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ALCOHOL PROBLEMS AND SOCIO-ECONOMIC STATUS:
A REGIONAL STUDY

A thesis presented in partial
fulfilment of the requirements for the degree
of Master of Arts
in Sociology at
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ABSTRACT

The problem was to explore the apparent relations between occupational status and drinking behaviour and to resolve, if possible, the confusions about which status positions were most likely to consume alcohol and experience problems.

The thesis investigates the hypothesis that people occupying high status positions are more vulnerable to high levels of alcohol consumption and alcohol related problems. It was presumed that ranking occupations in terms of the Elley-Irving SES scale, and educational attainment would permit the test of this assumed relationship.

The study focused on a sample of 869 males selected from a larger survey of health related issues in the five counties which comprise the Wanganui Hospital Board's area. All males over 15 years of age, employed in a full time occupation who were, or ever had been regular drinkers were interviewed about their levels of consumption, and any alcohol related problems they may have experienced.

The general trend of the findings suggested an association between alcohol misuse and low SES. A higher percentage of low status drinkers worried about their drinking; regarded themselves as heavy drinkers; were regarded by others as heavy drinkers; and indicated heavy patterns of consumption (400 + grams of alcohol per week).

No relationship between SES and regular drinking was found, although a positive association between regular drinking and educational attainment was suggested.

The lack of statistical significance restricts the extent to which we can draw any clear inferences as to the nature of the relationships involved.

In conclusion it could be stated that although the findings are not significant they suggest occupational vulnerability is more characteristic of low status occupations. Certain methodological inadequacies make it impossible to draw any firm conclusions concerning alternate hypotheses, for example that low SES positions are more vulnerable. Overreporting by the low SES group, and underreporting by those of high status may have biased the findings. An alternative theory is proposed to the effect that both ends of the status occupational hierarchy are characterised by high vulnerability.

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INTRODUCTION

In 1978 the Wanganui Hospital Board in conjunction with the Department of Sociology, Massey University, undertook a general population survey comprising 5% of the people in the Board's area.

The survey, known as the 'Wanganui Health Planning Project' focused on aspects of behaviour and attitudes towards health and health care. The Project was completed in December 1979.

Consistent with the Wanganui Hospital Board's intention to establish an Alcohol Treatment Unit in that city, information was collected on aspects of alcohol use with specific attention being focused on consumption patterns and rates of alcohol related problems.

The data used in the present study were derived from the Wanganui Health Planning Project survey.

The subject matter with which the present study is concerned relates to the relationships between alcohol use and socio-economic status (SES). It is assumed that groups differentiated on the basis of occupational status differ in terms of the patterns of alcohol consumption which characterise them. Because consumption patterns differ, it is assumed that rates of alcohol problems will differ also.

Increased consumption may be facilitated by many factors some of which it is suggested are occupation related. In some occupations the individual appears to be more vulnerable, that is, more at risk of becoming a heavy drinker.

If high status positions are those most likely to induce immoderate consumption among position holders, it follows that the high status group will have the highest rate of drinking problems.

The focal concern of this study then, is the rate of alcohol related problems among groups of different socio-economic status and in particular the high status group.

The theoretical argument is developed in Chapter One. The propositional statements and hypothesis are outlined and discussed in detail.

Chapter Two reviews the extensive literature, indicating that patterns of alcohol use are related to SES, and that some occupational groups have especially high rates of heavy drinkers and alcohol related problems.

An explanation of the methodological measures, including the procedures adopted in the field, the data collection and analysis methods are outlined in Chapter Three.

Chapter Four contains the basic characteristics of the sample and the research findings.

Chapter Five reviews the empirical and theoretical implications of the results of the study, in the light of the theoretical argument which has been developed. The limitations of the study are discussed and possible areas of future research are suggested.

CHAPTER ONE

THEORETICAL FRAMEWORK

Theoretical Statements and Hypothesis

The fact that high rates of alcohol abuse are characteristic of certain occupations suggests that some occupational groups are more susceptible to, or experience a higher risk of encountering, alcohol related problems.

If a person's occupation is an important precipitating factor in that it influences how and to what degree an individual uses alcohol, we can assume that individuals in some occupations will be more susceptible to alcohol. The resultant rates of alcohol problems for such groups are likely to be higher than for those where vulnerability is not so great.

This reasoning is reflected in the hypothesis set out below:

The higher the individual's socio-economic status, the more likely he is to experience alcohol related problems.¹

¹ The definition of an alcohol related problem employed here includes any difficulty arising from the drinking itself, which has seriously influenced or affected the individual negatively in one or more of a wide and varying number of areas, including his health, financial position, occupation, marriage, home life or family, his ability to look after himself and provide for his own needs, his friendships and social life. What constitutes a 'serious' problem, it must be noted, was subjectively defined by the respondent.

An alcohol related problem was not regarded as being strictly associated with alcoholism. While such a problem may be of some magnitude, affecting the individual severely in a number of areas including his relationships with spouse, friends and family, it does not necessarily indicate incipient or existing alcohol addiction.

Many of the social problems associated with alcohol are problems of 'drunkenness' rather than problems of alcohol dependence. In this definition an alcohol related problem includes the consequences of dependence as well as the social aspects of excessive drinking.

The general hypothesis was tested in two specific ways. It was decided that if a positive association was found between the measures of,

Occupational vulnerability and immoderate patterns of consumption, and...

Immoderate patterns of consumption and the incidence of alcohol related problems,²

...then the general hypothesis would be accepted as confirmed.

Occupational Vulnerability and Immoderate Consumption

The first theoretical statement purports the existence of a relationship between occupational vulnerability and immoderate patterns of consumption. Vulnerability is primarily being defined here as a high status phenomenon. Although not limited exclusively to high SES occupations, it is asserted that the higher an individual's SES, the more likely his occupation will be a high risk one, that is, be characterised by one or more factors which contribute to the vulnerability of individuals in such occupations.

There is much support in the literature for the idea that individuals in some occupations may be more likely to become heavy drinkers (Trice, 1966), or to develop drinking problems (Australian Senate Standing Committee on Social Welfare Report, 1977). Some occupations seem to provide acceptance or encouragement of drinking patterns and problems which may not be encouraged elsewhere (Hitz, 1973), while some have far greater rates of alcoholism than others (Plant, 1979). Finally, cirrhosis mortality figures tell us that some occupations have far higher rates than do others (Hitz, 1973; Plant, 1979).

² According to Clark (1966) there is no quantity of alcohol that can be labelled as the dividing line between excessive intake and normal drinking. What constitutes 'immoderate' drinking is as likely to be determined by group norms as by societal ones.

The kind of culturally instilled attitudes towards drinking held by different groups in society, influences such things as social expectations governing drinking behaviour and appropriate levels of consumption. Drinking then, becomes immoderate or excessive, not when it surpasses some hypothetical quantity, but when it no longer conforms to group norms concerning what is socially expected and acceptable.

High risk occupations are characterised by one or more factors which contribute to the vulnerability of individuals in these particular occupations. Roman and Trice (1970) believe that high status occupations are more likely to be characterised by factors which lead to vulnerability, and therefore individuals in those positions incur a greater risk of developing heavier patterns of drinking than do members of other groups.

An occupation may entail a high risk because of a number of factors, including its location, the nature of the work role, the demands associated with that role, and the type of product manufactured. The principal risk factors contributing to occupational vulnerability are outlined below.

The first risk factor concerns proximity and accessibility to alcohol. Both these aspects are particularly important in those occupations involved in the production, distribution or sale of liquor.

The full significance of the importance of proximity may be realised when one considers the high level of autonomy and freedom from supervision which characterise many high status positions associated with the liquor industry, and the ease of access which incumbents of those positions have regarding alcohol.

High status individuals are more likely to have access to alcohol due to the peculiar nature of the work roles of many high SES occupations. Individuals are less likely to be supervised, and less likely to have to account for work hours in terms of productivity output.

Accessibility is also accentuated in occupations where entertaining is common, for instance senior executives in business and commerce, sales representatives, and commercial travellers.

The second risk factor, that of occupational autonomy, can be defined as 'a loosely structured work situation where job performance measures are absent or few'. It involves the extent to

which an occupation permits freedom of work options, of work schedules, of commitment levels by the individual,³ as well as freedom from supervisory measures.

Occupational autonomy is particularly characteristic of high status occupations because there is less supervision; work roles are less interdependent with those of others; and individuals are not required to 'clock in' but in fact may be able to personally determine much of their worktime to suit themselves. Such occupations give individuals extensive freedom to drink, and increased opportunities to cover up the consequences of their drinking.

The third risk factor relates to those occupational roles characterised by low structural visibility. Characteristic of high status positions in particular, low visibility is often associated with a minimum of accountability to supervisors or colleagues.

Occupational obsolescence, resulting from the removal of an individual's work role through the delegation of duties to his subordinates may be one form of low structural visibility.

Where there is overspecialisation within an organisation necessitating the creation of job roles novel to that organisation, the lack of readily available guidelines for the evaluation of their performance may result in low visibility also.

Finally, low visibility may be associated with social distance, being reinforced by status indicators built into the respective roles, between a position holder and subordinates. This might be the case despite there being relatively close physical proximity of work places, thus the senior position holder may be isolated and to some extent protected from his subordinates.

³ This includes overcommitment by the individual, or work addiction, a factor which Roman and Trice (1970) believe is characteristic of high status individuals in particular, and which may result in the excessive use of alcohol by the work addict to combat the tension and emotional exhaustion which sustained levels of compulsive activity have created.

A fourth risk factor, which includes stress, anxiety or pressures relating to one's occupational role may generate greater risks of exposure to alcohol problems. This is particularly likely to be the case where individuals are under pressure to perform their roles in accordance with high professional standards. Also, where the role demands are constrained by limitations such as deadlines, individuals may be subject to frequent stress related situations, for instance, advertising and newspaper personnel and editors. Many high status occupations in particular have associated pressures and stress that could well lead to individuals seeking consolation or relaxation through heavy drinking.

Another risk factor concerns selection and/or recruitment procedures. Willis (1973) believes that preselection of high risk individuals, that is, the attraction of an occupation in which heavy drinking is accepted or encouraged, by those individuals with a predisposition towards heavy drinking, is a crucial factor.

Recruitment of individuals with pronounced drinking patterns, into positions which afford high levels of autonomy and accessibility to alcohol (such is often the case with high status occupations), may serve to accentuate the development of heavier patterns of consumption.

Another occupational risk factor concerns the social pressure which may be applied to individuals to use alcohol as part of the formal or informal role structure accompanying the occupation. Organisations often informally stimulate the belief that drinking is an important part of performing a job. According to one writer, some organisations tacitly approve and expect employees to use alcohol to assist them to achieve work related goals more effectively (Trice, 1966).

Finally, Roman and Trice (1970) have pointed out that jobs involving mobility from a highly controlled job status in which heavy drinking is practised to release tension, into a job which is also stressful but in which social controls are absent, may result in heavier drinking. The example they discuss concerns the graduate student whose need to spend long hours at work and to support perhaps both himself and his family on a very limited income curtails to a

large extent his use of alcohol. The attainment by the graduate of faculty status or his movement out of the university environment into a position in the commercial or business environment may be accompanied by restraint removal in terms of drinking behaviour.

According to Knupfer and Room (1964), certain factors conspire to form a 'style of life', multiplying the number of occasions for drinking among high status individuals. It has become an accepted part of the business scene that transactions be conducted in an hotel bar or restaurant. Entertaining, including the use of alcohol, is often employed to promote good relations between business executives, and to smooth negotiations in business transactions with current or prospective clients.

In some occupations, notably the entertainment, public relations and advertising industries, 'business' often involves gatherings and functions where alcohol is available.

Knupfer and Room also see the privileges associated with high status occupations as removing many of the constraints to heavy drinking. They point out that an executive can more easily 'appear' to function or just 'take off' from work if he has a hangover, than can a production line worker.

Because individuals in high status positions encounter fewer restrictions on their patterns of movement, and less supervision concerning hours of work, they have greater autonomy, and with it, increased accessibility to alcohol. It can be obtained when and if required. In fact, its use may be regarded as part of the occupational role for which provision is made in the form of an expense account.

For those individuals of high status, drinking may be viewed as a minor personal pleasure, or it may be regarded as a form of conspicuous consumption which attests to prosperity. In many cases alcohol use forms an integral part of the high status lifestyle, with such rituals as the pre-dinner drink, the cocktail party, the consumption of wines with meals, and the entertaining of friends and guests with alcohol, being common.

For those of high status, alcohol presents little or no financial strain on the budget, even in its more expensive and potent forms. Murray (1976) points out that one influential factor in explaining the high alcoholism rate among doctors in Scotland is their relatively high income. They can afford to buy alcohol.

Finally, Knupfer and Room mention 'sophistication' as a factor which may accentuate greater use of alcohol by some groups. The sophisticate has a liberated outlook and a disbelief in the simple definition of sin as equivalent to drinking, smoking and sex. The writers argue that because high status individuals tend to be more sophisticated, thus having a higher level of emancipation, they are less likely to make the conventional association between drinking and sin.

With regard to this high status lifestyle, the comparative lack of contact of many low status individuals with situations which are commonly lubricated with alcohol may, as Knupfer and Room suggest, cramp their drinking styles and afford fewer opportunities for members of this group to drink excessively.

Although the argument presented here has supported a positive association between high status and high rates of drinking problems, it must be acknowledged that there is considerable support in the literature concerning the existence of a positive association between low SES and alcohol related problems.

Because patterns of alcohol consumption are class related, it is likely that the kinds of problems encountered by drinkers may be class related as well. For instance, the pattern of consumption characteristic of high status groups involves frequent but light drinking (Edwards, Chandler and Hensman, 1972). Presuming that class determined abnormal drinking patterns will be generated as an extrapolation from class determined normal drinking patterns (Edwards, Chandler and Hensman, 1972: 90), any progression of such a pattern of drinking for this group leading to abuse may conceivably involve frequent, heavier drinking likely in turn to lead to problems associated with dependence.

The pattern of drinking which characterises lower status groups on the other hand, involves infrequent but very heavy consumption. A progression of this kind of drinking leading to abuse may involve relatively infrequent, but very heavy consumption, resulting in problems associated with drunkenness.

It has been noted that when an increase in consumption is due to increased quantity per drinking occasion, it is more likely to result in greater social problems (Fitzgerald and Mulford, 1978).

Problems associated with drunkenness are likely to be more visible than those of dependence, and not so easily rationalised by the drinker.

The fact that certain situations or kinds of behaviour are defined as problematic or nonproblematic may depend to a large degree on who is doing the defining. In other words, class definitions of particular situations or problems may differ. This may be directly attributable to the amount of 'resources' which an individual or family have available.

For instance the financial strain of dependency is less likely to become apparent for high status drinkers. Heavy drinking is less strain on the budget and the effects therefore are much less likely to become evident.

The social fabric of high status life is usually soundly established and does not readily disintegrate. This security of employment, well established family life and financial position, has been described by one writer, as part of the social status 'prop' which retards social deterioration (Sargent, 1967: 7).

The occupational autonomy of many high status positions not only facilitates greater accessibility to alcohol, it also enables the drinker to conceal the consequences of his drinking to a much greater degree. It reduces the probability that the individual's drinking will become problematic for him. There may be a greater tolerance towards high status deviance, particularly if the skills which the individual has are crucial to the organisation and are not easily replaced.

The kinds of social contacts which are common among many high status individuals, for instance, with medical practitioners and lawyers, may provide a source of confidential aid and advice with regard to potentially problematic situations arising from one's drinking.

The fact that high status individuals have greater resources with which to cope with or 'manage' a drinking problem (particularly a dependency problem) means they may more easily rationalise their dependency as being other than problematic. The kinds of problems which accrue from lower status drinking are more visible and less easily rationalised as a consequence of fewer resources. The kinds of problems each status group encounter then, may be very different. For the high status group, problems associated with dependence affecting the individual's health may be more characteristic, while for those of low status, problems associated with drunkenness, manifest through aggressive behaviour and violence appear more common. Because the latter is more likely to come to the attention of law enforcement agencies, such as the police, and considering that legal penalties for excessive drinking are often applied differentially according to status, those studies which focused on problems associated with drunkenness to the exclusion of other aspects will inevitably have highlighted a higher rate of problems among the low SES group.

Immoderate Consumption and Alcohol Related Problems

The second association to be investigated concerned the relationship between immoderate consumption and alcohol related problems. Individuals who drink excessively are more likely to encounter problems related to that drinking.

To briefly reiterate, alcohol related problems include any difficulty which affects the individual negatively with regard to any one of a number of areas. These areas can be divided under two headings, those associated with drunkenness, and those with dependence.

For instance, problems associated with drunkenness are more likely to include accidents,⁴ encounters with law enforcement agencies and perhaps problems associated with one's family, relations and friends.

Problems of dependence are likely to include financial strain, marital breakdown and family conflict, as well as problems concerning one's health, occupational performance and employment possibilities.

Although problems are more likely to be associated with one category or the other, some may be characteristic of both.⁵

While it does not necessarily follow that all drinkers who are experiencing problems must be consuming immoderate amounts, or that those individuals who are drinking immoderately will inevitably encounter problems (Clark, 1966), it is however more likely that a heavy drinker will experience problems either of dependence or drunkenness as a result of his consumption patterns.

Occupational Vulnerability and a Psychological Predisposition to Heavy Drinking

It has been suggested that some individuals have a psychological predisposition towards heavy drinking (Sargent, 1973). This is particularly likely where an individual has been influenced by early socialisation experiences such as childhood trauma and conflict in the home concerning alcohol, or provided with a role model by alcoholic relatives or friends.

The event of a personal crisis or tragedy may precipitate a change in drinking patterns from what Sargent terms 'convivial',

⁴ A study of a heavy drinking group, namely Scottish seamen by Rix, Hunter and Olley (1977) found the accidental death rate much higher for this group than for the general population.

⁵ A case in point is Brenner's study of San Francisco Bay area alcoholics (dependent drinkers), which indicated that the accident rate for this group was much higher than that of other area residents.

involving a loosening up of emotions promoting social ease and goodwill, to utilitarian drinking. This form of drinking activity is psychologically rewarding to the individual. The purpose is personal and self interested rather than social and expressive, with the needs satisfied being essentially self oriented. In a society where some members have acute needs for adjustment, if drinking as a means of adjustment is available, then a high rate of tension relieving drinking will occur. This is one manifestation of utilitarian drinking. Alcohol then, becomes a ready made, socially acceptable solution for the constant need to relieve the anxiety or trauma associated with inadequate interpersonal relationships and personal crises.

Where Sargent's argument diverges from the present one is with the implication that there may be a biologically inherited element, that is, some quality uniquely inherited by the individual, which results in a predisposition to alcoholism.

What is merely being suggested here, is that as a result of prior socialisation or role learning experience, this psychological predisposition may be expressed through the use of alcohol as a way to adjust to anxiety and difficulty.

Of course an individual may not seek to use alcohol primarily for utilitarian purposes, yet still exhibit some psychological predisposition towards heavy drinking. For instance, where an individual is psychologically or emotionally vulnerable, his needs for interaction may be most satisfied through the drinking group. Repeated exposure to such drinking groups tends to satisfy emotional needs and bring about certain emotional rewards for the individual. Trice (1966) has suggested that exposure to rewards experienced in drinking groups channel drinkers into alcoholism.

Where an individual has a psychological predisposition towards heavy drinking, the existence of an occupational situation where heavy drinking is either condoned, facilitated, or develops as a consequence of pressures and stress created within that occupational position, is likely to be conducive to increased patterns of consumption and related problems.

CHAPTER TWO

LITERATURE REVIEW

Introduction

A tremendous volume of research has been carried out on patterns of alcohol use. Despite the prolific nature of the literature, it is characterised by inconsistent and contradictory findings. This is particularly so regarding research relating to the association between patterns of use and social class, which is the focus of this review.

One writer has suggested that the principal reason for the differences in findings can be sought in the various measures of social class and drinking patterns which have been employed (Room, 1972).

Some studies have concerned themselves with variables such as education or income (Nelkar, 1970; Wallace, 1972; Thompson, 1975; Dight, 1976). Several American surveys have used some form of socio-economic rating scale, such as Hollingshead's two factor Index of Social Position (I.S.P.) comprising the educational level and the occupational level of the family breadwinner as its two factors (Cahalan and Room, 1972). Other researchers preferred an altered form of Hollingshead's I.S.P. scale (Cahalan and Cisin, 1968) while still others employed a different rating scale completely, using respondent's level of education and occupation as well as the total family income (Knupfer and Room, 1964).

British researchers have preferred to delineate populations in terms of social classes rather than status groups (Edwards, Chandler and Hensman, 1972) although descriptions of various classes can differ markedly. Some researchers have concentrated on specific groups, for example the 'upper class' (Moss and Beresford-Davies, 1967) or 'working class' (Dight, 1976). Such distinctions as 'manual' and 'nonmanual' have also been employed in some studies (Plant and Pirie, 1979).

One Australian study rather than relying on objective assessment techniques, chose respondent's perception of social class position as their indicator of SES (Encel, Kotowicz and Resler, 1972).

The confusion surrounding findings allows the selection of evidence to support quite contradictory arguments. Whereas for instance, some studies have highlighted the fact that those of high SES are most likely to drink heavily (Knupfer and Room, 1964; Knupfer, 1967), others suggest this group is more likely to be characterised by lighter drinking (Edwards, Chandler and Pirie, 1972; Plant and Pirie, 1979).

While Knupfer and Room (1964) indicate that high status drinkers are more likely to suffer from alcohol related problems, an Alcoholics Anonymous Report by Chandler, Hensman and Edwards (1971), suggests that in fact lower class individuals are more likely to have experienced complications associated with their drinking.

Any review of the literature concerned with patterns of alcohol use must take into consideration the various sources of information available. There are four principal means of data collection which enable the researcher to assess the relationship between patterns of alcohol use and socio-economic status. Firstly, self report data can be obtained through population surveys. Secondly, one can collect data from alcoholism treatment agencies. The third means involves detailed studies focused on specific occupational groups, and finally there is available, national liver cirrhosis mortality figures.

Population Surveys

Findings from survey techniques which rely upon self report data should always be interpreted with some care. The use of sample surveys provides the kind of information, for instance on 'normal' drinking patterns, which cannot be obtained from other sources (such as studies from alcohol treatment agencies), on a scale not readily duplicated by other studies, for example those dealing with specific occupational groups.

A great deal of research on patterns of alcohol use has been carried out, using general population surveys, particularly in the United States. Knupfer and Room (1964) stated that survey findings of drinking patterns had consistently illustrated that consumption of alcohol is positively related to SES, that is, the higher the consumption, the higher the SES of respondents.

In their own study they found 80% of high status males aged 21 - 39 were either heavy or moderate drinkers. The corresponding figure for males of low status was 68%. For high status males aged 40 or over, the percentage of heavy drinkers was 66%, compared with 38% for their low status counterparts. For males and females combined, 34% of high status drinkers qualified as 'heavy' in comparison to 12% of low status drinkers.

In effect then, there were nearly three times as many heavy drinkers of high status as there were of low status. The authors concluded that those who are least likely to drink, and least likely to drink heavily, are those of low status.

Mulford (1964) found the percentage of drinkers increased directly with both income and education levels. The higher an individual's income, the more likely that person was to drink alcohol. For instance, among those with incomes under \$3,000, some 54% drank. Where incomes were between \$5,000 and \$7,000, 68% drank, and for those on \$10,000 or more, the figure was 87%.

A similar situation existed for education. The higher an individual's level of education, the more likely that person was to be a drinker.

Mulford noted that those drinkers who were most likely to be experiencing problems were located at both ends of the status occupational hierarchy. Consistent with this finding, his study also pointed out that heavy drinkers and those persons who encountered 'trouble due to drinking' were likely to be those with the highest or lowest education.

Knupfer's study (1967) found a positive relationship between alcohol consumption and SES, and highlighted a particularly interesting relationship between serious high intake and serious social consequences.¹

¹ The serious social consequences dimension is derived from five principal areas of concern: trouble with one's occupation; spouse; friendships; the law; or from a hospital diagnosis of alcohol related health problems.

Although high status individuals are more likely to drink excessively,² the rate of serious social consequences is highest for the low status group, followed by those of middle status, and lastly those of high status. Whereas the high status group was high both on the dimension of 'dependence', (particularly the use of alcohol for coping) and 'excessive intake', whilst low on the 'social consequences' dimension, the low status group by contrast was high on the social consequences dimension.

In a British study, Moss and Beresford-Davies (1967) surveyed the extent of alcoholism in an English county. They found a higher prevalence of alcoholism among the upper classes. The findings of this study are not incompatible with those of Knupfer if we consider that alcohol use may be more prevalent in high status groups to relieve anxiety and to act as a tension management device, and if we assume that this kind of utilitarian drinking may lead to alcoholism. The fact that high status groups have low rates of 'social consequences' may be due to the fact that some kinds of drinking problems are class related. For instance, alcohol problems involving law enforcement agencies in particular are strongly class related. The lower class 'drunk' is much more likely to be arrested than is the case for his middle or upper class counterpart. This is also more likely to be the case where drinking is related to violence. Low status individuals are more likely to report violence as a problem resulting from drinking, while those of high status regarded bad effects from drinking as being health related (Cahalan, Cisin and Crossley, 1969).

At least three national surveys on drinking habits have been carried out in the United States. These were all general descriptive studies of American drinking practices (ADP) and the first was carried out in 1964-5, the findings being published in 1969 by Cahalan, Cisin and Crossley. This survey measured drinking behaviour and attitudes among 2,746 persons representative of the adult (that is, over 21) household populations of the United States. The authors found a positive relationship between alcohol use and socio-economic status.

² Excessive intake was defined as prolonged binges or frequent high intake,

While the highest SES group had the lowest percentage of abstainers, the situation was reversed for the lowest SES group.

Although alcohol use was found to be more common amongst those of high status, Cahalan, Cisin and Crossley noted a higher percentage of alcohol related problems amongst the lowest SES group than any other status groups.

The second national ADP survey, carried out by Cahalan and Cisin, involved reinterviewing a subsample from the first survey with the focus upon problems among males and females aged 21 or over. The results of this study were published in 1968.

Cahalan and Cisin also examined to what extent drinking patterns were related to SES. The SES index which they used, that of Hollingshead's two factor Index of Social Position (ISP) was altered with regard to the education dimension. The authors preferred to use the respondent's level of education as a factor rather than the family breadwinner's education level. This two factor index produced a scale which could be correlated in terms of SES position, that is, a high ISP score equated with a high SES position.

Cahalan and Cisin's findings indicate that in all age groups the percentage of male drinkers is slightly but consistently higher for those of high status. Figures for female drinkers indicate a similar pattern. The rate of abstention from alcohol use then is negatively related to SES, with the highest rates evident amongst the lowest status groups. These findings are similar to those of the first ADP survey.

The authors also found a positive relationship between regular alcohol use and the indices of education and income. More of those with family incomes over \$10,000 were drinkers (84%) than those whose incomes were under \$2,000 (44%). In addition, those with higher levels of education, for example college graduates, were more likely to be drinkers (82%) than those who had no high school education (53%).

Although Cahalan and Cisin's study suggests that alcohol use is more common in the highest status group, their findings do not support

the assertion that high status individuals are more likely to be heavy drinkers as well,

With regard to the occurrence of drinking problems, Cahalan and Cisin discovered no consistent trend concerning the proportions of heavy-escape³ drinkers by either age or social position, except that the rate was conspicuously high for both low status males and females aged between 21 and 39. This finding suggests that frequency of alcohol use need not necessarily lead to heavy or excessive patterns of consumption and related problems, an assumption which Knupfer and Room believed was strongly supported in the literature.

The third national ADP survey titled "Drinking Among American Men Aged 21 to 59" comprised a subsample (583 males) from the second national survey as well as a new sample (978 males) interviewed in 1969, giving a total of 1,561 males aged between 21 and 59. The findings from this survey were published by Cahalan and Room in 1972.

Their findings indicate that heavier drinking and alcohol problems are more common amongst lower status males regardless of age category. Those individuals who had the lowest social position, also had the highest 'consequences of drinking' score.⁴ Another point which the authors note was that the ratio of 'consequences of drinking' to heavy or binge drinking was found to be highest among those of lower status.

The ADP surveys appear to reach consensus on a number of points. Firstly, they indicate that alcohol use is positively related to SES. The higher an individual's status therefore, the more likely that person is to drink alcohol. In addition, alcohol use was found to be positively associated with the indices of education and income.

3 This label refers to those drinkers who were using alcohol for the purpose of relieving tension or anxiety, to forget their troubles or worries.

4 The consequences scale is made up of two components, firstly social consequences involving people oriented problems such as with one's spouse, relatives, friends, occupation or the law. Secondly, tangible consequences, made up of two criteria, alcohol related health or injury problems and financial problems.

Secondly, it was strongly suggested that heavy drinking is characteristic of the low SES group, and finally, the findings from all three ADP surveys indicate that individuals of low status are more likely to experience alcohol related problems.

The positive relationship between alcohol consumption and SES which characterised the Knupfer and Room study would not appear to be supported by the evidence derived from the three ADP surveys, unless we interpret 'consumption' to mean 'frequency of use'. High status individuals make more frequent use of alcohol. However, whether they drink more, that is, have a higher overall level of consumption than other groups is not clear. The studies of Knupfer and Room, and Mulford suggest this might be the case, the findings from the three ADP surveys do not.

Whether differences in findings are attributable to methodological procedures is a case in point. Room (1972) certainly believes this is so, and although the argument may have some validity, it fails to explain how different studies have produced similar findings regarding patterns of alcohol use, irrespective of whether SES is measured in terms of an income or education variable, or a status index incorporating an occupational rating scale. It also fails to explain how these similarities in drinking patterns extend to cross cultural studies.

A study of a London suburb by Edwards, Chandler and Hensman (1972) found a strong correlation between patterns of drinking and social class, which included not only differences in respective rates of drinkers and abstainers, but also the type of beverage consumed, the amount of money spent on alcohol, and the locations in which respondents preferred to drink.

According to Edwards et al., more class I and II⁵ women are heavier drinkers and class I and II men are lighter drinkers than respondents in other classes. In social classes I and II, abstinence was rare with only 4% refraining from drinking. The comparative figure

⁵ The scale of social class used by Edwards et al., ranged from I (the highest) to V (the lowest).

for individuals in class V was 13%. There is a strong and consistent trend for males in social classes III, IV and V to be heavy drinkers.

Edwards, Chandler, Hensman and Peto (1972) in a re-analysis of the original London suburb survey found no significant relationship between 'trouble score' distributions and social class. For social class groups I through V, the prevalence of problem drinkers was similar. The authors did note however, that those who drank heavily, as well as rated relief of unpleasant affect highly as a motivation for drinking are more likely to experience trouble.

Further evidence that frequency of alcohol use is related to SES is provided by two Scandinavian studies, the first a Norwegian national survey conducted by Wallace (1972) found a strong negative relationship between abstention and both income and education indices. Those males with the highest level of education had the lowest abstaining rate, as did males in the highest income group.

Wallace concluded however, that it was not ascertainable from her survey whether those apparently most 'at risk' regarding drinking ran a greater risk of developing alcoholism.

Nelkar (1970) undertook a survey of drinking patterns, sponsored by Ansvar, a Swedish group of insurance companies, and found that the higher the level of education, the more likely the person was to be a drinker.

Encel, Kotowicz and Resler (1972) in their study of drinking patterns in Sydney, Australia discounted to a great extent an association between education and drinking patterns, although they conceded that higher educational levels appeared to exert a moderating effect on consumption levels. The authors found that except for the very lowest income levels, income had a negligible effect on patterns of drinking.

Finally, with regard to the dimension of SES, Encel et al., chose not to use an objective socio-economic index, as had a number of other researchers, including Cahalan and Cisin (1968), Edwards et al. (1972), Knupfer (1967), Cahalan and Room (1972), and relied instead upon the subjective assessment of respondents as to which class they identified

with. Respondents had a choice of upper, upper-middle, middle, lower-middle, upper-working, middle-working, and lower-working. The sample size was too small at both the top (level 1) and bottom (level 7) to be included in the analysis. Nevertheless, the authors concluded that the relationship between social class and drinking patterns was negligible.

This study may be one example of where, according to Room (1972) differences in measurement of 'social class' results in findings which diverge from those of other studies.

One other Australian population survey was undertaken in the state of Victoria by Krupinski, Baikie, Stoller, Graves, O'Day and Polke (1967). It concentrated on the small community of Heyfield and associated alcoholism with low income, unskilled occupation and poor housing.

In one of the few New Zealand surveys which have been carried out on alcohol use among adults over 20, McCreary (1973) examined patterns of consumption among 740 respondents in two Wellington suburbs.

The sample differed from 1966 Census data, having a higher percentage of younger age groups, more unmarried people and proportionately fewer Maoris. There was also an over-representation of individuals with secondary and university education.

McCreary found a positive relationship between alcohol consumption and education. The higher an individual's level of education, the more likely that person is to be an 'upper quantity drinker' (that is, to consume over 200 grams of absolute alcohol per week). Therefore, a university graduate is more likely to be an upper quantity drinker than someone with no secondary school qualifications.

Another New Zealand study carried out on drinking patterns of adults over 20, by Thompson (1975), found that three-quarters of those in the top ten percent of income earners drank at least monthly.

He states that both high educational qualifications and high income earnings increases the likelihood of more frequent alcohol consumption. Using a scale of monthly drinking, the person without educational qualifications is twice as likely to be a non-drinker compared to a university graduate. Those individuals with University

Entrance appear more likely to drink than people with School Certificate or a trade certificate.

Several British studies have produced findings very similar to those reported in American studies. For instance, a national survey of Scottish drinking habits which collected data from 1,613 males and 840 females concluded, like Cahalan and Room (1972), that the heaviest drinking section of the adult population was young working class (or low status) males (Dight, 1976). It was found that the proportion of regular drinkers was greater among higher income groups for both males and females, and that amongst the extremely low income group, alcohol consumption was high.

In another Scottish survey, also based upon self report alcohol consumption data, Plant and Pirie (1979) interviewed 874 males and 1,146 females from four towns - Ayr, Glasgow, Aberdeen and Inverness. They concluded that non-manual workers were more likely to drink alcohol than were manual workers, and were also more likely to be light drinkers. Manual workers were more likely to be either abstainers or heavy drinkers.

A national survey conducted under the auspices of The Alcoholic Liquor Advisory Council of New Zealand (ALAC) was carried out in 1978 and early 1979 by Gregson.

Conducted throughout the length of the country, the study involved the administration of a lengthy and comprehensive questionnaire to each of 10,000 respondents. The survey was as concerned with attitudes governing alcohol use in society as with the patterns of consumption themselves.

One form of consumption measure the study employed involved asking respondents whether they had consumed alcohol in the 12 hours preceding the interview.

Responses to this question appear to be related to education levels. For instance, 15% of those without School Certificate (54% of the sample) had drunk alcohol in the past 12 hours. This compared with 26.5% (4.6% of the sample) of respondents who had a university degree.

Other consumption patterns support a positive relationship between alcohol use and levels of education. Whereas 17.8% of respondents with only primary school education abstained from drinking, only 4.6% of university graduates did so.

These figures must however, be interpreted with caution, since those respondents who by age could not have achieved the highest educational levels, have not been omitted from some categories. For example, the 17.8% of respondents with only primary school education included the 14 - 18 year old group in the survey. Some of this group would have had no opportunity to gain secondary school qualifications, and none are likely to have completed university degrees.

Isherwood and Adam (1979) examined the relationship between drinking patterns and SES in their study carried out in 1977 and 1978. Their sample consisted firstly of 200 subjects of Christchurch city, aged between 15 and 84, selected by means of a stratified sampling technique. This population sample was combined with 100 randomly selected individuals aged 15 to 82 who had been treated or admitted to Christchurch Hospital following a motor vehicle accident in which they were driving. This latter group biased the overall sample in terms of age and sex (there was a predominance of younger aged males in the hospital group).

The SES measure which Isherwood and Adam used was the Newton Economic and Social Status Index. This scale was developed in 1974 and ranges from level I (most affluent) to level VI (least privileged).

No clear relationship was found between alcohol abuse and either of the variables, occupation or education. Only slight differences appear for SES, with little overall pattern emerging. However, whereas 18% of level II drinkers (12% of the sample) were found to be abusing alcohol, 35% of level V drinkers (13% of the sample) were doing so.

Of the population surveys reviewed here, some found a positive relationship between drinking patterns and levels of education and income (Cahalan and Cisin, 1968; Nelkar, 1970; Edwards, Chandler and Hensman, 1972; Wallace, 1972; McCreary, 1973; Thompson, 1975; Dight, 1976; Gregson, 1979; Plant and Pirie, 1979); others found no such relationship (Encel, Kotowicz and Resler, 1972; Isherwood and Adam, 1979); and still other studies found the relationship positive for

both groups (Mulford, 1964).

While SES appeared to be positively related to alcohol use (Knupfer, 1967; Cahalan, Cisin and Crossley, 1969) it was negatively associated with alcohol problems (Knupfer, 1967; Cahalan, Cisin and Crossley, 1969; Cahalan and Room, 1972).

Some studies found heavy or problem drinkers more likely to come from one particular status group, whether it be high status (Knupfer and Room, 1964) or low status (Cahalan and Room, 1972), while Edwards, Chandler, Hensman and Peto (1972) found no such relationship.

The literature on alcoholism indicated that both high status (Moss and Beresford-Davies, 1967) and low status groups (Krupinski et al., 1967) appear to be vulnerable.

Alcoholism Treatment Agency Studies

The second means of collecting information is from those agencies dealing with the treatment of alcoholics or problem drinkers. A considerable number of studies have been carried out using sample populations from various treatment centres. However, there are certain difficulties inherent in obtaining accurate and reliable statistics from institutional sources.

Institutional samples reflect the fact that certain kinds of people seek help from such agencies. Amark (1970) has pointed out that some occupational groups are disproportionately likely to come forward to seek help. There is however, no means of ascertaining whether the alcoholics or problem drinkers who do seek treatment are representative of those sorts of people in the general population.

Many alcoholics do not wish to be recognised and prefer not to seek help. Only a small percentage of addicted drinkers are recognised by general practitioners and subsequently referred for treatment.

It is not surprising that those studies which have concentrated

on public agencies, Clark (1949), Wilkinson (1969), Morton (1973), and Wilkins (1974) have highlighted an association between alcoholism and that group most likely to avail themselves of help from such agencies, namely those of low socio-economic status.

To what extent the studies of Clark (1949), and Wilkinson (1969), both of which used hospital patient samples, are representative of hospital populations in general is questionable. Clark, in his survey of alcoholics admitted to Chicago hospitals between 1922 and 1934 included only white male patients in his sample. In his study of admissions to a Melbourne hospital clinic, Wilkinson acknowledged the lack of a control group and the possibility that all admissions to the hospital concerned could have been of low occupational status.

Morton and Wilkins, both of whom surveyed social service agencies, found that alcoholics and problem drinkers were significantly more likely to be of low SES. Morton noted that her findings could not be generalised to the wider population due to the fact that the extent of use of social agencies is largely determined by social class. Her survey revealed a negligible representation from that section of the population in the upper socio-economic grouping.

High status individuals often make their own arrangements for hospitalisation when this becomes necessary. This recourse to private treatment facilities creates problems for the researcher. Frequently sample sizes are too small, and the value of the data is limited as a consequence (Glatt, 1967; Carney and Lawes, 1967).

Samples derived from this source are biased in terms of those individuals or groups most able to afford private treatment. The fact that studies concentrated on private medical patients (Lemere, Maxwell and O'Hollaren, 1956; Glatt, 1967; Carney and Lawes, 1967) indicated a greater proportion of high status individuals seeking treatment than would be found in the general population, is hardly surprising.

The reliability of information obtained through alcoholism treatment agency studies is continually open to question. Because no single treatment institution is representative of all others, and because most of the studies have been confined to one or a few centres, there is seldom any basis for generalisation.

Occupational Studies

Detailed studies of specific occupational groups provides another means of data collection. This type of study has revealed that certain groups have particularly high rates of alcohol problems, which suggests that individuals in some jobs may be more susceptible to alcohol abuse.

Seamen

Hitz (1973) concluded in her study of occupational drinking amongst seamen and other groups that the lower blue collar group was not only more susceptible to heavy drinking but also to problems resulting from that drinking.

Certainly the rate of alcoholism and problem drinking amongst seamen appears to be particularly high, a finding which has been confirmed by studies of both merchant seamen and naval personnel.

Powdermaker (1945) and Heath (1945) found that approximately one-fifth of American seamen passing through merchant marine rest centres were alcoholic.

J.I.F. (1947), an abstainant alcoholic, suggests that the few emotional outlets sailors have on board result in shore leave being regarded as a means of tension relief, with heavy drinking frequently the norm.

Wallinga (1956) examined 94 hospitalised alcoholics from the United States Navy and Marines. He suggested that these patients had

become alcoholic primarily because of the encouragement to drink existing within their work situations.

Rose and Glatt (1961) found heavy drinking commonplace amongst the 100 British seamen they interviewed. The reasons they suggested were firstly, the social acceptance of heavy drinking and secondly, because many of their subjects exhibited personality traits associated with alcoholism.

Brun-Gulbrandsen and Irgens-Jensen (1967) examined a representative sample of 3,447 Norwegian naval conscripts and assessed 14% were seriously abusing alcohol.

Kolb and Gunderson report that a series of investigations have been carried out on naval conscripts hospitalised between 1965 and 1971, and for men treated in alcoholism rehabilitation centres and units from 1972 to mid-1974. These studies revealed that alcoholism in the United States Navy is a major problem.

Schukit and Gunderson (1974) looked at the job types amongst 1,701 United States Navy enlisted men hospitalised for alcoholism and suggested that the association between alcoholism and job type may have been due to selection factors rather than the effects of the job.

Alcohol Production Workers

Frank, Heil and Leadolter (1967) examined 450 Austrian males between the ages of 20 and 65, 200 of whom worked in a brewery. Their findings indicated that the rate of heavy drinking amongst the brewery workers was double that of the other workers. Physical examinations indicated that nearly one-quarter of the brewery males had suffered liver damage, a significantly higher percentage than was found for the non-brewery workers in the study. The researchers suggested that the availability of alcohol was the likely reason for the differences they detected.

Rankin stated in his submission to the Australian Senate Standing Committee on Social Welfare (1977) that some types of employment present a greater danger of the development of drinking problems than do others. He noted that workers engaged in the manufacture of alcohol are especially at risk.

Plant (1979), in a study of new recruits to an industry involved in the production of alcohol, found a likely explanation for heavy drinking, in the availability of alcohol and the level of encouragement or coercion to drink it. Many men stated that they drank at work because alcohol was within easy reach and that illicit drinking was an enjoyable 'sporting activity' which relieved the monotony of their jobs.

Medical Practitioners

There is considerable evidence to suggest that qualified doctors have particularly high alcoholism rates. Glatt (1974, 1976) and Edwards (1975) have both produced evidence to indicate that doctors belong to a high risk group.

Murray (1976) compared the alcoholism rates among Scottish male doctors with a group of professionals of comparable social status. He found that the rate was two and one half times higher for the doctors than for the professionals. Murray notes however, that this particularly high rate may have been influenced by the fact that his sample was confined to males, of Scottish nationality.

Domestic Servants

Straus and Winterbottom (1949) interviewed 99 female domestic servants in an American town, and found a higher incidence of drinking but little evidence of increased drinking problems.

The researchers believe that the close supervision which characterises this type of employment restricts social and sexual behaviour more than would be the case in most occupations, so that excessive drinkers are rapidly detected and dismissed from their employment.

Military Personnel

Carney and Lawes (1967) believe military life is characterised by strong encouragement to drink heavily. Harrington and Price (1962) and Davies (1962) found that American alcoholic veterans became heavy drinkers during their military service.

Carney (1963) in a study of British military personnel stationed

in Cyprus concluded that servicemen were subject to great pressures from their peers to drink heavily while in military messes. Perhaps the social expectations concerning heavier patterns of consumption and the availability of inexpensive drinks to all ranks accentuates this situation.

From the studies which have been reviewed here, the patterns of relationships between drinking behaviour and drinking problems appear to vary with particular occupations. Some obviously promote greater acceptance or encouragement of heavy drinking.

Mortality Rates

The fourth means of ascertaining the effects of alcohol consumption on socio-economic groups is from national liver cirrhosis mortality statistics. Death rates from this particular source indicate higher rates among certain occupational groups.⁷ Liver disease is mainly related to excessive drinking, and liver cirrhosis though imperfect, is still a very adequate indication of the prevalence of alcoholism.

Table 2.1 shows the twenty-four occupational groups (for males) in England and Wales which had the highest liver cirrhosis standardised mortality ratios (SMR's) in 1961. Each of the occupational groups depicted in the table had at least twice the average rate of mortality from this cause.

7 No comparable statistics are available in New Zealand relating to national liver cirrhosis mortality expressed in terms of standardised mortality ratios for specific occupational groups. Personal communication, Chief Health Statistician, Department of Health, National Health Statistics Centre, Wellington, May 29, 1980.

TABLE 2.1

High Risk Groups: Male Liver Cirrhosis Mortality
(England and Wales 1961)

Occupational Group	SMR
Publicans and innkeepers	773
Stage Managers, actors, entertainers and musicians	550
Deck engineering officers and ships' pilots	467
Cooks	460
Lodging house, hotel keepers, housekeepers and stewards	450
Deck and engine ratings, barge and boatmen	400
Armed forces (Commonwealth and overseas)	400
Armed forces (UK)	350
Medical practitioners	350
Finance, insurance brokers, financial agents	333
Textile, fabric and related products, makers and examiners	300
Electrical engineers	300
Restauranteurs, waiters, canteen hands	282
Service, sport and recreation workers	241
Garage proprietors	233
Brewers, winemakers, and related workers	200
Coachpainters	200
Workers below ground	200
Telegraph and radio workers	200
Civil, structural and municipal engineers	200
Judges, advocates, barristers and solicitors	200
Barmen	200
Hairdressers, manicurists and beauticians	200

Standardised mortality ratios are calculated taking into account the age composition of an occupational group. The average ratio is 100.

Source: Martin A. Plant, 1979, p.31.

The data in Table 2.1 was derived from mortality ratios for liver cirrhosis for men aged 15 to 64, between 1959 and 1963. The 1961 data, when first published, indicated an SMR of 2,200 for 'company directors.' This figure was subsequently found to be spurious for two reasons. First, it was calculated on a mere 22 cases, and second, not all of those who had been classified as company directors at the time of death actually belonged in that category. Hence, the occupational group was omitted from the table.

Proximity and accessibility regarding alcohol may result in some occupations having particularly high SMRs, such as publicans, innkeepers, hotelkeepers, restauranteurs and cooks. In those occupations where stress or anxiety may cause individuals to drink heavily, SMRs may be high also,

for example medical practitioners and insurance brokers.

Where occupations involve frequent travelling, long absences from home, physical and social isolation as well as sexual segregation of the work force, drinking may be regarded as an important social activity, particularly where no alternative forms of recreation are available. The result of heavy drinking in occupations characterised by these factors is reflected in the high SMRs of ships' crews, armed forces personnel, actors and commercial travellers.

The data in Table 2.2 indicates which occupational groups had significantly lower than average liver cirrhosis mortality ratios.

TABLE 2.2

Low Risk Groups: Male Liver Cirrhosis Mortality
(England and Wales 1953-63)

Occupational Group	SMR
Managers in building and contracting	11
Printing press operators	14
Office cleaners, window cleaners	25
Agricultural workers	29
Construction workers	33
Teachers	44
Carpenters and joiners	48
Machine tool setters, setter-operators	50
Fitters, machine-erectors, etc.	75

Source: Martin A. Plant, 1979, p.32.

One of the reasons why the low risk occupations listed in Table 2.2 have lower liver cirrhosis rates may be because men with drinking problems are excluded from such jobs.

Occupational liver cirrhosis mortality data for 1970 to 1972 is shown in Table 2.3. Because cirrhosis of the liver is commonly associated with both high alcohol consumption and inadequate diet, it is not surprising that occupational groups such as innkeepers, publicans and barmen, as well as fishermen, ships' officers and ratings all feature with high SMRs.

TABLE 2.3

High Risk Groups: Male Liver Cirrhosis Mortality
(England and Wales 1970-72)

Occupational Group	SMR
Publicans, innkeepers	1,576
Deck, engineering officers and pilots, ship	781
Barmen, barmaids	633
Deck and engine room ratings, barge and boatmen	628
Fishermen	595
Proprietors/managers of boarding houses/hotels	506
Finance, insurance brokers, financial agents	392
Restauranteurs	385
Lorry drivers' mates, van guards	377
Cooks	354
Shunters, pointsmen	323
Winders, reelers	319
Electrical engineers (so described)	319
Authors, journalists, and related workers	314
Medical practitioners (qualified)	311
Garage proprietors	294
Signalmen and crossing keepers, railways	290
Maids, valets and related service workers	281
Tobacco preparers and products makers	269
Metallurgists	266

Source: Martin A. Plant, 1979, p.33.

In the case of some individuals engaged in occupations with high SMRs, heavy drinking probably preceded recruitment into that occupation. It is likely that heavy drinkers would be attracted to occupations which afforded easy access to alcohol, or where drinking was accepted and encouraged, particularly if the basic amenities of life in the form of board and lodging were provided also.

Heavy drinking may be one form of response to the stress and pressures of one's work role. This may account for the fact that authors, journalists, medical practitioners and finance and insurance brokers have high SMRs. Men in professional positions often accept high alcohol consumption and inadequate diet as a consequence of the demands of their work.

Liver cirrhosis mortality rates for the nine highest occupational groups in the United States (1950) are shown in Table 2.4. These rates are broadly compatible with the figures for England and Wales.

TABLE 2.4
 High Risk Groups: Liver Cirrhosis Mortality
 (United States 1950)

Occupational Group	SMR
Waiters, bartenders, counterworkers	392
Longshoremen and stevedores	342
Transportation labourers (excluding railroad)	314
Cooks	286
Musicians	278
Meat cutters (excl. slaughtermen and packing house)	258
Authors, editors, reporters	222
Bakers	219
Other service workers (excl. private household)	209

Source: Danielle Hitz, 1973, p.497.

Although the World Health Organisation (1951) concluded that liver cirrhosis was the best available indicator of the prevalence of alcoholism, these figures only tell us how many dead alcoholics there are, not how many living ones. Also, the relationship between liver cirrhosis and alcoholism is somewhat tenuous since only a minority of alcoholics develop liver cirrhosis. Nevertheless, roughly 70% of liver cirrhosis mortality in Britain is related to excessive drinking (Plant, 1969: 44).

Conclusion

Although the literature is characterised by contradictions, some general trends can be inferred. Firstly, there is considerable evidence to suggest that the association between drinking and SES is a positive one. A higher percentage of high status individuals (or those with high levels of education and income) drink alcohol.

Secondly, despite high status individuals being more likely to drink, there is consistent support in the literature for the assertion that heavy drinkers are more likely to be of low SES.

Thirdly, from the literature reviewed here, the relationship between alcohol problems and low SES appears to be a positive one.

Although Mulford (1964) noted high rates of alcohol problems at both ends of the occupational status scale, these findings are exceptional,

To what extent is the literature reviewed in this study supportive of the theoretical argument outlined earlier? For instance, does the literature support an association between immoderate consumption and alcohol related problems?

The relationship between heavy drinking, alcohol problems and SES is far from clearly delineated. Clark (1966) states that problem drinkers may not be consuming large quantities, and those drinkers who are, may not be experiencing any difficulties or problems related to that drinking.

One other writer however, has stated that those who drink considerably more heavily than the rest of the population might be expected to have more than their share of problems with health, interpersonal relationships and other aspects of social and economic functioning (Clark, 1949: 648).

From the studies reviewed here, heavy drinkers seem particularly likely to develop problems as a result of their consumption patterns. This is confirmed by the fact that heavy drinking was predominantly a lower status activity, and that the rate of alcohol problems was highest for this group also.

It was indicated by the studies of specific occupational groups, and the liver cirrhosis mortality statistics, that some occupations for several different reasons, encourage heavy drinking among incumbents. Whether however, occupational vulnerability is status related, that is, particularly characteristic of occupations with shared or similar status rankings was not clearly established.

Finally, it must be pointed out that the conclusions which have been reached here should be regarded with some caution since the contradictory nature of the literature allows for the citing of exceptions in most cases.

CHAPTER THREE

METHODOLOGY

Introduction

Because this present study involves a secondary analysis of information collected for the Wanganui Health Planning Project (W.H.P.P.) survey, it is perforce constrained by decisions made in relation to that earlier survey. These constraints apply especially to the use of data, which are less than optimal for two principal reasons. Firstly, because the data were not collected specifically for the present study, the latter suffers from the usual constraints that any secondary analysis of data involves, namely that it imposes a limit to the number of variables used, and to what can be done with them.

The second form of constraint, arises from the requirement that the sample used in this study conform to specific criteria. Eligible respondents had to be male; fifteen years of age or over; involved in a full time occupation previous to being interviewed; and 'regular' drinkers of alcohol at some stage in their lives.

The need to conform to the above criteria has substantially reduced the possible sample size. This has made certain detailed computations difficult due to low cell frequencies thus restricting to some extent the level of analysis and the implications which can be derived from the study.

Limitations of the Sample

For the purposes of the present project, the sample for analysis included only males. This restriction was necessary to eliminate possible inaccuracies resulting from the recording of occupations on the interview schedules.

The description of male occupations included either the occupation the respondent was working in at the time of being interviewed, or his last employed position before retirement, sickness or some other factor terminated his participation in the workforce.

The study sample was restricted to males because data on female occupations as recorded on the interview schedule may only have served to distort the nature of the relationships we had chosen to investigate.

This distortion may have occurred for two principal reasons. Firstly, the majority of women gave up their jobs when they married. This change may have occurred some time ago, perhaps forty years or more. Secondly, the status of the last occupation which a woman had may bear little relation to that which her husband presently occupies, or correspond in any way to the lifestyle which both are currently living.

The second limitation applied to age, with only those males 15 years of age or over being included. The third sample requirement necessitated that all respondents had been engaged in a fully employed occupation at, or prior to the study. However, secondary school or university students who had worked in a full time position during vacations were not eligible.

The final delimitation involves the respondent's status as a regular drinker. Only those individuals who had consumed alcohol on a regular basis¹ at some stage preceding the study were included.

Source of the Data

The data used in this study were derived from the W.H.P.P. This research project resulted from an approach by the Wanganui Hospital Board to the Department of Sociology, Massey University in September 1978, with the intention of undertaking a survey of behaviour and opinions relating to health status and health services within the Board's area. The latter encompassed the counties of Patea, Waimarino, Waitotara, Wanganui and Rangitikei. The project was completed in December 1979.

1 For the purposes of the W.H.P.P. survey it was decided that one glass of alcohol per month would constitute regular drinking. Although an arbitrarily defined measure, it was felt that it nevertheless delineated that population of social drinkers who consumed alcohol often enough and in sufficient quantities to merit inclusion in the survey.

Listings were obtained from appropriate Local Authorities,² which included all but an insignificant proportion of the inhabited dwellings in the region. All unoccupied dwellings, and business premises were eliminated at this stage, leaving 23,400 households.

By utilising a computer defined set of random numbers, a five percent sample of households (1,170) was drawn. Of these, 49 were subsequently found to be unoccupied (either for the complete duration of the year, or for the greater part of that year) and were thus eliminated, leaving 1,121 households in the final sample.

Comparison of specific demographic data with corresponding figures from the New Zealand Census, gave an indication of the representativeness of the W.H.P.P. sample. The 2,751 individuals who were interviewed (an estimated response rate of 77.7%), were found to be closely representative of the general population with regard to age, sex and marital status criteria (Appendix 1). Further sample characteristics pertinent to this research study in particular are provided in Appendix 2.

Self Report Data

Surveys collect admissions of what a sample of people report they think or do. Self report data in conjunction with the interview technique can provide usefully accurate information concerning a population's patterns of alcohol use. However, it is evident that surveys of drinking behaviour and alcohol related problems are not perfect instruments, and their results must be interpreted with care.

Most surveys which rely upon answers elicited during a single brief interview, fail to validate the authenticity of the information they collect. Since quantity measures, for instance, are based solely on the respondent's verbal report, the problem of the reliability and validity of these measures of actual drinking is crucial.

2 For reasons of confidentiality, the source of the listings cannot be stated here.

The following procedures were adopted to minimise respondents' defensiveness and to increase reliability and validity. Firstly, it was emphasised to respondents that they had been selected as part of a random sample of households and complete anonymity was assured.

Secondly, alcohol abuse was regarded as a health issue, with the section on alcohol use being included in the content of a wider health survey carried out under the auspices of a local hospital board.

Thirdly, no source of reference as to what constituted heavy drinking was included, nor was there a reference to 'normative drinking patterns.'

Finally, the positioning of the alcohol section within the questionnaire allowed the interviewer time to build up a rapport with the respondent, since the sections on health status, disability, health service use and social relations preceded it.

The positioning of potentially threatening questions relating to problem drinking of self and family members was left to near the end of the alcohol section so that respondents were given an opportunity to discuss their drinking habits in some detail before being confronted with questions relating to problems.

Reliability can be ascertained through longitudinal studies involving the reinterviewing of the same sample at a later time. However, this is less realistic where large sample surveys have been undertaken involving hundreds of respondents.

Whenever other evidence is available by which to judge survey results, it is apparent that people generally under-report the amount they drink. According to one writer, surveys may reveal only 20 to 70 percent of national consumption (Plant, 1979: 42). Schmidt (1972) notes that heavy drinkers and alcoholics are especially likely to under-report their alcohol consumption.

Fitzgerald and Mulford (1978) compared survey estimates of annual per capita consumption of absolute alcohol with annual sales records for the State of Iowa. The authors reported that in both Iowa State Surveys (1958 and 1961), the results showed a substantial under-reporting

of alcohol consumption, especially of beer, in comparison with reported figures and official sales records. They, in fact, established that a survey to sales records under-reporting ratio of 1:3 existed.

Fitzgerald and Mulford state that this comparison of estimates based on survey data with those based on sales suggests the limitations of the survey technique. Some of these limitations can be eliminated, or at least minimised however. For instance by singling out specific beverages when obtaining consumption figures, and by restricting estimates of use from respondents to a time period of weeks or months rather than asking for an assessment of consumption over a longer period such as a year.

In the W.H.P.P. survey, those individuals drinking alcohol on a regular basis were asked to assess their present consumption patterns, that is, for a 'typical week.' These were recorded in separate totals for each beverage (beer; wine; fortified wine; and spirits/liqueurs).

However, for those respondents who used to drink regularly in the past, but who had ceased to do so, estimates were gained of how much they used to drink in a typical week. This is likely to be less accurate because many respondents had not been regular drinkers for some years.

Interviewer Procedures

The W.H.P.P. relied almost exclusively upon student volunteers from Massey University as interviewers. Those students involved were principally from the Social Science and Humanities faculties, the great majority of whom were engaged in the second year of a Social Work course, being aged between 18 and 21 years.

Interviewer training consisted of four briefing sessions, each of approximately two hours duration. Areas covered included interviewing techniques, the interview schedule and role playing. Finally, guest speakers were invited to address the group on such topics as ethnic families, alcohol abuse and general health care.

Contact procedures consisted of a letter from the Chairman of the Hospital Board to all households in the sample informing them that students from Massey University would be calling on them in the near future. The letter also gave respondents some knowledge of the project and its purpose. Interviewers carried identification cards and a letter of introduction signed by the Chairman of the Hospital Board.

Interviewers worked in pairs since this enabled husbands and wives to be interviewed separately. The latter situation was deemed desirable given the confidential nature of the interview, and the personal information elicited from respondents.

Instrumentation

Information was collected by means of a personal interview using a standardised schedule (Appendix 3) which was administered by a trained interviewer.

The questionnaire schedule was divided into six sections, comprising 54 questions relating to disability; health status; health service use/opinions/satisfaction; social relations; patterns of alcohol use; and demographic material. Those sections of specific concern to the present study dealt with alcohol use and demographic data.

The section concerned with patterns of alcohol use comprised 21 questions relating to eight areas of drinking habits; (1) the status of the drinker as regular or nonregular, (2) consumption patterns in terms of a weekly intake, (3) assessment of the degree respondents would miss drinking if instructed to cease, (4) assessment of degree respondents worried about their drinking, (5) experience of alcohol related problems, (6) assessment of respondent's drinking as heavy/problematic/compulsive, (7) experience of others' drinking problems, (8) household members with drinking problems.

Those questions of primary concern dealt firstly with alcohol related problems, that is, the frequency of problem drinkers (see Appendix 3, question 36), and the areas regarded as problematic (question 36a). Secondly, with consumption per week, in the present

(questions 25 - 28), or in the past (questions 31 - 34).

The demographic section contained 24 questions relating to (1) sex, (2) marital status, (3) age, (4) ethnic affiliation, (5) country of birth, (6) residential mobility, (7) occupation, (8) educational qualifications, (9) income, and (10) religion. Those areas of particular concern to this study included sex (Appendix 3, page 15), age (question 40), and occupation (question 46).

Arrangement of the Variables

Twenty-seven variables from the W.H.P.P. survey have immediate relevance to this study. These can be grouped under four principal headings concerned firstly with 'aspects of alcohol use,' secondly 'alcohol consumption,' thirdly 'alcohol problems' (drinking difficulties)³ and fourthly 'demographic material.'

Aspects of Alcohol Use

There were six variables which related to aspects of alcohol use. These included whether the respondent drank or used to drink alcohol on a regular basis; how much he would miss drinking if he gave it up; how much he worries about his drinking; whether he regarded himself as a heavy drinker; whether anyone else regarded him as a heavy drinker; and finally, the number of attributions as a heavy drinker. For instance one's spouse, relatives, workmates, friends, doctor, neighbours and social worker/counsellor, each counted as one attribution with the maximum total being seven.

Alcohol Consumption

The second group, consisted of four variables, concerning patterns of alcohol consumption and in particular, the total grams of alcohol consumed per week by each individual drinker. The variables

3 The terms 'alcohol problems' and 'drinking difficulties' are used synonymously in this study.

were 'alcohol grams per week now,' 'alcohol grams per week past,' and a grouped version of each. The grouped variables enabled greater clarification, condensing consumption totals into an eleven category scale.

Emphasis concerning patterns of consumption was on quantity rather than frequency. Measurement of quantity of alcohol consumption involved the calculation of amounts of absolute alcohol for each respective beverage. The responses for each drinker, incorporating the respective amounts of beer, wine, sherry/port and spirits/liqueurs consumed per week was converted into the number of grams of alcohol consumed (Appendix 4). The figures for each category of alcohol beverage were then summed together to provide a total score. Further analysis necessitated grouping scores into four categories: 0 - 49; 50 - 149; 150 - 399; 400+ (Appendix 5:I). For greater clarification those regular drinkers who consumed on average, less than one gram of alcohol per week (therefore registering 0 on the scale) were grouped into a separate category (Appendix 5: II).

Because a distinction was made between those drinkers currently consuming alcohol on a regular basis, and those who at some stage in the past had drunk alcohol regularly, this distinction was carried over to levels of consumption. Thus, the alcohol gram totals of those who were currently drinking were kept separate from the totals of those who had drunk alcohol regularly only in the past.

Alcohol Problems

The third group of variables, totalling twelve in number, relate to the single dependent variable in the study, that of drinking difficulties.

The first variable concerns the respondent's drinking, that is, whether his drinking created serious difficulties for him. The areas specified as problematic number eight on the interview schedule, each of which can be considered as a separate variable. These include his health; friendships and social life; occupation and/or employment opportunities; marriage and homelife; financial position; ability to care for himself and provide for his own needs; ability to care for his family; and finally, experiencing frustration or anger as a motivation for drinking or as a consequence of it.

An individual's drinking may create problems for him in one or more of these areas. The problem(s) may have only occurred in the past, may be occurring at present or alternatively may relate to both the present and past.

Again the distinction between present and past was included so that we have 'number of drinking problems now' as the tenth variable, and 'number of drinking problems in the past' as the eleventh.

For the twelfth variable, the present and past distinction is combined, giving us the variable 'number of alcohol related problems now or in the past.'

Demographic

The final group, consisting of five variables relates to demographic criteria. The first of these is sex. Although the present study sample is confined to males, much of the argument developed in this paper, particularly that concerned with patterns of alcohol usage among SES groups, has equal relevance for females as well. Therefore, the appropriate data tables pertaining to female patterns of use are included in Appendix 6.

The second demographic variable is age. The third and fourth variables relate to education. The third, 'highest school examination,' includes three groups: (1) no school qualifications; (2) School Certificate; and (3) University Entrance. The fourth variable, 'post secondary school qualifications,' includes trade certificate and University Degree or Diploma.

The fifth variable is SES. By using the Elley Irving Socio-Economic Index for New Zealand (1976), SES has been defined in terms of the reported income and educational levels typical of the occupations listed in the scale, which is based on median income and median educational level. Equal weighting is given to both variables. The original six point scale as set out by Elley and Irving is condensed for our purposes into a three level structure, hence Elley-Irving levels 1 & 2 (occupations of a predominantly professional nature) are referred to as the 'high' SES group. Elley-Irving levels 3 & 4 (semi-professional and skilled occupations) are the 'middle' SES group and the Elley-Irving

5 & 6 levels (unskilled occupations) are known as the 'low' SES group.

New Variable

One new variable was created especially for this study. In order to obtain a more complete picture of consumption patterns, the variable 'GRMSWK 3' was constructed to incorporate the alcohol gram totals of present drinkers ('alcohol grams per week now') and past drinkers ('alcohol grams per week past').

In this study, 28 variables in all have been examined (Appendix 7), 27 of which have been taken directly from the W.H.P.P. study, while the variable GRMSWK 3 was created later. The categorisation of each variable in this study follows closely that of the W.H.P.P. study. The categories of some variables have been combined at times because detailed analysis is not necessary, or when too many categories make cross-tabulation results difficult to interpret. This is particularly the case with data relating to consumption figures, which were condensed from the original eleven point scale of the W.H.P.P. survey into a four point scale for the present study.

Analysis of the Data

Because most of the data used in the present analysis were either nominal (that is, where the kind of response can be classified in terms of a yes/no answer) or ordinal (where the numbers represent ordered response categories), frequency distributions were used as the predominant analytic tools.

Computer analysis involved the processing of data using the Statistical Package for the Social Sciences (SPSS) system. Two types of frequency distribution were used. Firstly, one way distributions, where the frequencies of different responses to a particular item are set out. Analyses carried out on one way distributions included means, standard deviation and variance.

The second type of frequency distribution, that of cross-tabulations, provides simple frequency tables illustrating the relationship between two variables, as well as those tables where a

third factor is introduced as a control variable.

Data derived from the cross tabulations were analysed using chi-square (appropriate for nominal and ordinal scales respectively) to determine the statistical significance of apparent relationships; and Cramers V, which is a measure of strength of relationship between nominal variables. It takes on the value of 0 when no relationship exists, and of 1 when the variables are in perfect association. It is suitable for a table which is rectangular (4x2), rather than square (2x2).

The first part of the analysis explored the association between SES and various independent variables pertaining to aspects of alcohol use. Secondly, the nature and implications of the relationship between the dependent variable (alcohol problems) and SES was examined.

CHAPTER FOUR

THE FINDINGS

This chapter outlines the findings from the study and is divided into four sections. In the first section, the basic characteristics of the sample are delineated. The second section deals with aspects of alcohol use. In the third, patterns of alcohol consumption are examined, while the final section focuses on those males in the sample whose drinking has created difficulties for them.

Characteristics of the Sample

The following is a breakdown of the sample characteristics. For the original W.H.P.P. survey, the sample included both males and females. Table 4.1 indicates the percentages of males and females 15 years of age and over:

TABLE 4.1
Percentage of Respondents,
15 Years of Age or Over,
According to Sex

Male	46.1	(869) ^(a)
Female	53.9	(1,016)
	100.0	(1,885)

(a) In this and subsequent tables throughout this study, figures in parenthesis denote number of cases.

For the purposes of the present study, only males were included in the sample, the total N being 869. Any table where the N is less than 869 indicates either that the information is not available for the balance of subjects, or that the question was not applicable to the balance.

Table 4.2 shows the percentages of males, 15 years of age and over in age groups.

TABLE 4.2

Percentage of Males by Drinking Status,
According to Age Groups

Age Groups	<u>Drinker Status</u>					
	Regular Now		Regular Past		Never Regular	
15 - 19	12.1	(82)	6.7	(3)	26.8	(40)
20 - 29	22.5	(152)	13.3	(6)	5.4	(8)
30 - 39	19.1	(129)	15.6	(7)	13.4	(20)
40 - 49	15.6	(105)	15.6	(7)	12.8	(19)
50 - 59	15.7	(106)	20.0	(9)	14.8	(22)
60 - 69	8.9	(60)	11.1	(5)	14.1	(21)
70 +	6.1	(41)	17.8	(8)	12.8	(19)
	100.0	(675)	100.1	(45)	100.1	(149)

(a)

N = 869

- (a) Note that all percentages are rounded to one decimal place. In some tables there will thus be slight discrepancies between the totals and their constituent percentages.

TABLE 4.3

Percentage of Male Drinkers with
Serious Drinking Difficulties

% with Drinking
Difficulty

11.2 (80)

% with No Drinking
Difficulty

88.8 (637)

100.0 (717)

TABLE 4.4

SES Group Percentages, For Males

SES Group

High

13.1 (105)

Middle

55.9 (449)

Low

31.0 (249)

100.0 (803)

TABLE 4.5

Percentage of Males with Drinking Difficulties:
In SES Groups

<u>SES Group</u>	<u>% With Drinking Difficulties</u>	<u>% of Total Sample of Males</u>
High	7.6 (6)	0.9
Middle	55.7 (44)	6.5
Low	36.7 (29)	4.3
	100.0 (79)	

When comparison is made between subgroups in the sample, statistical tests were applied where appropriate. No differences are referred to in the text unless they reached the .05 level of rejection. Significance is indicated in the following manner:

0.05 *
0.01 **

Patterns of Alcohol Use

The second section focused on patterns of alcohol use including: the percentage of drinkers and non-drinkers in the sample; the extent to which drinkers would miss alcohol; how much they worried about their drinking; what percentage regarded themselves as heavy drinkers; what percentage had been labelled by other people as heavy drinkers; and finally, how many different sources of labelling had been encountered by the drinker.

TABLE 4.6

Drinking Status of Males:
In SES Group Percentages

<u>Drinker Status</u>	High	Middle	Low
Regular Now	78.1 (82)	80.2 (360)	77.5 (193)
Regular Past	5.7 (6)	4.9 (22)	6.0 (15)
Never Regular	16.2 (17)	14.9 (67)	16.5 (41)
	100.0 (105)	100.0 (449)	100.0 (249)

df = 4

N = 803

Chi square = 0.84 (n.s.)

Cramer's V = 0.02

In Table 4.6 the middle SES group has the highest percentage of regular drinkers. A slightly higher percentage of the high SES group drinks alcohol regularly than is the case with the low SES group. Combining the figures for present and past regular drinkers, the relative order remains unchanged, with the middle SES group having the highest percentage of those who have been regular drinkers at some stage in their lives (85.1%).

There is little difference between the other two groups with the percentage for the low SES group being 83.5% and that for the high SES group 83.8%. The low SES group has the highest percentage of males who have never drunk alcohol on a regular basis (16.5%), while the middle SES group has the lowest figure (14.9%).

TABLE 4.7

Drinker Status by Secondary School
Qualifications, for Males

	<u>School Qualifications</u>					
<u>Drinker Status</u>	None		School Cert.		U.E.	
Regular Now or in the Past	85.7	(365)	85.7	(66)	91.2	(62)
Never Regular Drinker	14.3	(61)	14.3	(11)	8.8	(6)
	100.0	(426)	100.0	(77)	100.0	(68)
	df = 2			N = 571		
	Chi square = 1.50 (n.s.)					
	Cramer's V = 0.07					

In Table 4.7 the categories for regular drinking 'now' and 'past' were combined due to low cell frequencies. The percentages of 'regular now' drinkers for each group are as follows: no school qualifications (80.3%); School Certificate (80.5%); and University Entrance (91.2%).

Those males with the highest qualification (U.E.) are more likely to be regular drinkers (91.2%) and less likely to refrain from regular drinking (8.8%), than is the case with individuals who have School Certificate or no qualifications at all.

TABLE 4.8

Drinker Status by Post Secondary
School Qualifications, for Males

<u>Drinker Status</u>	Trade Certificate	Univ. Degree/Diploma
Regular Now	83.3 (110)	90.9 (20)
Regular Past	5.3 (7)	0.0
Never Regular Drinker	11.4 (15)	9.1 (2)
	100.0 (132)	100.0 (22)

Because this is a composite table, tests of significance and an N total are not included.

The data in Table 4.8 suggest alcohol use is positively related to educational qualifications. Males with university qualifications are more likely to drink alcohol regularly (nearly 91%). This same group has the lowest percentage of those who have never drunk alcohol on a regular basis.

The group with trade certificate has a lower percentage of currently regular drinkers (83.3%), and a higher percentage of males who have never drunk alcohol regularly.

TABLE 4.9

How much Would Miss Drinking Alcohol:
In SES Groups, for Males

<u>Degree Would Miss Drinking</u>	<u>SES</u>		
	High	Middle	Low
A lot	9.8 (8)	10.3 (37)	14.1 (27)
Some	29.3 (24)	14.5 (52)	13.6 (26)
A little	26.8 (22)	27.9 (100)	24.6 (47)
Not at all	34.1 (28)	47.4 (170)	47.6 (91)
	100.0 (82)	100.1 (359)	99.9 (191)

df = 6
Chi square = 15.21 *
Cramer's V = 0.11

N = 632
p .05

Table 4.9 suggests an inverse relationship between those who would miss drinking 'A lot' and SES. Males of low status are most likely of all three groups to miss drinking 'A lot.' The percentage of those

who would miss drinking to some degree (combining the response categories 'A lot,' 'Some' and 'A little') is highest for those of high SES (65.9%), compared with 52.7% for the middle SES group and 52.3% for the low SES group.

It can be inferred from Table 4.9 that alcohol use is an important part of the high status lifestyle since a higher percentage of this group indicated they would miss drinking. This importance should not be overstated however, since the high SES group had the lowest percentage of drinkers who would miss alcohol 'A lot.'

TABLE 4.10
How Much Males Worry About Their Drinking:
In SES Groups

<u>Degree of Worry</u>	<u>SES</u>					
	High		Middle		Low	
A lot or Some	4.5	(4)	3.2	(12)	5.8	(12)
A little	4.5	(4)	6.6	(25)	10.7	(22)
Not at all	90.9	(80)	90.3	(343)	83.5	(172)
	99.9	(88)	100.1	(380)	100.0	(206)

df = 4 N = 674
Chi square = 7.24 (n.s.)
Cramer's V = 0.08

In Table 4.10, due to low cell frequencies, the categories 'A lot' and 'Some' were combined. A higher percentage of low status individuals stated that they worried 'A lot' or 'Some' about their drinking. Of those who worried to some degree (either 'A lot,' 'Some' or 'A little'), the relative percentages are 9.0% for the high SES group, 9.8% for the middle SES group, and 16.5% for those of low SES. These findings suggest that low status drinkers are particularly likely to worry about their use of alcohol.

TABLE 4.11

Males Who Have Regarded Their Drinking as Heavy:
In SES Groups

	SES					
	High		Middle		Low	
<u>% of Heavy Drinkers</u>	5.8	(5)	11.8	(45)	12.3	(25)
<u>% of Non-Heavy Drinkers</u>	94.2	(81)	88.2	(335)	87.7	(179)
	100.0	(86)	100.0	(380)	100.0	(204)

df = 2 N = 670
Chi square = 2.90 (n.s.)
Cramer's V = 0.06

In Table 4.11 we can note an inverse relationship between self reported heavy drinking and SES. The low SES group had the highest percentage of males who believed their drinking was heavy (12.3%). The high SES group had the lowest percentage (5.8%), under half that of their low status counterparts.

TABLE 4.12

Males Who Have Regarded Their Drinking as Heavy,
by Secondary School Qualifications

	Secondary School Qualifications					
	None		School Cert.		Univ. Entrance	
<u>% of Heavy Drinkers</u>	12.7	(46)	13.6	(9)	6.7	(4)
<u>% of Non-Heavy Drinkers</u>	87.3	(315)	86.4	(57)	93.3	(56)
	100.0	(361)	100.0	(66)	100.0	(60)

df = 2 N = 487
Chi square = 1.95 (n.s.)
Cramer's V = 0.06

In Table 4.12, that group least likely to regard themselves as heavy drinkers have the highest secondary school qualification (U.E.).

TABLE 4.13

Males Who Have Regarded Their Drinking as Heavy,
by Post School Qualifications

	<u>Post School Qualifications</u>	
	Trade Cert.	Univ. Degree/Diploma
<u>% of Heavy Drinkers</u>	16.5 (19)	0.0
<u>% of Non-Heavy Drinkers</u>	83.5 (96)	100.0 (20)
	100.0 (115)	100.0 (20)

Composite Table

The data in Table 4.13 suggest patterns of alcohol use may be strongly related to status. For example, 16.5% of males with trade certificate believed their drinking was heavy. No males in the sample with university qualifications regarded themselves as heavy drinkers.

TABLE 4.14

Males Who Have Been Regarded as Heavy Drinkers by Others:
In SES Groups

	<u>SES</u>		
	High	Middle	Low
<u>% Regarded as Heavy Drinkers</u>	10.5 (11)	14.9 (67)	18.1 (45)
<u>% of Non-Heavy Drinkers</u>	89.5 (94)	85.1 (382)	81.9 (204)
	100.0 (105)	100.0 (449)	100.0 (249)

df = 2 N = 803
Chi square = 3.41 (n.s.)
Cramer's V = 0.06

For those males who acknowledged their drinking had been regarded by others as heavy, the pattern in Table 4.14 again suggests an inverse relationship, with the low SES group having the highest percentage (18.1%), and the high SES group having the lowest figure (10.5%).

TABLE 4.15

Number of Attributions as a Heavy Drinker:
In SES Groups, For Males

No. of Attributions	SES					
	High		Middle		Low	
None	89.5	(94)	85.1	(382)	81.9	(204)
One	5.7	(6)	8.9	(40)	11.2	(28)
Two	2.9	(3)	3.1	(14)	1.6	(4)
Three or More	2.0	(2)	2.9	(13)	5.2	(13)
	100.1	(105)	100.0	(449)	99.9	(249)

df = 6

N = 803

Chi square = 7.80 (n.s.)

Cramer's V = 0.10

Table 4.15 is a breakdown of the previous table (4.14), giving the percentages of males who have been regarded as heavy drinkers by one, two, or three or more sources. These are seven separate attribution sources including spouse; relatives; doctor; friends/acquaintances; neighbours; workmates; and counsellor/social worker. The separate sources are not delineated in this table. There were no drinkers who had been labelled by all sources as a heavy drinker.

The sample frequencies are very small where the higher numbers of attributions are concerned. This necessitated the grouping of attributions into the category 'three or more'. For those drinkers who had been labelled by only one source, the pattern is again inverse. The low SES group has the highest percentage (11.2%) and the high SES group has the lowest percentage (5.7%). For those drinkers with one or more attributions a similar pattern is maintained, with the percentages for high, middle and low SES groups being 10.6%; 14.9% and 18.0% respectively.

Patterns of Alcohol Consumption

The third section examines patterns of consumption among SES groups. This examination takes two forms. Firstly, the totals for each SES group are compared and subjected to various statistical tests, including means, standard deviations and variance. Secondly, the patterns of consumption within groups are examined.

The original eleven point scale used in the W.H.P.P. study has been collapsed into a four point scale for the purposes of the present study. In addition, the first category of this scale has been further delineated into two separate groupings. Those drinkers who consumed less than 1 gram of alcohol in a typical week (but were still regular drinkers in that they drank at least one glass of alcohol per month), were separated from those who drank 1 to 49 grams per week.

TABLE 4.16

Alcohol Grams per Week for Current Drinkers,
Male and Female: In SES Groups

<u>SES Group</u>	<u>Sum</u>	<u>Mean</u>	<u>Std.Dev.</u>	<u>Variance</u>	<u>N</u>
High	11248.00	92.19	86.65	7508.52	(122)
Middle	66235.00	108.58	152.72	23323.61	(610)
Low	44854.00	119.29	205.20	42107.80	(376)

This table includes both male and female current drinkers. There is an inverse relationship between mean totals and SES. The high SES group has the lowest mean total for all three SES groups. The low SES group, by contrast, has the highest mean total.

This same pattern continues in Tables 4.17 and 4.18, that is, for currently drinking males, and for all male drinkers, current and past. The high SES group has the smallest mean total and the low SES group has the highest.

TABLE 4.17

Alcohol Grams per Week for Currently Drinking Males:
In SES Groups

<u>SES Group</u>	<u>Sum</u>	<u>Mean</u>	<u>Std.Dev.</u>	<u>Variance</u>	<u>N</u>
High	9338.00	116.72	94.22	8878.50	(80)
Middle	51415.00	144.42	180.42	32554.23	(356)
Low	34256.00	180.29	266.18	70852.05	(190)

TABLE 4.18

Alcohol Grams per Week for All Male Drinkers,
Current and Past: In SES Groups

<u>SES Group</u>	<u>Sum</u>	<u>Mean</u>	<u>Std.Dev.</u>	<u>Variance</u>	<u>N</u>
High	9929.00	94.56	95.77	9172.90	(105)
Middle	59765.00	133.10	206.83	42778.68	(449)
Low	41006.00	164.68	301.96	91181.79	(249)

TABLE 4.19

Alcohol Grams per Week for Currently Drinking Males:
In SES Groups

<u>Grams of Alcohol</u> <u>(grouped)</u>		<u>SES</u>					
		High		Middle		Low	
I	0 - 49	28.8	(23)	30.6	(109)	30.0	(57)
II	50 - 149	45.0	(36)	39.9	(142)	36.3	(69)
III	150 - 399	23.8	(19)	22.5	(80)	23.6	(45)
IV	400 +	2.5	(2)	7.0	(25)	10.0	(19)
		100.1	(80)	100.0	(356)	99.9	(190)

df = 6 N = 626
Chi square = 8.04 (n.s.)
Cramer's V = 0.11

Table 4.19 indicates the weekly consumption of absolute alcohol for those males who are currently drinking regularly. Consumption totals are set out in terms of a four level scale for each of the three SES groups. We can note that the percentages are similar for all three groups concerning level I drinkers. The high status group has the highest percentage of level II drinkers, while percentages are again very similar among the three groups for level III drinkers.

For the heaviest drinking group (level IV), there appears to be an inverse relationship with 10% of low status drinkers being in this group, compared with only 2.5% of high status drinkers.

TABLE 4.20

Alcohol Grams per Week for Currently Drinking Males,
by Secondary School Qualifications

<u>Grams of Alcohol</u> <u>(grouped)</u>	<u>Secondary School Qualifications</u>		
	None	School Cert.	U.E.
I 0 - 49	29.9 (100)	36.1 (22)	36.7 (22)
II 50 - 149	36.6 (122)	37.7 (23)	28.3 (17)
III 150 - 399	25.2 (84)	19.7 (12)	26.6 (16)
IV 400 +	8.4 (28)	6.6 (4)	8.3 (5)
	100.1 (334)	100.1 (61)	99.9 (60)

df = 6

N = 455

Chi square = 4.17 (n.s.)

Cramer's V = 0.11

There are several points of interest in Table 4.20. Firstly, the lowest percentage of drinkers in level I had no secondary school qualifications. In contrast to this, the lowest percentage of drinkers in level II had the highest qualifications (U.E.). Finally, level III and IV drinkers (those with the heaviest patterns of consumption) are more likely to have either the highest qualification (U.E.) or no qualifications at all.

TABLE 4.21

Alcohol Grams per Week for Currently Drinking Males,
by Post School Qualifications

<u>Grams of Alcohol</u> <u>(grouped)</u>	<u>Post School Qualifications</u>	
	Trade Cert.	Univ. Degree/Diploma
I 0 - 49	33.3 (36)	45.0 (9)
II 50 - 149	27.8 (30)	35.0 (7)
III 150 - 399	31.5 (34)	20.0 (4)
IV 400 +	7.4 (8)	0.0
	100.0 (108)	100.0 (20)

Composite Table

The consumption patterns of the two groups depicted in Table 4.21 differ quite considerably. Whereas 80% of males with university qualifications drink only moderate amounts (under 150 grams per week),

61.1% of those with trade certificate do so. The latter group has a much higher percentage of drinkers in the two highest consumption categories.

TABLE 4.22

Alcohol Grams per Week for Present and Past
Drinking Males: In SES Groups

<u>Grams of Alcohol</u> <u>(grouped)</u>	<u>SES</u>		
	High	Middle	Low
I Under 1 gram per week	17.1 (18)	16.5 (74)	18.9 (47)
II 1 - 49	25.7 (27)	25.0 (112)	23.7 (59)
III 50 - 149	35.2 (37)	33.0 (148)	28.5 (71)
IV 150 - 399	20.0 (21)	18.4 (83)	19.6 (49)
V 400 +	1.9 (2)	7.0 (32)	9.2 (23)
	99.9 (105)	99.9 (449)	99.9 (249)

df = 8

N = 803

Chi square = 7.82 (n.s.)

Cramer's V = 0.11

In Table 4.22, we can note similar percentages in all three SES groups for drinkers in the first category (those who drink less than 1 gram of alcohol per week). For level II drinkers, the high SES group has a slightly higher percentage. This is also the case for levels III and IV.

It is noteworthy that although the high SES group has the highest percentage of any group of drinkers in level IV (20.0%), only 1.9% of high status drinkers are located in level V. Indeed, the relationship between consumption and SES is an inverse one for level V drinkers, with the lowest SES group having the highest percentage of drinkers (9.2%).

Drinking Difficulties

The final section of this chapter looks at the relationships between drinking difficulties and SES.

TABLE 4.23

Percentage of Currently Drinking Males with Difficulties:
In SES Groups

	SES					
	High		Middle		Low	
<u>% with Drinking Difficulty</u>	6.8	(6)	11.5	(44)	14.1	(29)
<u>% with No Drinking Difficulty</u>	93.2	(82)	88.5	(337)	85.9	(177)
	100.0	(88)	100.0	(381)	100.0	(206)

df = 2

N = 675

Chi square = 3.16 (n.s.)

Cramer's V = 0.06

Table 4.23 indicates the relative percentages of currently drinking males whose drinking had caused them serious difficulties. The highest percentage (14.1%), can be found in the lowest SES group, while 11.5% of the middle SES group had experienced difficulties, and only 6.8% of the high SES group.

TABLE 4.24

Whether Drinking Created Difficulties for Currently
Drinking Males, by Secondary School Qualifications

	School Qualifications					
	None		School Cert.		U.E.	
<u>% with Drinking Difficulty</u>	12.7	(46)	10.6	(7)	9.7	(6)
<u>% with No Drinking Difficulty</u>	87.3	(317)	89.4	(59)	90.3	(56)
	100.0	(363)	100.0	(66)	100.0	(62)

df = 2

N = 491

Chi square = 0.56 (n.s.)

Cramer's V = 0.08

The data in Table 4.24 suggest a negative relationship between drinking difficulties and secondary school qualifications. The group with no secondary school qualifications has the highest percentage of drinkers with difficulties (12.7%), while the group with U.E. has the lowest percentage (9.7%).

TABLE 4.25

Whether Drinking Created Difficulties for Currently
Drinking Males, by Post School Qualifications

	<u>Post School Qualifications</u>	
	Trade Cert.	Univ. Degree/Diploma
<u>% with Drinking Difficulty</u>	9.4 (11)	0.0
<u>% with No Drinking Difficulty</u>	90.6 (106)	100.0 (20)
	100.0 (117)	100.0 (20)

Composite Table

From Table 4.25 we can note that no males with university qualifications considered their drinking was causing them serious difficulties. In comparison, nearly 10% of those drinkers with trade certificate were encountering difficulties related to their drinking.

TABLE 4.26

Percentage of Males with Specified Drinking Problems:
In SES Groups

<u>Area of Drinking Difficulty</u>	<u>SES</u>		
	High	Middle	Low
Health	1.9 (2)	3.6 (16)	4.0 (10)
Social Life	2.9 (3)	2.2 (10)	3.2 (8)
Work/Employment Opps.	0.0	2.4 (11)	2.4 (6)
Marriage/Home Life	3.8 (4)	5.1 (23)	5.6 (14)
Financial	1.0 (1)	3.8 (17)	4.0 (10)
Self Care	0.0	1.6 (7)	2.0 (5)
Caring for Family	1.0 (1)	1.1 (5)	2.4 (6)
Angry/Frustrated	1.0 (1)	3.3 (15)	4.0 (10)

Composite Table

In Table 4.26 the eight separate areas where drinking may have caused difficulties are outlined. The area of greatest concern for all three SES groups appears to be 'marriage/home life.' There is an inverse relationship between drinking difficulties and SES for six of the eight areas outlined. These include the categories 'health,'

'marriage/home life,' 'financial situation,' 'self care,' 'caring for family' and 'angry/frustrated.'

For the remaining two areas - 'social life' and 'work/employment opportunities' - the relationship is not so clear, although the low SES group has the highest percentage of individuals whose drinking had affected their social lives (3.2%) and equal highest (2.4%), for the area of work/employment opportunities.

TABLE 4.27

Number of Present or Past Alcohol Problems For
All Male Drinkers: In SES Groups

<u>No. of Alcohol Problems</u>	<u>SES</u>		
	High	Middle	Low
None	94.3 (99)	90.6 (407)	89.2 (222)
One	2.9 (3)	3.8 (17)	4.0 (10)
Two	1.0 (1)	2.0 (9)	2.8 (7)
Three or More	2.0 (2)	3.4 (16)	4.0 (10)
	100.0 (105)	99.8 (449)	100.0 (249)

df = 6

N = 803

Chi square = 2.67 (n.s.)

Cramer's V = 0.08

In Table 4.27, the eight areas where drinking may have caused difficulties are grouped, so that drinkers who indicated only one area of difficulty are separated from those who indicated two, or, three or more. Despite this grouping, the percentages remain relatively small.

TABLE 4.28

Percentage of Drinkers with Drinking Difficulties:
In SES Groups, by Age (grouped)

SES Group		% with Drinking Difficulty	% with No Drinking Difficulty
Age 1 (15 - 29)	High	27.2 (3)	72.8 (11) 100.0
	Middle	17.7 (19)	82.3 (107) 100.0
	Low	13.9 (13)	86.1 (93) 100.0
		N = (35)	N = (211)
Age 2 (30 - 49)	High	4.7 (2)	95.3 (40) 100.0
	Middle	10.2 (14)	89.8 (123) 100.0
	Low	22.4 (13)	77.6 (45) 100.0
		N = (29)	N = (208)
Age 3 (50 +)	High	2.9 (1)	97.1 (34) 100.0
	Middle	8.1 (11)	91.9 (125) 100.0
	Low	5.7 (3)	94.3 (49) 100.0
		N = (15)	N = (208)

The effect which age has on the relationship between SES and drinking difficulties was of particular interest to the researcher. The findings reviewed in this chapter suggest the existence of an inverse relationship between drinking difficulties and SES. The extent to which age distorted this relationship was however not ascertainable due to low cell frequencies.

For example, it appeared that the inverse relationship held for those in the 30 - 49 age group but that the reverse was true for drinkers in the 15 - 29 group.

The N of high SES drinkers in this latter group was too small, but the order for middle and low SES drinkers fits the original hypothesis.

CHAPTER FIVE

SUMMARY AND CONCLUSIONS

The present research endeavoured to provide a more detailed analysis of the relationship between occupational vulnerability and self reported alcohol problems.

It was assumed that occupational vulnerability was status related. That factors or conditions likely to facilitate patterns of heavy drinking may be characteristic of positions which share similar status rankings.

It was argued that if individuals in high status occupations were more likely to experience occupational vulnerability, this would be reflected in a higher rate of heavy drinking for the same group.

It was also assumed that high rates of heavy drinking would be reflected in high rates of alcohol related problems, therefore it was expected that a higher percentage of high status drinkers suffered from alcohol related problems.

Rejection of the Hypothesis

In reviewing the findings, it can be concluded that the general hypothesis, which assumed that SES and alcohol problems were positively related, must be rejected.

In the first place, the association between high SES and regular drinking was not substantiated, although a positive association was suggested by the data between regular drinkers and educational attainment. The percentage of regular drinkers for all three status groups was not markedly different. Despite this, the percentage of regular drinkers in the high status group was still relatively high (78%).

Secondly, the association between high SES and immoderate consumption (whether self defined, other defined, or delineated in terms

of absolute quantity consumed per week) was not substantiated. It was notable however, that those drinkers who consumed 400 + grams of alcohol per week were more likely to have high secondary school qualifications or none at all.

Thirdly, the association between high SES and alcohol related problems was also not substantiated. It was assumed in theory that a positive association existed between immoderate consumption and alcohol related problems. Therefore, that group with a higher percentage of heavy drinkers would by implication, have a higher rate of alcohol problems.

The high SES group however, had neither the highest percentage of heavy drinkers, nor a higher percentage of drinkers with alcohol related problems.

Nineteen relationships were examined in order to ascertain what level of support existed for the hypothesis proposed. The nineteen variables tested were grouped under four headings: regular drinking; concern over alcohol; immoderate consumption; drinking difficulties. Table 5.1 sets out the relationships.

TABLE 5.1

Summary of Associations Tested Between
Alcohol Use and SES Measures

1. Regular Drinking:	...SES
	...Secondary School Qualifications
	...Post School Qualifications
2. Concern Over Alcohol:	
Missed Drinking	...SES
Worried About Drinking	...SES
3. Immoderate Consumption:	
Heavy Drinker (self defined)	...SES
	...Secondary School Qualifications
	...Post School Qualifications
(other defined)	...SES
No. of Attributions	...SES
Mean Consumption	...SES
Heavy Consumption (400 +)	...SES
	...Secondary School Qualifications
	...Post School Qualifications
4. Drinking Difficulties:	
Serious Drinking difficulty	...SES
	...Secondary School Qualifications
	...Post School Qualifications
Specified Drinking difficulty	...SES
No. of Drinking difficulties	...SES

Support for an Alternate Hypothesis: Low SES and Alcohol Related
Problems

With regard to low status drinking patterns, several relationships were suggested by the findings. The relationship between low SES and regular drinking however, remains unclear. Although a high percentage of this group drank regularly (77.5%), they did not seem particularly more likely to be regular drinkers than middle or high status individuals.

The association between low SES and heavy drinking was strongly suggested by the data. Heavy drinking was measured using four

different indices. Firstly, self definition ('I am a heavy drinker'); secondly, labelling by others ('my wife thinks I am a heavy drinker'); thirdly, self report consumption (measured in grams of absolute alcohol consumed per week); while the final index concerned the mean consumption figure for low status males.

A higher percentage of low SES males defined their drinking as heavy, and were labelled by others as heavy drinkers. Reported consumption figures indicate a higher percentage of low status males in the heaviest consumption category (400 + grams). In addition, a higher percentage of drinkers with a trade certificate consumed over 400 + grams per week than did those who had obtained university qualifications. Drinkers with no secondary school qualifications were also particularly likely to be in the heaviest consumption category. Finally, the mean consumption figure for low status drinkers was the highest of all three groups.

Of central concern to the present analysis was the relationship between heavy drinking and the incidence of alcohol related problems. From the data concerned with low SES drinking patterns, we can infer the existence of an association between immoderate consumption and alcohol problems. This group had the highest percentage of heavy drinkers, and the highest rates of self reported alcohol problems.

The nature of the relationship between low SES and alcohol problems may be accounted for if we assume that occupational vulnerability is status related, and that low status rather than high status occupations are characterised by greatest risk.

Unfortunately, the lack of statistical significance limits the extent to which positive statements can be made, and conclusions drawn, as to the nature of the relationships involved.

TABLE 5.2

Summary of Associations Between Alcohol
Use and SES Groups

Relationship	High SES	Low SES	Inconclusive
Regular Drinking	2	0	1
Concern over Alcohol	1*	1	0
Immoderate Consumption	0	8	1
Drinking Difficulties	0	5	0

* Denotes Statistically Significant

Table 5.2 summarises the nineteen associations outlined in Table 5.1. It was decided to report whether the pattern of associations tended to favour either high or low status groups, or alternatively, clearly favoured neither and could be regarded as inconclusive.

With regard to 'regular drinking', there were three associations tested. The findings did not suggest a relationship between regular drinking and SES (the first), therefore it was regarded as inconclusive. The other two associations however, with secondary school qualifications and post school qualifications, appeared positively related to SES, thus they were listed in the high SES column. The fact that none of the three associations for 'regular drinking' supported the low SES group was indicated by the zero in that column.

Of the two associations under the heading 'concern over alcohol', the high status group was more likely to miss alcohol the most, while the low status group indicated a greater level of concern about their drinking.

Eight of the nine relationships concerned with 'immoderate consumption' produced findings which suggest an association between low SES and heavy drinking. The only exception to this pattern, concerns the relationship between consumption and secondary school qualifications. Those drinkers consuming over 150 grams per week (level III and IV drinkers) had either the highest qualification (U.E.) or none at all. Because consumption was highest for both groups, the association was

regarded as inconclusive.

All five associations under the heading 'drinking difficulties' favoured a negative relationship between alcohol problems and SES.

Methodological Shortcomings

An alternative explanation for the pattern of findings reported in this study lies in the possibility that methodological procedures were either inadequate or inaccurate, and as a result the general hypothesis which stated that 'the higher an individual's SES, the more likely he is to experience alcohol related problems', has not been sufficiently tested.

There are some indications that high SES is positively linked to aspects of alcohol misuse. For instance, the findings highlighted an association between alcohol use and educational attainment.

Firstly, regular drinking was associated with secondary school qualifications. A higher percentage of respondents with University Entrance drank regularly, than did those with no secondary school qualifications.

Secondly, regular drinking was associated with post secondary school qualifications. A higher percentage of respondents with university qualifications drank regularly, than did those with a trade certificate.

McCreary (1973) also found a positive relationship between alcohol consumption and education, in his survey of two Wellington suburbs. The higher the respondent's level of education, the more likely that person was to be an 'upper quantity drinker'.

Another indication of the importance of alcohol to high status lifestyles may be deduced from the finding that nearly two thirds of high status drinkers reported that they would miss alcohol to some extent. This figure was much higher than for other groups, and the association was statistically significant.

A third indication involves the positive association between reported consumption (in the 400 + grams category) and secondary school qualifications. That group with the highest qualification (U.E.) had a particularly high percentage of drinkers consuming over 400 grams per week. However, it must be noted, that the group with no secondary school qualifications at all had a high percentage of drinkers in this category also.

With regard to the methodological limitations which may have influenced the usefulness of the data, firstly, there are always problems associated with the reliability and validity of responses gained from survey instruments. Surveys are often subject to bias, in the form of both under and overreporting.

One explanation for the patterns of responses reported in the present study pertains to the degree of validity and reliability associated with the response of particular SES groups. Respondents of high status may have considered the questions more threatening and provided covert responses as a result. Underreporting of quantities consumed, and a rationalisation of drinking behaviour may have combined to produce the patterns reported.

By contrast, low status males may be guilty of overreporting their consumption. If the low status male role includes an image of heavy drinking and the regarding of oneself as a heavy drinker able to 'handle the booze', then as a means of conforming to this male role, drinkers may have deliberately overreported the quantities they consumed.

By implication then, if underreporting is common amongst the high SES group, and if heavy drinking is related to the 'heavy' male role for low status drinkers, then differences in self report consumption figures may be due to class related images.

A second methodological problem concerns the sample. Design limitations may have resulted in the exclusion of some groups from the survey. The focus on household units may have excluded that part of the lowest SES group made up of a largely transient or homeless population.

A second group may have been omitted from the sample due to the fact that the demographic characteristics of the area sampled, particularly in terms of population concentration, were not sufficiently large to ensure a representative sample of all groups, and in particular those of highest SES.

Because only one relatively small city was incorporated within the sample area, this suggests that individuals in the highest SES group, for instance, managers and directors of large national or multi-national companies, banks and government institutions; financiers; accountants; consultants (economic, technological or marketing); and those individuals associated with the business scene in general, are much more likely to reside in or near a large urban metropolis such as Auckland or Wellington, rather than a city the size of Wanganui.

The implications for the present study are far reaching if this particular group, postulated to maintain a lifestyle in which the regular use of alcohol is accepted and encouraged, is greatly underrepresented in the sample. Incidentally, of the high status group (Elley-Irving levels 1 and 2), those individuals in level 1 were distinctly in the minority, the high status group being predominantly made up of individuals of level 2 status.¹

The final methodological problem concerns the measure of SES employed in the study. Any measure is at best an approximation. The measure used here, developed by Elley and Irving (1976) based on indices of education and income, has its shortcomings. There is considerable ambiguity surrounding some occupations, for example, 'farmers' and 'managers'.

The criticisms outlined here are not directed at the Elley-Irving index in particular, but apply to SES indices in general. There are likely to be problems associated with whatever SES rating scale is selected. There is no reason to believe that this one in particular was any more inadequate than others which could have been utilised.

¹ A breakdown of the high status group indicated that 32.4% were of level 1 status, while 67.6% were of level 2 status.

A Third Alternative

In the first place, the high status hypothesis has had to be rejected due to the lack of support from the findings, which clearly indicate a direction opposite from that hypothesised in theory, although there are indications, which have already been elaborated upon, suggesting that high status use of alcohol may be more frequent and of greater quantity than was indicated in this study.

Although the general trend of the findings suggested an association between low status and alcohol related problems, the lack of statistical significance prevents drawing any clear inferences concerning the relationships which were explored.

The distribution may be more complicated than a high versus low status pattern. If, for instance, occupational vulnerability is characteristic of jobs at both extremes of the SES scale, then the rate of alcohol problems is likely to be high for both groups, hence a curvilinear distribution.

Support for this alternative was cited by Mulford (1964) who noted that individuals with alcohol problems came from both the highest and lowest status occupational categories.

The association between heavy consumption (400 + grams per week) and secondary school qualifications, may be a further indication of support also. Those SES groups with the highest school qualification (U.E.) and no qualifications at all had the highest percentage of drinkers consuming over 400 grams per week.

Implications for Further Research

The use of SES as a construct for investigating the distribution of alcohol related problems has had obvious limitations. It has not usefully delineated the 'vulnerable' population from the 'nonvulnerable' in the sample.

'Vulnerability' may be a more important concept than occupational SES for investigating and accounting for the patterns

of alcohol related problems in society.

It is nonetheless possible that vulnerability is a function of SES, and that it characterises occupations at both ends of the status scale. Therefore, those individuals who are more vulnerable are more likely to drink greater quantities, indicate more problems associated with their drinking, and are more likely to indicate signs of dependency as a result of their drinking.

One necessary prerequisite to any in-depth analysis concerns the need to operationalise 'occupational vulnerability', enabling the concept to be tested empirically.

This would necessitate the construction of an occupational vulnerability scale which would enable the researcher to measure the degree of vulnerability characteristic of specific occupations.

Such a scale would need to incorporate the various occupational risk factors in terms of the degree of exposure risk characteristic of specific occupations.

Such a study suggests the investigation of an hypothesis relating to the fact that individuals in high risk occupations are more likely to develop alcohol related problems, than are those in low risk occupations.

Any in-depth study would need to select a sample from such a source as the New Zealand Census, identifying a population of male drinkers, preselected on the basis of their patterns of consumption, with an equal N for each of the six Elley-Irving occupation levels, subsequently investigated in terms of the degree of occupational vulnerability of each drinker's position.

The increasing economic and social 'costs' associated with excessive patterns of alcohol consumption make it imperative that continued research be carried out on patterns of consumption characteristic of occupational groups. If appropriate preventative and educational programmes aimed at reducing the social and emotional effects resulting from the misuse of alcohol are to be developed and

implemented, it is particularly important that the nature of the relationships relating to consumption of alcohol within the occupational context be clearly delineated. The need for such sustained research in New Zealand is incontrovertible.

APPENDIX 1Comparisons between W.H.P.P. Sample and Census Data
on selected Demographic Variables

Age in Decennial Groups

<u>Age</u>	<u>Sample</u>	<u>1971 Census</u>
0 - 9	20.9	22.0
10 - 19	19.3	20.8
20 - 29	13.2	13.6
30 - 39	12.1	10.7
40 - 49	10.6	10.8
50 - 59	9.8	9.3
60 - 69	7.6	7.1
70+	6.4	5.7
	99.9 (2743)	100.0

Sex

	<u>Sample</u>	<u>1976 Census</u>
Females	51.5	49.6
Males	48.5	50.4
	100.0 (2742)	100.0

Marital Status (aged 16 and over)

	<u>Sample</u>	<u>1976 Census</u>
Never married	19.0	22.1
Married	70.0	67.4
Widowed	7.2	7.4
Divorced	2.2	1.5
Separated	1.5	1.6
	99.9 (1831)	100.0

APPENDIX 2

Comparisons between Research Sample and Census Data on Selected Demographic Variables

	Occupational Status	
	<u>Sample</u>	<u>1976 Census</u>
Employer	5.0 (35)	8.2
Self Employed	22.7 (158) (a)	8.9
Wage/Salary	66.7 (465)	80.8
Unemployed	1.7 (12)	1.7
Relative assistance/ Other/More than one	3.9 (27) (b)	0.4
	100.0 (697) (c)	100.0

- (a) The large discrepancy between the sample and the Census figures may be due to the fact that many respondents considered themselves to be both self employed, for instance farming or in private business, as well as a wage or salary earner, that is, they paid themselves a wage. Which of the two they considered to be their principal choice was in many cases an arbitrary decision made at the time of the interview.
- (b) The relatively high percentage in this group reflects the fact that some respondents had two or more occupations which were regarded as of equal importance, thus they were included in this category.
- (c) This total does not include 118 respondents who had retired, as well as 53 students. Therefore the total N was 868.

<u>Age Groups</u>	<u>Age</u> <u>Sample</u>	<u>1976 Census</u>
16 - 19*	14.4 (125)	11.4
20 - 24	8.6 (75)	12.3
25 - 34	19.9 (173)	21.2
35 - 44	15.4 (134)	15.7
45 - 54	16.3 (142)	15.7
55 - 64	12.1 (105)	12.2
65 - 74	8.9 (77)	8.1
75+	4.4 (38)	3.4
	100.0 (869)	100.0

* These figures are not strictly comparable because the research sample included 15 year olds.

APPENDIX 3

The Wanganui Health Planning Project Questionnaire Schedule
Questionnaire Form A: For Respondents Aged 12 and Over

All respondents over 12 years of age were interviewed with this twenty page schedule. For respondents under 12, an abbreviated version 'Form B' was used. The latter omitted sections on alcohol use, religion and occupation.

Wanganui Health Planning Project: Questionnaire Form A

(For all respondents aged 12 and over)

ID

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

1

Interviewer: Transfer from
Household Information Sheet

Number in household

--	--

12

Household Classification

--	--

14

Position in household

--	--

16

In this interview we are
interested in gaining information
and opinions on a wide range of
topics associated with health and
health services.

1. May I begin by asking you to
describe your present state of
health? Is it

Interviewer: Read 1 - 5

Always good

1

18

Usually good

2

Variable

3

Usually poor

4

Always poor

5

Don't know

6

2. Compared with a year ago, would you
say your health is.....

Interviewer: Read 1 - 3

Better now

1

19

Worse now

2

About the same

3

Don't know

4

3. Have you had any of the
following over the last month?

Interviewer: Show Card A

- | | | |
|--|--------------------------|----|
| A bad cough..... | <input type="checkbox"/> | 20 |
| Pain or swelling in joints..... | <input type="checkbox"/> | 21 |
| Any itching of the scalp or scalp irritation..... | <input type="checkbox"/> | 22 |
| Sleeplessness..... | <input type="checkbox"/> | 23 |
| A sore throat, cold or difficulty in swallowing..... | <input type="checkbox"/> | 24 |
| Not being able to remember things..... | <input type="checkbox"/> | 25 |
| Chest pain..... | <input type="checkbox"/> | 26 |
| A bad backache..... | <input type="checkbox"/> | 27 |
| Feeling dizzy or faint..... | <input type="checkbox"/> | 28 |
| Constantly worried about things..... | <input type="checkbox"/> | 29 |
| Bad dreams or nightmares..... | <input type="checkbox"/> | 30 |

Constipation.....	<input type="checkbox"/>	31
Having no-one to talk with.....	<input type="checkbox"/>	32
Bad headaches.....	<input type="checkbox"/>	33
Feeling your life is going nowhere.....	<input type="checkbox"/>	34
Finding it hard to breathe at night or when working.....	<input type="checkbox"/>	35
Fever or high temperature.....	<input type="checkbox"/>	36
Being upset by remembering things you've done in the past.....	<input type="checkbox"/>	37
Feeling depressed or very unhappy.....	<input type="checkbox"/>	38
Skin infection or skin rash.....	<input type="checkbox"/>	39
Bad toothache.....	<input type="checkbox"/>	40
Often finding it hard to control your temper.....	<input type="checkbox"/>	41
Asthma, wheezy breathing or hayfever.....	<input type="checkbox"/>	42
Any eye infection or swelling of the eyes.....	<input type="checkbox"/>	43
Mental strain or nervousness.....	<input type="checkbox"/>	44
An upset stomach, vomiting, diarrhoea or stomach pain.....	<input type="checkbox"/>	45
Problems with hands and/or feet.....	<input type="checkbox"/>	46
Any injury (work, school, home, car, sport, etc.).....	<input type="checkbox"/>	47
Bad earache or running ear.....	<input type="checkbox"/>	48
Weakness or tiredness of body.....	<input type="checkbox"/>	49
Feel unable to make the effort to do things.....	<input type="checkbox"/>	50
A fear of certain places or things.....	<input type="checkbox"/>	51
Pain or cramp in the arms or legs.....	<input type="checkbox"/>	52
Feeling that life is getting on top of you.....	<input type="checkbox"/>	53

3a. Have you had any other symptoms
in the last month?

Describe.....	<input type="checkbox"/>	54
Describe.....	<input type="checkbox"/>	55
Describe.....	<input type="checkbox"/>	56

Interviewer: If no symptoms indicated
for Q.3 or Q.3a., go to Q.5

4. Did any of these symptoms require
you to do anything or consult anyone?

Yes

No

N/A

1

57

2

9

Interviewer: If no, go to Q.5

- 4a. Could you look at this card and tell me which of these things you did and who if anyone you consulted?

Interviewer: Show Card B

Rested in bed.....	<input type="checkbox"/>	58
Changed or reduced diet.....	<input type="checkbox"/>	59
Took tablets or medicine prescribed by a Doctor.....	<input type="checkbox"/>	60
Took tablets or medicine bought from a chemist.....	<input type="checkbox"/>	61
Restricted your activities.....	<input type="checkbox"/>	62
Engaged in prayer.....	<input type="checkbox"/>	63
Tried to think more positively.....	<input type="checkbox"/>	64
Used some sort of home remedy.....	<input type="checkbox"/>	65
<u>Consulted...</u>		

Your spouse.....	<input type="checkbox"/>	66
Parents or other relatives.....	<input type="checkbox"/>	67
Local Doctor.....	<input type="checkbox"/>	68
A medical Specialist.....	<input type="checkbox"/>	69
Dentist.....	<input type="checkbox"/>	70
Hypnotherapist.....	<input type="checkbox"/>	71
Osteopath.....	<input type="checkbox"/>	72
Tohunga.....	<input type="checkbox"/>	73
Physiotherapist.....	<input type="checkbox"/>	74
Alcoholics Anonymous.....	<input type="checkbox"/>	75
Colour Therapist.....	<input type="checkbox"/>	76
Chiropractor.....	<input type="checkbox"/>	77
Psychiatric service.....	<input type="checkbox"/>	78
Counsellor or Social worker.....	<input type="checkbox"/>	79
A Hospital Outpatients clinic.....	<input type="checkbox"/>	80
Occupational Therapist.....	<input type="checkbox"/>	12
Nurse (District, Plunket, Public Health, etc).....	<input type="checkbox"/>	13
Phone counselling service.....	<input type="checkbox"/>	14
Acupuncturist.....	<input type="checkbox"/>	15
Naturopath.....	<input type="checkbox"/>	16
Clergy or Religious Counsellor	<input type="checkbox"/>	17

Took any other action (What was this?).....	<input type="checkbox"/>	18
---	--------------------------	----

5. Do you currently have.....

Interviewer read

A physical impairment or complaint	<input type="checkbox"/>	19
Emotional problems	<input type="checkbox"/>	20
Any psychological difficulties	<input type="checkbox"/>	21

Interviewer: If none indicated, go to Q.6

- 5a. Could you give me a medical name for the complaint(s)/problem(s) you have?

Interviewer: If unable to give name, ask for a full description.

1.
.....
2.
.....
3.
.....

☐ ☐

22

☐ ☐

24

☐ ☐

26

Interviewer: If more than one, ask which is most serious and circle number beside it.

- 5b. Do you regard this as.....

Interviewer: Read 1 - 4

A severe disability

A moderate disability

A slight disability

Not a disability

Don't know

N/A

1
2
3
4
5
9

28

Interviewer: If not a disability or don't know, go to Q.6. Otherwise proceed with Q.5c.

- 5c. In which, if any, of these areas does it limit you or cause you difficulties?

Interviewer: Show Card C

- Your work or employment opportunities..... ☐ 29
- Your friendships and social life..... ☐ 30
- Being able to care for your family..... ☐ 31
- Looking after yourself and providing for your own needs..... ☐ 32
- Being able to do jobs or gardening around the house..... ☐ 33
- Recreation or sporting activities..... ☐ 34
- Getting out to shops, Doctor, etc..... ☐ 35
- Your marriage or home life..... ☐ 36
- Other difficulties (What are these..... ☐ 37
-;..... ☐ 37

5d. How long have you had this disability?

Under 6 months
Under 12 months
Under 18 months
Under 2 years
Under 5 years
Under 10 years
Over 10 years
Lifetime
N/A

1
2
3
4
5
6
7
8
9

38

5e. Would you say it was

Interviewer: Read 1 - 4

Stable
Recurring
Getting worse
Improving
Don't know
N/A

1
2
3
4
5
9

39

5f. Is there anyone currently in charge of your treatment for this disability?

Interviewer: Prompt by reading
1 - 4 if necessary

Local Doctor
Private Specialist
Hospital
Other (Specify)
No-one

1
2
3
4
5

40

5g. Are there any services not available at present which would assist you in coping with this disability?

Interviewer: Record suggestions

.....

.....

Yes
No
N/A

1
2
9

41

6. If you were worried about your health, who would you most likely go to?

Interviewer: Show Card B and code number here

--	--

42

7. How many times have you made use of health services in the last 12 months?

Interviewer: Ask with respect to each service

	None	Once	Twice	3 Times	4-6 Times	7-12 Times	More than 12 Times	
Local Doctor or Specialist	1	2	3	4	5	6	7	44
Hospital: Accident & Emergency	1	2	3	4	5	6	7	45
Hospital: Clinics & other Services	1	2	3	4	5	6	7	46
Nurse: Plunket, Public Health, District, etc.	1	2	3	4	5	6	7	47

- 7a. Has your use of health services in this 12 month period been typical for you?

Yes

No, less than usual

No, more than usual

Don't know

1	48
2	
3	
4	

8. What, if any, is the main difficulty encountered in using these health services?

Interviewer: Show Card D, and code appropriate response for each service.

Code 00 where no difficulties encountered

Code 99 where no use or attempted use of service by the respondent.

Local Doctor or Specialist.....	<input type="checkbox"/>	<input type="checkbox"/>	49
Hospital: Accident and Emergency.....	<input type="checkbox"/>	<input type="checkbox"/>	51
Hospital: Clinics and other services.....	<input type="checkbox"/>	<input type="checkbox"/>	53
Nurse: Plunket, Public Health, District, etc.....	<input type="checkbox"/>	<input type="checkbox"/>	55

9. For each of these health services, could you tell me whether you are very satisfied, satisfied, partially satisfied, dissatisfied or very dissatisfied?

	Very satisfied	Satisfied	Partially Dis- Satisfied	Dis- satisfied	Very dis- satisfied	N/A	
Local Doctor or Specialist		2	3	4	5	9	57
Hospital: Accident & Emergency	1	2	3	4	5	9	58
Hospital: Clinics & other Services	1	2	3	4	5	9	59
Nurse: Plunket, Public Health, District etc	1	2	3	4	5	9	60

Interviewer: If categories
3, 4 & 5 not used above, go
to Q.10.

- 9a. What are the major reasons for your dissatisfaction with the health services?

.....
.....
.....

- 9b. Can you suggest any ways in which the services could be improved?

.....
.....
.....

10. I'd like to know when you last had a routine check-up with a Doctor?

Interviewer: Read 1 - 6

Last 6 months
Last 12 months
Last 2 years
Last 5 years
Over 5 years ago
Never
Don't know

1
2
3
4
5
6
7

61

11. Do you have your own Doctor to whom you would go if you were ill?

Yes

No

Don't know

1	62
2	
3	

12. Could you tell me which of these illnesses you are currently vaccinated or immunised against?

Interviewer read

Tuberculosis.....	<input type="checkbox"/>	63
Whooping cough.....	<input type="checkbox"/>	64
German measles (Rubella)....	<input type="checkbox"/>	65
English measles (Morbelli)..	<input type="checkbox"/>	66
Polio.....	<input type="checkbox"/>	67
Diphtheria.....	<input type="checkbox"/>	68
Tetanus.....	<input type="checkbox"/>	69
Other (Specify).....	<input type="checkbox"/>	70

13. Here is a list of reasons that people sometimes give for not going to see the dentist. For each one could you tell me whether that has ever been a reason for you not to visit the dentist.

Interviewer read

Nothing wrong.....	<input type="checkbox"/>	71
Afraid of pain.....	<input type="checkbox"/>	72
Too expensive.....	<input type="checkbox"/>	73
Too far to go.....	<input type="checkbox"/>	74
Too long to get an appointment	<input type="checkbox"/>	75
Haven't the time	<input type="checkbox"/>	76
No teeth or false teeth.....	<input type="checkbox"/>	77
Afraid of dentist.....	<input type="checkbox"/>	78

14. Are you taking tablets, medicine or any other medication at present?

Yes

No

1	79
2	

Interviewer: If no, go to Q.15

- 14a. Are these prescribed by a Doctor, or did you buy them from a chemist?

Prescribed

Bought

Both

Don't know

N/A

1	80
2	
3	
4	
9	

15. Over the last 2 years, how many times have you stayed overnight in a hospital because of some illness or injury?

Interviewer: If none, go to Q.16

No. of times

--	--

12 3

- 15a. Altogether how many nights have you spent in a hospital over the last 2 years?

No of nights

--	--	--

14

16. If you needed admission to a hospital for treatment and were put on a waiting list of 6 months or longer, what action do you think you would take?

Interviewer: Prompt by reading 1-2 if necessary

Wait for turn

Go to private hospital

Depends on circumstances

Other (Specify).....

.....

Don't know

1
2
3
4
5

17

17. Are you currently on a hospital waiting list?

Yes

No

Don't know

1
2
3

18

Interviewer: If no or don't know, go to Q.18

- 17a. How many months have you been waiting?

No. of months

--	--

19

18. Do you have any private medical insurance?

Yes

No

Don't know

Object or N/A

1
2
3
9

21

19. Are there any additional health services which you think should be provided in this area?

Yes

No

Don't know

1
2
3

22

Interviewer: Note comments here

.....

I'd now like to ask you a few questions about your social activities.

20. Firstly, how many times in an average week would friends, relatives or acquaintances visit you?

Interviewer: Prompt by reading 1 - 5 if necessary

Less than once a week
About once a week
2-5 times a week
6-10 times a week
More than 10 times a week
Don't know
N/A

1
2
3
4
5
6
9

23

21. In an average week, how many times would you go out to visit friends, relatives or acquaintances?

Interviewer: Prompt by reading 1-5 if necessary

Less than once a week
About once a week
2-5 times a week
6-10 times a week
More than 10 times a week
Don't know
N/A

1
2
3
4
5
6
9

24

22. Could you tell me whether you now drink or have ever drunk alcohol on a regular basis

Interviewer note: Consider at least one drink a month would qualify as regular

Yes - I drink alcohol on a regular basis
Yes - I used to drink alcohol on a regular basis
No - I have never drunk alcohol on a regular basis
Object

1
2
3
9

25

Interviewer: If Yes - I drink alcohol on a regular basis go to Q.'s 23 - 28 (Page 11)

If yes - I used to drink alcohol on a regular basis go to Q.'s 29 - 34 (Page 12)

If No, I have never drunk alcohol on a regular basis, go to Q.39

Object go to Question 39.

FOR REGULAR DRINKERS ONLY

23. If you ever had to give up drinking alcohol altogether, how much do you think you would miss it?

A lot
Some
A little
Not at all
N/A

1
2
3
4
9

26

24. For how long a time have you been drinking alcohol on a regular basis?

Interviewer: Write in the total number of years here

--	--

27

Interviewer: For Questions 25-28 refer to the conversion tables in your Coding Sheet

25. Could you tell me about how much beer you would drink in a typical week?

Interviewer: Write in the total number of bottles here

--	--

26. Could you tell me about how much table wine you would drink in a typical week?

Interviewer: Write in the total number of glasses here

--	--

27. Could you tell me about how much sherry/port you would drink in a typical week?

Interviewer: Write in the total number of glasses here

--	--

28. Could you tell me about how much spirits/liqueurs you would drink in a typical week?

Interviewer: Write in the total number of nips here

--	--	--

Interviewer: Now go to Question 35

--	--	--

29

FOR NON REGULAR DRINKERS ONLY

29. Since you gave up drinking alcohol on a regular basis, how much do you miss it?

A lot
Some
A little
Not at all
N/A

1
2
3
4
9

32

30. For how long a time did you drink alcohol on a regular basis?

Interviewer: Write the number of years here

--	--

33

Interviewer: For questions 31-34 refer to the conversion tables in your Coding Sheet

31. Could you tell me about how much beer you used to drink in a typical week?

Interviewer: Write in the total number of bottles here

--	--

32. Could you tell me about how much table wine you used to drink in a typical week?

Interviewer: Write in the total number of glasses here

--	--

33. Could you tell me about how much sherry/port you used to drink in a typical week?

Interviewer: Write in the total number of glasses here

--	--

34. Could you tell me about how much spirits/liqueurs you used to drink in a typical week?

Interviewer: Write in the total number of nips here

--	--	--

Interviewer: Now go to Question 35

--	--	--

35

INTERVIEWER: THESE QUESTIONS ARE FOR BOTH REGULAR AND NON REGULAR DRINKERS

35. Some people worry about their drinking even though they may not really drink all that much. How much do you worry about your drinking?

A lot

Some

A little

Not at all

N/A

1
2
3
4
9

38

36. Do you feel that your drinking is creating now or has created in the past any serious difficulties for you?

Yes

No

Object

N/A

1
2
3
9

39

Interviewer: If no, object, or N/A go to Q.37.

- 36a. Could you indicate in which of the following areas these difficulties have occurred ?

Interviewer: Read out & tick the appropriate box(es).

	Now	Past	
Your health.....	<input type="checkbox"/>	<input type="checkbox"/>	40
Your friendships & social life.....	<input type="checkbox"/>	<input type="checkbox"/>	42
Your work or employment opportunities	<input type="checkbox"/>	<input type="checkbox"/>	44
Your marriage or home life.....	<input type="checkbox"/>	<input type="checkbox"/>	46
Your financial position	<input type="checkbox"/>	<input type="checkbox"/>	48
Looking after yourself & providing for your own needs.....	<input type="checkbox"/>	<input type="checkbox"/>	50
Being able to care for your family.....	<input type="checkbox"/>	<input type="checkbox"/>	52
Feeling frustrated or angry before or after you drink.....	<input type="checkbox"/>	<input type="checkbox"/>	54

37. To the best of your knowledge, have any of the following people ever regarded you as being a heavy drinker, problem drinker or compulsive drinker?

Interviewer: Read & tick the appropriate box(es).

Spouse.....	<input type="checkbox"/>	56
Relative.....	<input type="checkbox"/>	57
Friend/Acquaintance..	<input type="checkbox"/>	58
Neighbour.....	<input type="checkbox"/>	59
Doctor.....	<input type="checkbox"/>	60
Workmates.....	<input type="checkbox"/>	61
Counsellor/.....	<input type="checkbox"/>	62
Social Worker		

38. Do you now or have you ever regarded yourself as being a heavy drinker, problem drinker or compulsive drinker?

Yes

No

Object or N/A

1
2
9

63

INTERVIEWER: THESE QUESTIONS ARE FOR ALL RESPONDENTS

39. Do you feel that anyone else's drinking is now creating or has created in the past any serious difficulties for you?

Yes

No

Object

N/A

1
2
3
9

64

Interviewer: If no, object, or N/A go to Q.40

- 39a. Could you indicate in which of the following areas these difficulties have occurred.

Interviewer: Read out and tick the appropriate box(es).

Your health.....

Your friendships and social life.....

Your work or employment opportunities..

Your marriage or home life.....

Your financial position.....

Looking after yourself and providing for your own needs.....

Being able to care for your family.....

Feeling frustrated or angry before or after you drink.....

Now Past

☐ ☐ 65

☐ ☐ 67

☐ ☐ 69

☐ ☐ 71

☐ ☐ 73

☐ ☐ 75

☐ ☐ 77

☐ ☐ 79

Interviewer: If no areas indicated go to Q.39b. anyway

- 39b. Is that person concerned a member of this household?

Yes

No

Object

N/A

1
2
3
9

12

4

For much of the interview we have been discussing questions related primarily to health. I'd now like to conclude by asking you some general information questions.

Sex Female
 Male

1
2

13

40. Could you tell me your age in years?

Years



--	--

14

41. What is your marital status?
Are you...

Interviewer: Read 1-5

Single
Married
Widowed
Divorced
Separated

1
2
3
4
5

16

42. What racial group do you belong to?

Interviewer: Prompt by reading 1 - 6 if necessary

European
Maori
Polynesian
Chinese
Indian
Other (Specify)
.....
Don't know

1
2
3
4
5
6
7

17

43. Were you born in New Zealand?

Yes
No

1
2

18

44. How long have you lived in New Zealand?

Under 6 months
Under 12 months
Under 5 years
Under 10 years
10 years or longer
All of life

1
2
3
4
5
6

19

Interviewer: For respondents aged under 15, go to Q.50.

45. Has this been your permanent address for the last 5 years?

Yes

No

1
2

20

Interviewer: If yes, go to Q.46

45a. How many times have you shifted permanent address over the last 5 years?

Once

Twice

Three times

Four times

Five or more times

N/A

1
2
3
4
5
9

21

46. Could you look at the card and tell me what your main occupation is?

Interviewer: Show Card E

Employer of labour.....

Self employed.....

Wage or salary earner....

Student.....

Household duties.....

Unemployed.....

Retired.....

Not working through.....
accident or illness

Other or more than one...
(Specify).....

N/A.....

0	1
0	2
0	3
0	4
0	5
0	6
0	7
0	8
1	0
9	9

22

Interviewer: If respondent not in paid employment, go to Q.46f. Otherwise proceed with Q.46a.

46a. Could you tell me what your job is called?

--

24

Interviewer: Obtain accurate description. If necessary, ask what duties are entailed.

.....
.....

6b. Are you presently working full time or part time?

Full time

Part time

N/A

Interviewer note: Full time = 30 hours or more per week

1	25
2	
9	

6c. Is this a permanent or casual job?

Permanent

Casual

N/A

1	26
2	
9	

6d. Do you have any other part time jobs as well?

Yes

No

N/A

1	27
2	
9	

Interviewer: Go to Q.47

6e. (For respondents not currently in paid employment)

Have you ever been in paid employment?

Yes, full time

Yes, part time only

No previous employment

N/A

1	28
2	
3	
9	

Interviewer: If no previous employment, go to Q.47

6f. Could you tell me what your last job was called?

Interviewer: Obtain accurate description. If necessary, ask what duties were entailed

	29
--	----

.....

47. What is the major source of your income?

Interviewer: Prompt by reading list if necessary

Salary, wages or other earnings from employment.....	0	1	30
Income from business, farm or sale of goods & services.....	0	2	
Interest, dividends or rents from savings, shares or property.....	0	3	
Annuities paid to you regularly, e.g. Superannuation or Life Insurance from employer or firm	0	4	
Social Benefits/State Payments, includes National Superannuation; Sickness, Unemployment and Domestic Purposes Benefits; War Pensions; Bursaries; Accident Compensation etc.	0	5	
Monetary contributions from friends, relatives or organisations	0	6	
Receipts from persons paying board, including other family members	0	7	
Other Sources (Specify).....	0	8	
Rely on spouse, parents, etc. for support.....	1	0	
N/A.....	9	9	

Interviewer: Where necessary, check if still attending secondary school. If so, go to Q.51

48. How many years did you spend at secondary school?

No. of years

32

49. What was your highest school exam qualification?

None

1

33

Proficiency examination

2

School Cert. in 1-3 papers

3

School Cert. in 4+ papers

4

University Entrance

5

Higher School Certificate

6

Bursary or Scholarship

7

Other (Please state)

8

.....

N/A.....

9

50. Have you gained any further qualifications since leaving school?

Yes

1

34

No

2

N/A

9

Interviewer: If no, go to Q.51

50a. What qualifications do you have?

Interviewer: Prompt by reading if necessary

- | | | |
|--|--------------------------|----|
| Commercial qualifications
(e.g. Pitmans) | <input type="checkbox"/> | 35 |
| Professional qualifications
(e.g. teaching) | <input type="checkbox"/> | 36 |
| Technicians Certificate | <input type="checkbox"/> | 37 |
| Trade Certificate | <input type="checkbox"/> | 38 |
| University Degree/Diploma | <input type="checkbox"/> | 39 |
| Other (Please describe)..... | <input type="checkbox"/> | 40 |
| None..... | <input type="checkbox"/> | 41 |

51. How would you describe your religious beliefs?

Interviewer: Read 1 - 4

- | | | |
|---------------|--------------------------|----|
| None | <input type="checkbox"/> | 42 |
| Some belief | <input type="checkbox"/> | |
| Fairly strong | <input type="checkbox"/> | |
| Very strong | <input type="checkbox"/> | |
| Don't know | <input type="checkbox"/> | |
| Object or N/A | <input type="checkbox"/> | |

Interviewer: If none, go to Q.53

52. Do you belong to any religious group?

- | | | |
|---------------|--------------------------|----|
| Yes | <input type="checkbox"/> | 43 |
| No | <input type="checkbox"/> | |
| Object or N/A | <input type="checkbox"/> | |

Interviewer: If no, go to Q.53

52a. Which group do you belong to?

- | | | |
|-------------------------------|--------------------------|----|
| Anglican | <input type="checkbox"/> | 44 |
| Presbyterian | <input type="checkbox"/> | |
| Roman Catholic | <input type="checkbox"/> | |
| Methodist | <input type="checkbox"/> | |
| Baptist | <input type="checkbox"/> | |
| Ratana | <input type="checkbox"/> | |
| Latter Day Saints
(Mormon) | <input type="checkbox"/> | |
| Other (Specify)..... | <input type="checkbox"/> | |
| Object or N/A | <input type="checkbox"/> | |

53. I'm going to ask you how much your religious views affect certain areas of your life. In each case, could you tell me whether there is a considerable effect, some effect or no effect

Considerable Effect Some Effect No Effect Don't Know Object or N/A

Your general health	1	2	3	4	9
Your choice & use of food	1	2	3	4	9
How you think about & use alcohol	1	2	3	4	9
Your friendships & social life	1	2	3	4	9

45

46

47

48

Interviewer: The next question to be asked only of those who completed the Household Sheet. Transfer coding to all other members of household.

- 54 Finally, it would help me to have some information on the income of this household. We don't wish to know the exact amount, but could you look at this card and tell me into which of these groups your total annual household income falls?

Interviewer: Show Card F

\$

0-1999

2000-3999

4000-5999

6000-7999

8000-9999

10,000-11,999

12,000-13,999

14,000-15,999

16,000-17,999

18,000-19,999

20,000-24,999

25,000-29,999

30,000+

0	1
0	2
0	3
0	4
0	5
0	6
0	7
0	8
1	0
1	1
1	2
1	3
1	4

49

That brings us to the end of this interview. Thank you very much for giving of your time. When the results of this survey become available you will be sent a report on the findings.

APPENDIX 4

Alcohol Conversion Table

The quantities of liquor were initially noted by the interviewers in bottles (beer), glasses (table wine, fortified wine) and nips (spirits/liqueurs). The conversion table below was then used to convert these into grams of alcohol. These were then summed to give a total weekly alcohol consumption figure for present drinking, or past drinking in the case of respondents no longer drinking regularly.

Conversion Table

Beer	5.6 gms	200ml glass
	13 gms	1 can
	20 gms	1 bottle (745mls)
	28 gms	1 jug (5 glasses)
	60 gms	1 flagon
Table Wine	12 gms	1 glass (6 per bottle)
	72 gms	26oz. bottle (750mls)
Fortified Wine (port/sherry)	5.5 gms	1 glass (22 per bottle)
	120 gms	26oz. bottle (750mls)
	360 gms	1 flagon
Spirits/Liqueurs	6.2 gms	1 'nip'
	260 gms	26oz. bottle (750mls)

APPENDIX 5

Ordinal Scales Developed from Raw Data

I: Weekly Consumption of Alcohol in Grams: 4 Level Scale

- 1 0 - 49
- 2 50 - 149
- 3 150 - 399
- 4 400+

II: Weekly Consumption of Alcohol in Grams: 5 Level Scale

- 1 0 (less than 1 gram per week on average)
- 2 1 - 49
- 3 50 - 149
- 4 150 - 399
- 5 400+

APPENDIX 6

Data on Patterns of Alcohol Use Among Females

TABLE 1

Drinking Status of Females: In SES Group Percentages

<u>Drinker Status</u>	<u>SES</u>		
	High	Middle	Low
Regular Now	61.5 (40)	59.7 (259)	48.3 (185)
Regular Past	7.7 (5)	4.4 (19)	9.4 (36)
Never Regular	30.8 (20)	35.9 (156)	42.3 (162)
	100.0 (65)	100.0 (434)	100.0 (383)
	df = 4		N = 882
	Chi Square = 16.17*		p .05
	Cramer's V = 0.09		

TABLE 2

How Much Would Miss Drinking Alcohol: In SES Groups

<u>Degree Would Miss Drinking</u>	<u>SES</u>		
	High	Middle	Low
A lot	2.5 (1)	1.9 (5)	1.1 (2)
Some	10.0 (4)	10.0 (26)	5.4 (10)
A little	25.0 (10)	25.1 (65)	19.5 (36)
Not at all	62.5 (25)	62.9 (163)	74.1 (137)
	100.0 (40)	99.9 (259)	100.1 (185)
	df = 6		N = 484
	Chi square = 7.32 (n.s.)		
	Cramer's V = 0.08		

TABLE 3

How Much Respondents Worry About Their Drinking:
In SES Groups

<u>Degree of Worry</u>	<u>SES</u>					
	High		Middle		Low	
A lot, Some or A little	2.3	(1)	6.5	(18)	10.0	(22)
Not at all	97.7	(43)	93.5	(259)	90.0	(198)
	100.0	(44)	100.0	(277)	100.0	(220)

df = 2

N = 541

Chi square = 4.04 (n.s.)

Cramer's V = 0.09

TABLE 4

Females Who Have Regarded Their Drinking as Heavy:
In SES Groups

	<u>SES</u>					
	High		Middle		Low	
<u>% of Heavy Drinkers</u>	0.0		2.5	(7)	5.9	(13)
<u>% of Non-Heavy Drinkers</u>	100.0	(46)	97.5	(269)	94.1	(206)
	100.0	(46)	100.0	(276)	100.0	(219)

N = 541

Chi square test inappropriate due to low cell frequencies.
Cramer's V = 0.10

TABLE 5

Females Who Have Been Regarded As Heavy Drinkers By Others:
In SES Groups

	<u>SES</u>					
	High		Middle		Low	
<u>% Regarded as Heavy Drinkers</u>	1.5	(1)	2.8	(12)	5.2	(20)
<u>% Regarded as Non-Heavy Drinkers</u>	98.5	(64)	97.2	(423)	94.8	(363)
	100.0	(65)	100.0	(435)	100.0	(383)

df = 2

N = 883

Chi square = 0.11 (n.s.)

Cramer's V = 0.07

TABLE 6

Alcohol Grams Per Week For Current Female Drinkers:
In SES Groups

SES Group	Sum	Mean	Std. Dev.	Variance	N
High	1910.00	45.47	40.52	1641.96	(42)
Middle	14820.00	58.34	78.24	6122.49	(254)
Low	10598.00	56.97	72.41	5243.79	(186)

TABLE 7

Alcohol Grams Per Week For Currently Drinking Females:
In SES Groups

Grams of Alcohol (grouped)		SES					
		High		Middle		Low	
I	0 - 49	66.7	(28)	64.2	(163)	63.4	(118)
II	50 - 149	30.9	(13)	28.0	(71)	30.1	(56)
III	150 - 399	2.4	(1)	6.7	(17)	5.4	(10)
IV	400 +	0.0		1.2	(3)	1.1	(2)
		100.0	(42)	100.1	(254)	100.0	(186)

N = 482

Chi square test inappropriate due to low cell frequencies.
Cramer's V = 0.08

TABLE 8

Percentage of Presently Drinking Females With Difficulties:
In SES Groups

	SES					
	High		Middle		Low	
% With Drinking Difficulty	0.0		3.6	(10)	7.2	(16)
% With No Drinking Difficulty	100.0	(44)	96.4	(264)	92.8	(205)
	100.0	(44)	100.0	(274)	100.0	(221)

N = 539

Chi square test inappropriate due to low cell frequencies.
Cramer's V = 0.10

TABLE 9

Percentage of Females With Specified Drinking Difficulties:
In SES Groups

<u>Area of Drinking Difficulty</u>	<u>SES</u>					
	High		Middle		Low	
Health	0.0		1.1	(5)	1.8	(7)
Social Life	0.0		0.9	(4)	1.8	(7)
Work/Employment	0.0		0.2	(1)	0.3	(1)
Marriage/Home Life	0.0		0.7	(3)	2.6	(10)
Financial	0.0		0.2	(1)	1.3	(5)
Self Care	0.0		0.5	(2)	1.0	(4)
Caring for Family	0.0		0.2	(1)	0.5	(2)
Angry/Frustrated	0.0		0.7	(3)	1.0	(4)

Composite Table

TABLE 10

Number of Present or Past Alcohol Problems: For all Female Drinkers;
In SES Groups

<u>No. of Alcohol Problems</u>	<u>SES</u>					
	High		Middle		Low	
None	100.0	(65)	98.2	(427)	95.8	(367)
One	0.0		0.7	(3)	1.8	(7)
Two	0.0		0.5	(2)	0.8	(3)
Three or More	0.0		0.7	(3)	1.6	(6)
	100.0	(65)	100.1	(435)	100.0	(383)

N = 883

Chi square test inappropriate due to low cell frequencies.
Cramer's V = 0.06

APPENDIX 7

Variables Used In This Study

A. Aspects of Alcohol Use

- 1 Whether drink or have drunk alcohol
- 2 How much would miss alcohol
- 3 How much worry about drinking
- 4 Have regarded self as heavy drinker
- 5 SEENASAL Whether anyone regards as heavy drinker
- 6 ALATTRIB Number of attributions as a heavy drinker

B. Alcohol Consumption

- 7 Alcohol grams per week now
- 8 Alcohol grams per week past
- 9 GRAMSWK 1 Alcohol grams per week now (grouped)
- 10 GRAMSWK 2 Alcohol grams per week past (grouped)

C. Alcohol Problems

- 11 Whether drinking created difficulties
- 12 ALCPROB 1 Alcohol, health problems
- 13 ALCPROB 2 Alcohol, social life problems
- 14 ALCPROB 3 Alcohol, work problems
- 15 ALCPROB 4 Alcohol, marriage/home life problems
- 16 ALCPROB 5 Alcohol, financial problems
- 17 ALCPROB 6 Alcohol, self care problems
- 18 ALCPROB 7 Alcohol, caring for family problems
- 19 ALCPROB 8 Alcohol, angry or frustrated
- 20 NOWALC Number of alcohol problems now
- 21 PASTALC Number of alcohol problems past
- 22 ALCDIF Number of alcohol problems now or in the past

D. Demographic

- 23 Sex
- 24 Age
- 25 Highest school exam qualification
- 26 Post secondary school qualification
- 27 SES

E. New Variable

- 28 GRAMSWK 3 Alcohol grams per week now and past (grouped)

REFERENCES

- Amark, C.
1970 "A Study of Alcoholism." Acta Psychiatrica et Neurologica Supplementum 70: 237-243.
- Archer, J.
1977 "Occupational Alcoholism." In Schramm, C.J. (ed.) Alcoholism and its Treatment in Industry. Baltimore: Johns Hopkins University Press, 2-28.
- Asher, B., F. Fordham and D. Pitcher
1979 Health in the Wanganui Region: A Survey of Behaviour and Opinions. Massey University.
- Australian Senate Standing Committee on Social Welfare. Report.
1977 Government Printer: Canberra.
- Blalock, H.M.
1960 Social Statistics. New York: McGraw-Hill.
- Brun-Gulbrandsen, S. and O. Irgens-Jensen
1967 "Abuse of Alcohol Amongst Seamen." British Journal of Addiction 62: 19-27.
- Cahalan, D.
1970 Problem Drinkers: A National Survey. Jossey-Bass: San Francisco.
- Cahalan, D. and I.H. Cisin
1968 "ADP Summary of Findings From a National Probability Sample. I Extent of Drinking by Population Subgroups." Quarterly Journal of Studies on Alcohol 29: 130-151.
- 1968a "ADP Summary of Findings From a National Probability Sample. II Measurement of Massed Versus Spaced Drinking." Quarterly Journal of Studies on Alcohol 29: 642-656.
- Cahalan, D., I.H. Cisin and H.M. Crossley
1969 American Drinking Practices: A National Survey of Drinking Behaviour and Attitudes. New Brunswick, N.J.: Rutgers Center of Alcohol Studies.
- Cahalan, D. and R. Room
1972 "Problem Drinking Among American Men Aged 21 - 59." American Journal of Public Health 62: 1473-1482.
- Carney, M.W.P.
1963 "Alcoholic Hallucinoses Among Servicemen in Cyprus." Journal of the Royal Army Medical Corps 109: 164-170.
- Carney, M.W.P. and T.G.G. Lawes
1967 "The Etiology of Alcoholism in the English Upper Classes." Quarterly Journal of Studies on Alcohol 28: 59-69.
- Chandler, J., C. Hensman and G. Edwards
1971 "Determinants of What Happens to Alcoholics." Quarterly Journal of Studies on Alcohol 32: 349-363.

- Clark, R.E.
1949 "The Relationship of Alcoholic Psychosis Commitment Rates to Occupational Income and Occupational Prestige." American Sociological Review 14: 539-543.
- Clark, W.
1966 "Operational Definitions of Problem Drinking and Associated Prevalence Rates." Quarterly Journal of Studies on Alcohol 27, No.4 (December): 648-668.
- Clinard, M.B.
1974 Sociology of Deviant Behaviour. (fourth ed.) New York: Holt, Rinehart and Winston.
- Davies, D.L.
1962 "Normal Drinking in Recovered Alcoholics." Quarterly Journal of Studies on Alcohol 23: 94-104.
- Dight, S.
1976 Scottish Drinking Habits. London: Office of Population Censuses and Surveys, Social Survey Division, HMSO.
- Edwards, G.
1975 "The Alcoholic Doctor: A Case of Neglect." Lancet 27 (December): 1297-1298.
- Edwards G., J. Chandler and C. Hensman
1972 "Drinking in a London Suburb. I Motivation for Drinking Among Men." Quarterly Journal of Studies on Alcohol Supplement 6: 69-93.
- Edwards G., J. Chandler, C. Hensman and J. Peto
1972 "Drinking in a London Suburb. II Correlates of Trouble With Drinking Among Men." Quarterly Journal of Studies on Alcohol Supplement 6: 94-119.
- Elley, W.B. and J.C. Irving
1976 "Revised Socio Economic Index for New Zealand." New Zealand Journal of Educational Studies II: 25-36.
- Encel, S., K.C. Kotowicz and H.E. Resler
1972 "Drinking Patterns in Sydney, Australia." Quarterly Journal of Studies on Alcohol Supplement 6: 1-27.
- Fitzgerald, J.L. and H.A. Mulford
1978 "Distribution of Alcohol Consumption and Problem Drinking." Journal of Studies on Alcohol 39, No.3: 879-893.
- Frank, H., W. Heil and I. Leadolter
1967 "The Liver and Beer Consumption." Munchener Medizinische Wochenschrift 109: 892-897.
- Glatt, M.M.
1967 "Complications of Alcoholism in the Social Sphere." British Journal of Addiction 62: 35-44.

1974 "Alcoholism Among Doctors." Lancet 2: 342.

1976 "The Alcoholic Doctor." Lancet 1: 196.

- Gregson, R.A.M.
1979 "Alcohol, Attitudes and Self-Reported Consumption in New Zealand, 1978-79." Paper presented at the Alcohol Research Seminar, Nelson. May 1979.
- Harrington, L.G. and A.C. Price
1962 "Alcoholism in a Geriatric Setting." Journal of the American Geriatric Society 10: 197-211.
- Haufman, E.
1950 "The Life History of an Ex-Alcoholic." Quarterly Journal of Studies on Alcohol 12: 405-433.
- Heath, R.G.
1945 "Group Psychotherapy and Alcohol Addiction." Quarterly Journal of Studies on Alcohol 5: 555-562.
- Hitz, D.
1973 "Drunken Sailors and Others: Drinking Problems in Specific Occupations." Quarterly Journal of Studies on Alcohol 34: 496-505.
- Hore, B.D. and E. Smith
1973 "Who Goes to Alcohol Units?" Paper presented at the Institute for Prevention and Treatment of Alcoholism, Belgrade.
- Isherwood, J. and K.S. Adam
1979 "Some Factors Associated With Alcohol Abuse in a New Zealand Sample: A Preliminary Study." Paper presented at the Alcohol Research Seminar, Nelson. May 1979.
- J.I.F.
1947 "Alcoholism: An Occupational Disease of Seamen." Quarterly Journal of Studies on Alcohol 8: 498-505.
- Kerlinger, F.N.
1973 Foundations of Behavioural Research (second ed.) New York: Holt, Rinehart and Winston.
- Kessel, N. and H. Walton
1965 Alcoholism. Harmondsworth: Penguin.
- Knupfer, G.
1967 "The Epidemiology of Problem Drinking." American Journal of Public Health 57: 973-986.
- Knupfer, G. and R. Room
1964 "Age, Sex and Social Class as Factors in Amount of Drinking in a Metropolitan Community." Social Problems 12, No.2: 224-240.
- Krupinski, J., A.G. Baikie, A. Stoller, G. Graves, D.M. O'Day and P. Polke
1967 "Community Health Survey of Heyfield, Victoria." Medical Journal of Australia 1: 1204-1211.
- Kolb, D. and E.K.E. Gunderson
1976 "Alcoholism in the United States Navy." Journal of Studies on Alcohol 37: 890-899.

- Lemere, F., M.A. Maxwell and P. O'Hollaren
1956 "Sociology Survey of 7,828 Patients Treated for Alcoholism." Journal of Nervous and Mental Disorders 123: 281-285.
- Mayer, J. and D.J. Myerson
1970 "Characteristics of Out-patient Alcoholics in Relation to Change in Drinking, Work and Marital Status During Treatment." Quarterly Journal of Studies on Alcohol 31: 889-897.
- Mellor, C.S.
1967 "The Epidemiology of Alcoholism." Hospital Medicine (December): 284-294.
- Merseyside Council on Alcoholism
1973 The Alcohol Explosion. Tenth Annual Report.
- McCreary, J.R.
1973 A Survey of Drinking Patterns of a Random Sample of the Population in Two Wellington Suburbs. Memorandum to the Royal Commission on Liquor.
- Morton, J.M.
1973 Survey of Social Work Agency Involvement With Problem Drinking. Monograph No.2, Wellington: NSAD.
- Moss, M.C. and E.B. Beresford-Davies
1967 A Survey of Alcoholism in an English County. London: Geigy Scientific Publications.
- Mulford, H.A.
1964 "Drinking and Deviant Drinking USA 1963. Quarterly Journal of Studies on Alcohol 25: 634-650.
- Murray, R.M.
1975 "Alcoholism and Employment." Journal of Alcoholism 10: 23-26.

1976 "Alcoholism Amongst Male Doctors in Scotland." Lancet (October) 2: 729-731.
- Nelkar, G.
1970 "Attitudes to Alcohol in Australia and New Zealand in Comparison with some European Countries and the U.S.A." Paper presented to the Fourth World Congress on Alcoholism and Drug Dependence.
- Nie, N.H. et al.
1975 Statistical Package for the Social Sciences. (second ed.) New York: McGraw-Hill.
- Plant, M.A.
1977 "Alcoholism and Occupation: A Review." British Journal of Addiction 72, No.4 (December): 309-316.

1979 Drinking Careers: Occupations, Drinking Habits, and Drinking Problems. Cambridge: University Press.
- Plant, M.A. and F. Pirie
1979 "Self-Reported Alcohol Consumption and Alcohol-Related Problems: A Study in Four Scottish Towns." Social Psychiatry.

- Powdermaker, F.
1945 "Review of Cases at Merchant Marine Rest Centres." American Journal of Psychiatry 10: 650-654.
- Rogers, M.
1974 "Instrumental and Infra Resources: The Bases of Power." American Journal of Sociology 79: 1418-1433.
- Roman, P.M. and H.M. Trice
1970 "The Development of Deviant Drinking Behaviour." Archives of Environmental Health 20, No.3 (March): 424-435.
- Room, R.
1972 "Drinking Patterns in Large U.S. Cities." Quarterly Journal of Studies on Alcohol Supplement 6: 28-57.
- Rose, H.K. and M.M. Glatt
1961 "A Study of Alcoholism as an Occupational Hazard of Merchant Seamen." Journal of Mental Science 107: 18-30.
- Sargent, M.
1967 "Heavy Drinking and its Relation to Alcoholism with Special Reference to Australia." Australian and New Zealand Journal of Sociology 4: 146-157.
- Schmidt, D.W.
1972 "Analysis of Alcohol Consumption Data. The Use of Consumption Data for Research Purposes." Report on Conference on Epidemiology of Drug Dependence. London: World Health Organisation. 57-66.
- Schukit, M.A. and E.K.E. Gunderson
1974 "The Association Between Job Type and Alcoholism in the United States Navy." Quarterly Journal of Studies on Alcohol 35: 577-585.
- Siegel, S.
1956 Nonparametric Statistics. New York: McGraw-Hill.
- Spratley, T.A.
1969 Occupation as a Cause of Alcoholism. M.Phil., Dissertation. University of London.
- Straus, R. and M.T. Winterbottom
1949 "Drinking Patterns in an Occupational Group: Domestic Servants." Quarterly Journal of Studies on Alcohol 10: 441-460.
- Thompson, J.W.
1975 Alcohol in New Zealand Society. In a Compilation of papers presented to the Sixth Summer School of Alcohol and Drug Dependence, Massey University. Wellington: NSAD. 34-42.
- Trice, H.
1966 Alcoholism in America. New York: McGraw-Hill.
- Wallace, J.G.
1972 "Drinkers and Abstainers in Norway." Quarterly Journal of Studies on Alcohol Supplement 6: 129-151.

Wallinga, J.V.

1956 "Severe Alcoholism in Career Military Personnel." United States Armed Forces Medical Journal 7: 551-561.

World Health Organisation

1951 "Expert Committee on Mental Health." Alcoholism Subcommittee Second Report. Geneva, WHO, Technical Report Series No.48.

Wilkins, R.H.

1974 The Hidden Alcoholic in General Practice. London: Elek.

Wilkinson, P., J.N. Santamaria, J.G. Rankin and D. Martin

1969 "Epidemiology of Alcoholism: Social Data and Drinking Patterns of a Sample of Australian Alcoholics." Medical Journal of Australia 1: 1020-1025.

Willis, J.

1973 Addicts: Drugs and Alcohol Re-Examined. London: Pitman.