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SELF-REPORTED DELINQUENCY AND ALCOHOL CONSUMPTION

by John Andrew Casey

1978

Submitted to the Department of Criminology, University
of Ottawa, in partial fulfilment of the requirements
for the degree of Master of Arts

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INTRODUCTION

In the past two decades it has become increasingly clear to researchers that official criminal statistics do not accurately convey the true incidence and seriousness of deviant behaviour in the general population. For this reason, criminologists began to seek sources other than adjudicated offenders in attempting to obtain an estimate of the amount of ongoing deviant behaviour in the population. Among adjudicated offenders, prison inmates have been used most often to outline the major characteristics of offenders. One of the characteristics which emerged from such studies was the widespread abuse of alcohol among inmates, from which general conclusions were drawn concerning an association between the use (and abuse) of alcohol and criminality.

Doubts among criminologists concerning both the representativeness of the deviant offender and the nature of the association between his criminality and his use of alcohol, led to the growing use of self-report techniques for research inquiry, aimed at the general population. Self-report studies revealed deviancy to be more widespread and frequent an activity than had been supposed, regardless

of age, sex and socio-economic status, leading to the conclusion that virtually every person breaks the law at some time.

It is with this in mind, and with an interest in the nature of the association between alcohol use and crime, that this study was undertaken.

Chapter I reviews the literature concerned with the problem. Chapter II provides a description of the sample, the instrument used, the procedure, and techniques of analysis. In chapter III the results are presented, interpreted and discussed. The chapter ends with suggestions for further research, and a short summary of the thesis.

In addition to the questionnaire used in the study, the appendix contains 3 illustrated scattergrams. Hand-drawn scattergrams were used in the study because the product-moment correlation statistic assumes the absence of non-linear relationship among the variables, and appropriate computer techniques were not available in the Computing Centre's APL package.

CHAPTER I

Review of the Literature

This chapter reviews the literature on the association between alcohol and crime. The problems of demonstrating and interpreting such a relationship are examined with the help of previous reviews of the literature, followed by specific and relevant studies not included therein. The attention then is turned to the consideration of available evidence regarding the nature of alcohol usage and the nature of delinquency among non-adjudicated high school students in North America. The chapter concludes with the statement of the experimental hypothesis.

Studies purporting to analyze any aspect of an association between alcohol use and crime must immediately recognize the complexity of the task at hand.

Blane (1965) states that studies which purport to examine the role of alcohol as an immediate antecedent to the commission of a criminal offence are generally inadequate methodologically, especially with respect to

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the establishment of causal relationships and to the over-generalization of the findings.

Any alcohol-crime relationship has multiple determinants and the outcome is the result of complex interaction among personality variables, social interaction variables, cultural or subcultural norms, situational factors, and the pharmacological effect of alcohol on the particular individuals involved.

Most crime, Blane reminds us, occurs without alcohol as a factor. Only a minority of drinkers and drinking situations can be associated with law violations (P. 27).

Since no all-embracing explanation of the alcohol-crime relationship exists, Blane feels that at this time research should restrict itself to modest questions which can be empirically answered.

Empirical studies of the alcohol-crime relationship may be differentiated according to the type of drinker involved, category of offence, and type of offender. Some studies, dealing with clinical groups, are clearly

discussing alcoholism and not merely intoxication. Studies such as those of Wolfgang (1956) and Amir (1970) have considered alcohol as an independent variable, in connection with the offences of homicide and forcible rape respectively. Offenders may be distinguished along such factors as sex, age, adult or juvenile status, recidivist, or by occasional-situational or recidivist patterns of offence.

One must keep in mind that the literature has to be viewed in the light of changes in the law regarding drinking, and also what constitutes an offence at any given time.

In Britain, for example, the Criminal Justice Act of 1967 ended drunkenness per se as an offence. In Canada, drunkenness per se in a public place may constitute the offence of disturbing the peace, and is punishable by summary conviction. [R.S.C. 1970, c.c.-34, s. 171(1)(a)(ii)]. In the United States, a patchwork situation prevails, with drunkenness retained as an offence in some States. In 1971, the Federal Bureau of Investigation reports, out of a total of 6,912,448 arrests, 1,491,782 were for drunkenness (Sutherland and Cressey,

1974, P. 164).

Past Reviews of the Literature

A number of surveys of the literature concerned with the relationship between alcohol and crime have been conducted. Jackson (1964) in a non-critical review of studies of United States prison populations and arrest rates, says that statements about the ratio of alcoholic prisoners or prisoners convicted of alcohol-related offences to the prison population as a whole are misleading because: 1) "use of alcohol" and "alcoholism and crime" are seldom defined; 2) research depends largely on police reports; 3) such offenders may be caught more often because of their drinking, and acquitted less often, making them unrepresentative of drinking offenders as a whole.

Such studies had shown: that more alcoholics and heavy drinkers were arrested than were moderate drinkers, that about 75 per cent of police time across the United States was spent dealing with drunks, that a large part of such offenders were arrested several times a year, usually on a misdemeanour charge. Of those in prison, 24 per cent to 40 per cent had histories of excessive

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drinking, and between 8 per cent and 24 per cent were drunk when arrested. When asked, 80 per cent to 90 per cent blamed alcohol for their incarceration. Alcoholics were more likely to offend against the person than property and were more likely to act alone and impulsively. The offences of alcoholic women differed from those of non-alcoholic women in that the offences of the first group contained a preponderance of illegal sexual behaviour. Imprisoned alcoholics tended to be older than non-alcoholic prisoners, and between 30 per cent and 40, per cent of persons chronically arrested for drunkenness had histories of criminal activities prior to the drinking problem (P. 169).

Jackson reported that there was general agreement in the literature that only rarely was drinking and alcoholism the major cause of a crime (P. 170).

Certain offences appeared more likely to occur with drunkenness, these being assault, homicide and destruction of property. Jackson recommends that reports of the use of alcohol by offenders be standardized if reliable and comparable data is to be obtained. At the present time, she says, we do not know to what extent

alcohol use contributes to crime. We do know that a substantial proportion of prison inmates are heavy users of alcohol. Jackson emphasises that prison populations are a highly selected group of all offenders, from which generalizations about alcohol use and crime cannot be made.

Twomey (1969), allowing for the complex nature of the subject matter, thinks that the evidence is irrefutable that there is a significant relationship between alcohol use and crime (P. 23).

He points to Federal Bureau of Investigation Uniform Crime Report figures showing arrests for drunkenness at 35 per cent or more of all annual arrests. The literature, he finds, shows half the jail population in the United States is incarcerated for drunkenness, and half of all jail time is served by drunks (P. 23).

A study by Shupe (1954) is given attention because of the special qualifications of the investigator, who, as police chemist for Columbus, Ohio, over a 2 year period was able to examine 882 persons arrested during or immediately after the commission of a felony, and to

obtain a urine sample from them. Crimes of physical violence by men were most often found to be associated with intoxication. In crimes of cutting and stabbing for instance, 11 offenders were intoxicated (an alcohol level of .10 per cent or more) for every 1 who was not. The ratio for shootings and for murder was 4 to 1, and for property offences (robbery, burglary, larceny and auto theft) the ratio was 2 to 1 (Shupe 1954).

Twomey also notes Wolfgang's (1958) Philadelphia study of homicide, drawn from police records, which showed 64 per cent of 588 murder situations involved alcohol, with alcohol present in both parties in 44 per cent of these situations. For physical assault the figure was 70 per cent and for shootings and other assaults, 50 per cent (Wolfgang 1958, quoted by Twomey, P. 23).

Turning to prison studies, Twomey reports that Banay (1942) estimated that 25 per cent of the offenders in Sing Sing demonstrated a close or direct causal relationship between their crimes and alcoholism, and the Gluecks (1930) found 39.4 per cent of reformatory inmates had used liquor to excess. These findings came from relatively well-controlled studies (P. 23).

Twomey notes the poor design of many studies and recommends that researchers focus on more restricted categories of offenders and offences.

Offenders are categorized by him as: 1) the "revolving door alcoholic" as described by Pittman and Gordon (1958), whose offences are drunkenness per se and related minor offences, such as disorderly conduct, vagrancy and causing a public nuisance; 2) the alcoholic who commits serious offences directly associated with his inebriation, such as forgery and assault; 3) the non-alcoholic, whose criminality results from occasional alcohol use. A variety of offences are here applicable, which might include assault and homicide.

Ponee (1970) emphasises the need to differentiate conceptually between instances in which alcohol use itself is a crime and those instances where alcohol use leads to or is combined with "other-directed" crimes. Like other reviewers, Ponee acknowledges the difficulty of demonstrating the precise nature of the relationship.

Ponee's review of the literature is a selective one and includes such aspects as chronic drunkenness,

alcohol and aggression and under-age drinking.

The greater part of the literature is, according to Ponee, given over to the chronic drunkenness offender and his petty offences. In view of this he calls for more attention to be devoted to the more serious categories of offenders, such as those guilty of violent offences against the person.

Regarding the relationship between alcohol and aggression, Ponee concludes that for about 20 per cent of drinkers aggression is an integral aspect of their non-drinking behaviour, and for some of these alcohol aggravates aggressive tendencies. Laboratory studies reviewed, such as those of Bennet, Buss and Selzer (1969) and Kastl (1969) disagree, but because they used mature college students under controlled laboratory conditions, Ponee questions the generalizability of the findings by the above authors that alcohol use did not result in aggressive behaviour.

A Detroit study by Wattenberg, William and Mair (1956) compared the police records of 141 boys convicted of drunkenness with a survey of 9,555 boys found guilty

of other offences, and found the 2 groups to be similar in character, although the drinking group tended to be younger.

Ponee finds fault with the methodology of alcohol-crime studies because many use anecdotal data, lack a theoretical framework, and end with sweeping generalizations.

He re-emphasises Blane's comments concerning the many determinants of drinking and criminal behaviour. Therefore, Ponee says, an all-encompassing explanation of the link between drinking and criminal behaviour is unlikely. At the same time the role played by alcohol in criminal behaviour must not be exaggerated, for in the great majority of cases of both drinking and offending the two are not associated.

He suggests that future research must look more at socio-cultural variables and situational factors. He also recommends more use of the research technique of self-reporting in place of official records and/or information gained from institutionalized groups. Doing this, Ponee thinks that more accurate findings

can be obtained with greater protection against certain biases.

The most comprehensive review of the existing literature associating alcohol use with crime is that of Blum (1967).

Blum sees 5 major methodological approaches to the study of alcohol as a factor in crime (P. 40).

One is to look at all known crimes and to calculate how many are for alcohol use as such. A second method is to categorize offences, and by studying offenders or their victims establish to what degree alcohol use was involved in the commission of the different types of offences. A third method, one that has been much used, is to study a population of known offenders such as inmates of a prison, and calculate how many are incarcerated for offences involving alcohol, or how many prisoners have alcohol problems. A fourth technique has been to study chronic alcoholics and establish their criminal histories. Lastly, the fifth is an overview approach of separate and often independent studies, and aims to assess the current status of knowledge in the field.

The complexity of the subject matter is demonstrated, for example, in Blum's discussion of laws pertaining to drinking as such in the United States. Legislation includes, for instance, statutes prohibiting intoxicated behaviour in a public place, in or near an automobile. Violations of alcohol control laws, such as selling to minors, after-hours trading and employing females as bartenders, constitute another group of offences directly related to alcohol as such. In addition, other statutes are often invoked to deal with intoxicated persons, such as those of vagrancy, public nuisance and disturbing the peace.

Blum readily concedes that present reporting practices are not equal to the task of presenting an adequate account of the incidence of such offences or variety of offenders involved. Nevertheless, one must fall back on the Uniform Crime Reports furnished by the Federal Bureau of Investigation; for example, in 1961, 55 per cent of all arrests in the United States reported to the Federal Bureau of Investigation were for alcohol-related offences, such as drunkenness, liquor law violations, and drunk driving, or offences which often involved drinking, such as vagrancy (P. 40). In 1965 the

figure was 52.6 per cent.

These figures cover only offences arising from the use of alcohol itself, and do not account for all other offences in which alcohol consumption takes place prior to or during the offence.

Blum attempts to convey in his review some of the circumstances in which the alcohol-crime association can occur. Alcohol may, for instance, cause inhibitions to be reduced or removed, giving rein to sexual and aggressive impulses, or lead to attempts to steal to obtain liquor. Also a negative association between alcohol and crime may exist, in that abuse of alcohol may preclude involvement in certain types of criminality such as white-collar crime, organized crime and criminal activities requiring physical dexterity, social skills, and reliability over time.

The major weakness in studying the alcohol-crime relationship of prison populations is related to the legal classification of categories of offences and the validity of inmate responses to questions about alcohol.

One of such studies was that of 2,325 new arrivals

in California prisons (Blum P. 42, source not identified). Replying to a questionnaire, 98 per cent stated they were users of alcohol, and 88 per cent said they had been intoxicated at least once. Twenty-nine per cent described alcohol as a major problem and 6.4 per cent had received medical treatment for alcohol abuse. Problem drinkers more often had prior convictions (23 per cent) than non-problem drinkers (14 per cent). Twenty-eight per cent said they were intoxicated at the time of the offence for which they were committed, including 50 per cent of auto theft offenders, and one-third of manslaughter, assault, and sex offenders.

Ullman, Demone, Stearns and Washburne (1957), says Blum, found 31 per cent of 1,000 consecutive jail admissions in Massachusetts were for drunkenness. All studies examined by Blum show a higher proportion of problem drinkers in prison than is to be found in the general population (P. 42). (Blum does not say how the population estimates were obtained).

Pittman and Gordon (1962) did a study using chronic alcoholics in New York State. All 187 subjects were imprisoned recidivists, the average number of

arrests being 16.5. Three-quarters of all past arrests had been for drunkenness. Thirty-seven per cent of offenders had serious offence records. A pattern was seen in which offenders in youth committed a variety of offences, sometimes including drinking, but after age 35 or 40, offences became increasingly those of drinking. One-third of their subjects, the authors believed, became alcoholics as a response to failed criminal careers.

In concluding, Blum categorizes most studies as descriptive and too readily implying a causal association between drinking and crime (P. 43). He sees the commission of a criminal offence as the result of many forces at work over a period of time, the presence of alcohol being only one. The role played by alcohol in a particular criminogenic situation is also determined by many variables. Since alcohol is a sedative, it is perhaps surprising, he notes, that so little attention has been given to the amount of crime prevented by the drinking habit, (although this aspect of the crime-alcohol association might be even more difficult to demonstrate empirically than is the conducive aspect).

Blum points out that research into alcohol use and

criminal behaviour has not yet progressed to the point where we can be sure of our inferences. Therefore, we must be guarded in our generalizations, assume multiple causes for events, and keep in mind other subgroups of people who react differently to the use of alcohol.

We remain unsure that the use of alcohol by offenders, adjudicated and non-adjudicated, exceeds that of non-offenders with similar social and personal characteristics. Also, we are uncertain that alcohol use by offenders is greater at the moment they commit offences than at any other time. When an alcohol-related offence is committed, we do not know that the offence would not have been committed had alcohol not been present.

Finally, in view of the fact that all the studies he reviewed have drawn their samples from apprehended offenders, Blum suggests that the association between alcohol use and crime for such apprehended offenders may in fact be a demonstrated association between getting caught and being a user of alcohol, rather than being both a criminal and a user of alcohol. One must be wary therefore of rushing into conclusions about

alcohol as the "cause" of crime. Always one proceeds on the basis of uncertainties and probabilities.

Blum's caution about the use of apprehended offenders leads him to say that in order to generalize beyond the group of known offenders to the general population, we must draw samples from the latter.

He also thinks that in spite of the methodological problems, past research allows the making of a few general statements with some degree of confidence about the alcohol-crime relationship. He claims that: 1) offenders more often drink before certain offences than before others (specifically, drinking is more often associated with crimes of violence and unskilled property offences); 2) for delinquent youth, heavy drinking tends to be part of the general lifestyle.

On several points there is specific agreement among these authors. The extent to which these reviews were influenced by each other, however, is not clear. Blum's bibliography contains Blane's work, but otherwise there is no cross-referencing between the writers. (Also, of course, the lack of an explicit statement

regarding a particular idea may simply mean that the writer did not pay attention to this point; and/or found it relatively unimportant, and/or found the matter so obvious that he/she did not bother to write about it).

Summarized, roughly following the sequence in the conduct of an inquiry, the principal agreement can be stated as follows:

1. Problem

All 4 reviewers agree about the complexity of the alcohol-crime relationship; Blane and Blum urge that questions asked should be restricted to those where answers through empirical research can be given.

2. Review of the Literature

A large part of annual crime figures constitute alcohol-related crime; much of which represent simple drunkenness charges (Jackson, Ponee). While it is not known to what degree alcohol use is associated with "other-directed" criminal behaviour, alcohol use is rarely the major cause of criminal action (Jackson, Blum). However, one should not forget that most crime occurs without alcohol as a factor, and most drinking does not

result in criminal behaviour (Blane, Ponee)'.

Alcohol-related offences frequently occur in the form of offences against the person (Jackson, Blum).

3. Theory/Hypothesis

No comprehensive, empirically-testable explanation of the alcohol-crime relationship exists (Blum, Ponee).

Multiple determinants are at play in the separate (and interacting) decisions to drink and to offend (Blane, Blum, Ponee).

A promising way to understand the alcohol-crime association is in terms of type of offender and their use of alcohol (Twomey, Ponee). It should not be forgotten however, that alcohol may also serve to prevent crime (Blane, Blum).

Other Studies

What follows is a sampling of studies which were not included by the previous reviewers primarily because they appeared after the period surveyed by these reviews,

or, even though they have appeared in the periods covered, they were not included. Most of these are reported here because they add to the conclusions above concerning the prevalence of alcohol use with adjudicated offenders in general and violent offenders in particular.

Australian (Drew, 1961; Bartholomew, 1968) and English studies (Hensman, 1968; Arnold, 1968; Washbrook, 1976) of male prison populations reveal a pattern similar to those reviewed, of recidivism, a high proportion of problem drinking and drinking before offences, recurring short-term sentences and few skills. These men tended to be older than other criminals, in most instances, over 30 years of age.

Three English studies of women in prison (Woodside, 1960; Prince, 1968; d'Orban, 1968), show a pattern of heavy alcohol use, chronic recidivism, homelessness, frequent incarcerations, below-average intelligence and poverty among an elderly lower-class group.

In Canada, Haslam (1964) states that one of the most common reasons for the incarceration of females are offences against the liquor laws, such as being found

drunk in a public place, or causing a disturbance (P. 463). The Canadian Corrections Association in its "Brief on the Woman Offender" (1969), reports that in 1965, 13,417 women were convicted in Canada for being intoxicated, 10 per cent of these convictions resulting in a prison sentence. Dardis (1976), quoting a report of the Study Committee on Correctional Services in the Northwest Territories (1971), says that breaches of the liquor law accounted for 88 per cent of women incarcerated in Yellowknife.

MacDonald and Bygott (1977) in a study of the impact of alcohol on the criminal justice system in Ontario, quote Lambert and Madden (1975) who stated that "women who reported at intake that they used alcohol 'a great deal' tended to recidivate" more than others during the 2 years following release (P. 2).

The Report of the National Advisory Committee on the Female Offender (1977) was of the opinion that alcohol and drug problems among women inmates were a more important factor in post-release adjustment than having a job (P. 64).

The prevalence of alcohol in the lives of females incarcerated in American prisons is documented by, among others, Myerson (1959), Cramer and Blacker (1966), Myer, Myerson, Needham and Fox (1966), Cole, Fisher and Cole (1968), and Velimesis (1975).

Charnley in Britain (1972) sought to establish a relationship between teenagers known to be deviant and their drinking, after a survey was published showing that girls in one London borough began drinking on average at 12.3 years of age, while for boys the figure was 12.8 years.

Charnley submitted a questionnaire to 333 young males in a borstal and a detention centre, whose age ranged from 16 to 18. The questionnaire was designed to show who used alcohol and how often, their reasons for drinking, attitudes toward alcohol use, age at commencement of use and the effect of alcohol on them. Anonymity was assured to all respondents.

Results showed 84 per cent were users and 47 per cent regular users (5 times or more weekly). About three-quarters had begun drinking while at school. A

high proportion of drinkers were thought to have serious drinking habits, on the basis of a question which asked if the respondent had experienced any of the "tell-tale" signs of problem drinking, such as loss of memory or drinking before or instead of breakfast.

Acres (1976) quotes figures for drunkenness offences in Britain as 73,000 in 1965 and 106,000 in 1975. Half of the current British prison population (42,000 in 1976) are said to have a drinking problem, and many are incarcerated for non-payment of fines.

Gath (1968) in England carried out a study of male offenders appearing in 2 London courts charged with drunkenness offences per se, in order to establish their social and psychological characteristics. Previous studies of this type in England such as Parr (1962) had been weakened by reliance on official records. Gath obtained interviews with 151 offenders immediately following their appearance in court. Standardized interviews were conducted by a team of psychiatrists who found that 70 per cent had been charged with being drunk in public and the rest with drunkenness associated with other offences. Recidivism was a characteristic of

this group, 30 per cent having been arrested 3 times or more in the previous 12 months, and 45 per cent had been imprisoned at least once. The mean age of the men was 41.7 years. Only one-quarter had no drinking problem, while 50 per cent were judged alcoholic, in that they showed clear signs of chemical dependence, embracing Jellinek's "gamma", "delta", and "epsilon" typologies (Jellinek, 1960).

Structured psychiatric interviews were used in a study by Guze, Tuason, Gatfield, Stewart and Picken (1962) in the United States, with a consecutive sample of 223 male probationers and parolees. Forty-three per cent of the sample were diagnosed as alcoholic, whose mean age was 24 years. The mean age of the non-alcoholic group was 22 years. In order to be defined as alcoholic, each respondent had to show characteristics of at least 3 out of 5 groups of symptoms, involving: 1) physiological consequences of drinking; 2) frequency and amount consumed; 3) some attempt to reduce consumption; 4) living problems resulting from drinking; 5) attitudinal factors (P. 514). The alcoholic group had been arrested more often than the non-alcoholic group, mainly for traffic violations, drunkenness, disturbing the peace and

fighting. Since there was no difference in the misconduct caused by the 2 groups in prison, the authors suggested that alcohol intake itself played a significant role in the alcoholic group's deviancy.

A comparison of the criminal and drinking histories of the 2 groups showed no difference in criminal behaviour until the onset of heavy drinking by the alcoholic group.

A Swedish study (Lindelius and Salum, 1975) obtained samples from a male alcoholic group in treatment, a larger group of men (1,021) treated for acute psychiatric sequels of excessive drinking, and a group of homeless men, the majority of whom were heavy drinkers. Official data was obtained on criminal behaviour from the Swedish General Criminal Register, including offences while intoxicated. Criminality was greatest among homeless men, while for the alcoholic group the rate did not exceed that of the general population.

Of those in the second group who had criminal records (426 men), 87 per cent of the records included drinking offences. For the homeless men the figure was 90 per cent. The most common types of offences in the

second and third groups were property offences, followed by drunken driving, violence and sex offences.

Alcohol and Violent Offences

Goodwin (1973) has reviewed the literature on alcohol involvement in suicide and homicide in several countries. Only the homicide studies are included in this review. Goodwin claims a relationship between drinking and murder for at least 15 studies in anglophone countries in the 30 years preceding this review. Ten of these studies showed the percentage of murderers who had been drinking prior to the crime. This estimate ranged from 19 per cent to 83 per cent.

Goodwin refers to 6 studies showing murder is most often committed at weekends, coinciding with high liquor sales. He points out that while drinking is frequently associated with homicide, those who kill are rarely diagnosed as alcoholic.

His tentative conclusions from the review were:

- 1) that drinking was associated with homicide, while alcoholism was associated with suicide;
- 2) that

alcoholics were no more likely to kill others than were members of the general population.

Cole, Fisher and Cole (1968) found alcohol to be associated with 50 per cent of 112 homicides committed by women. This information was obtained from a psychiatric evaluation of the offenders at the California Institute for Women in 1965. Alcohol was associated with "about half" of the murders by Anglo-American women, 42 per cent of the group, and with "an even higher rate" among negro offenders, who made up 43 per cent of the sample (P. 6). The author notes that women account for less than 20 per cent of homicides in the United States each year.

In Canada, Rosenblatt and Greenland (1974), in a series of studies, gathered information from prison and hospital records on violent offences where life was threatened. Data was obtained for 91 patients in Ontario mental hospitals, 69 males and 22 females, detained by warrant of the Lieutenant Governor, and for a random sample of 100 Ontario penitentiary inmates, 4 of whom were female (P. 175).

Alcohol use was associated with "about half" of

the penitentiary group. "Considerably less" of the patients could be so classified, and none of the females (P. 177).

Janowska (1972) reports that of 279 persons sentenced for homicide in Polish courts in 1961, 55.6 per cent were excessive drinkers, and 64.5 per cent were killed while intoxicated. Among the victims, 48.9 per cent were intoxicated at the time of death. No information is available in the English source, of the method whereby these results were obtained.

In a study of forcible rape in Philadelphia for the years 1958 and 1960, Amir (1970) used police records to estimate that one-third of 646 rape occurrences included alcohol as a factor, and that in 63 per cent of such incidents alcohol was present in both parties. Alcohol use was "strongly related" to violence in rape. The highest number of rapes occurred at weekends and, as suggested by Goodwin, the increase in offences coincided with peak alcohol purchases.

Alcohol and the Young

A growing part of the literature in recent years has dealt with alcohol use by young people, and this is partly a reflection of a current public and media concern about the drinking of youth. Much of the literature on young people and drinking dates from the 1960's onward.

One comprehensive recent overview of this aspect of alcohol use is Smart (1976).

He points out that despite the attention given to the use of various hallucinogenic narcotics by young people in the 1960's, alcohol was and has remained the number one drug used by them. Smart also states that any discussion of drinking by the young has to be seen against the background of adult drinking norms, from which, he says, young people derive their own rationale for drinking. Problems associated with young people's drinking are seen as increasing, aided by a drop in the drinking age to 18 and 19 across Canada. An Ontario drinking survey by the Addiction Research Foundation is quoted, showing that 82 per cent of adults aged 18 to 19 were classed as drinkers, and 95 per cent of the age group.

20 to 24 (P. 17).

While young people are responsible for only a small part of alcohol-related problems, Smart feels that concern for the future is justified in that more young people are drinking than ever before (P. 3) as overall per capita consumption rises (P. 5). Reduced tolerance for alcohol in comparison to adult drinkers (due to less experience with alcohol effects), means that the young are exposed to greater risks of accidental injury, such as traffic accidents.

The magnitude of the youth drinking problem, Smart indicates, depends on how it is defined. In terms of physiological complications from drinking such as cirrhosis and alcoholic hepatitis, the problem is negligible, but if one sees the problem in terms of public intoxication, school or job absenteeism, disrupted family relationships and delinquent or anti-social behaviour, the drinking problems of young people take on a greater dimension. The problems encountered with young people's drinking in the order of their frequency are drunkenness, alcohol-related traffic accidents, delinquent or anti-social behaviour, and alcoholism. While the practice of drinking is

widespread among youth, heavy or frequent drinking is not common.

Empirical work has not revealed any single reason either for young people beginning the drinking habit, or continuing with it. The motives offered by subjects in empirical studies, says Smart, are generally the same as those of the adult drinking culture. There is evidence, he feels, that peer pressure is an important factor in formulating the decision to begin drinking, and to continue with it.

College and High School Studies

A great part of the studies of young persons and their drinking have employed students as their subjects, because these represent fairly accessible large captive populations.

One of the earlier and frequently referred to studies of college students was that of Straus and Bacon (1953):

The authors obtained data by means of a

questionnaire administered to class groups in 27 colleges representative of all types of college in all regions of the United States (P. 3). The class groups, who received a "brief and standardized oral explanation" of the purpose of the study (P. 4), in each case were thought by the authors to be representative of the student body as a whole, in terms of sex, college year and major field of study. Information obtained from the questionnaire which was pretested, was supplemented by discussions with students and faculty and by "general observations" by survey staff (P. 3). A total of "nearly 17,000" students voluntarily took part in the study. Alcohol use, defined as any consumption of alcohol, other than "1) experimental, joking or ceremonial use before age 11, and 2) purely incidental, isolated experience" (P. 46), was found to be generally modest for both sexes, ranging from 65 per cent for men in private sectarian colleges embodying a temperance viewpoint, to 92 per cent in private non-sectarian colleges. For women, the corresponding range was 39 per cent to 89 per cent. In view of the very broad definition of use, these figures are not surprising.

While drinking began before college for 79 per cent of the males and 65 per cent of the females, drinking

while in college was an infrequent activity among these students, with only moderate amounts (less than 3 ounces) consumed at any one sitting by 95 per cent of the sample.

Drinking patterns of individuals in specific colleges, with the exception of a small minority of heavy drinkers, reflected the average student drinking patterns of the specific college. The picture which emerged from this study was generally one of restraint and moderation (Pp. 116-117).

In contrast, Parfrey (1974) in the Republic of Ireland found 16 per cent of 264 males in his sample to be occasional drunks (sporadic drunkenness) or regular heavy drinkers. Only 2 per cent of 177 females were so classed. Thirty-six per cent of females and 20 per cent of males did not drink.

Using a mailed questionnaire, Parfrey sampled 1 in 7 undergraduates, and with 2 follow-ups obtained a response of 97 per cent. Significant associations were found for close friends' drinking, siblings' drinking and the respondents' drinking patterns. For females, a significant association was found for their drinking and

their mothers' drinking status.

Here, as in the Straus and Bacon study, the drinking patterns of students was seen as reflecting the norms of the drinking culture, in which a serious national drinking problem coexisted with a large minority of total abstainers.

Looney (1976), used a mailed questionnaire to sample 1 in 7 of a California student population of 14,000, selected by computer, obtaining a response rate of 63 per cent. The aim of the study was to establish a preventive health care program on campus. Beer, wine and liquor in descending order were found to be the preferred beverages, on the basis of the previous week's recalled drinking, with males favouring beer over the others.

Students tended to drink more the larger the group they lived with. Six per cent drank every day, and 7 per cent drank more than 21 cans of beer, glasses of wine or shots of liquor weekly. Older students tended to drink more, those between 21 and 29 constituting the heaviest drinking age group.

Reasons for drinking ranged from enjoyment of taste to simply getting drunk, and seems to confirm Smart's statement (1976), that young people borrow their elders' rationales for drinking. Five per cent of the campus population it was felt, allowed their drinking to disrupt academic work. From these findings the authors felt able to predict that 70 per cent of those who reported abstaining at the time of the study (11 per cent of the sample), would later commence drinking, and 30 per cent of these would come to define themselves "as having some problem" (P. 111). It was not explained how these predicted figures were arrived at. Overall, it was stated that students carried on "responsible drinking the majority of the time" (P. 110).

The accuracy of long-range alcohol use predictions were questioned by Smart (1976). He describes a study by Fillmore (1974) in which 206 members of the Straus and Bacon sample were contacted 20 years after the study and their drinking status was compared to the current position. This group, according to Fillmore, was representative of the 1953 sample, with the exception that black females were underrepresented in 1974. It was found that while 44 per

cent of the males had been defined as problem drinkers in 1953, only 19 per cent were defined as such 20 years later. Of the females however, there was little change, although the problem drinkers were shown to be 14 per cent of Fillmore's sample, as compared to 12 per cent in 1953.

In comparing Straus and Bacon's subjects with those of Looney 25 years later, a more liberal attitude can be detected on the part of the latter group. For example, in the earlier study the large majority of students indicated an intolerance of drunkenness in others, while most of Looney's subjects claimed to be highly tolerant, as long as no harm was done.

Maddox (1970) reviewed 11 high school studies conducted in the United States between 1948 and 1965 and summarized their findings. The studies, involving over 10,000 students, showed drinking as a learning process, by which the young person learns to want to drink from the prevailing adult drinking culture.

Maddox finds the results of these studies to be similar in their main points: introduction to alcohol at age 13 or 14, a probability that every high school student

will take a drink during high school years; a variation in the proportion of adolescent drinkers according to regional and ethnic subcultural differences; first use in the home with parents; among drinking adolescents, at least one parent drinks, while abstinent adolescents usually report non-drinking parents; the probability that an adolescent will drink is determined by sex, age, socio-economic status, ethnic and religious background, rural or urban residence. Specifically, drinkers are more often male, situated at extremes of the socio-economic scale, older than non-drinking peers, Jewish or Catholic, and resident in an urban milieu.

Maddox interprets drinking as adult role-playing and the substance is viewed as a beverage rather than a drug; the prevalence of drinking was not found to be dependent on the legal restraints in a community; a majority of subjects, including non-drinkers, saw nothing morally wrong with the drinking practice as such; problem drinkers are few among adolescents; most alcohol consumed was of a low alcohol content; even so, "subjective evaluations" says Maddox, suggest that 1 in 4 young drinkers become "high" in any given month, and about 10 per cent become "drunk" (neither "high" nor "drunk" were

defined, P. 111). Little change had taken place in the 20 years or so covered by the studies in adolescent attitudes toward, and use of, alcohol.

The adolescents' reference groups are seen by Maddox to be parents, peers, the media, religion and the school, with parents and peers being by far the most influential. Use of alcohol by one or both parents greatly increases the probability that their children will drink also.

Peers become increasingly important to the adolescent with age. The studies suggest that while many adolescents would drink without peer influence, the peer group provides a congenial environment for experimentation with alcohol. Nevertheless, there was no evidence that the drinking status is the main basis for peer group formation.


After he or she has adopted the drinking habit in the pursuit of adult roles, Maddox is in agreement with Smart in stating that the adolescent justification for continuance of the drinking habit is also borrowed from the adult drinking culture. Problem drinkers however,

are likely to be only 2 per cent to 5 per cent of adolescents.

Maddox concludes by saying that the decision to drink by adolescents is an integral part of growing up.

Alexander and Campbell (1967) used a questionnaire to obtain information on drinking behaviour and attitudes from 1,410 white male high school seniors in 30 urban and rural high schools in North Carolina, in an area where strong religious pressures existed against drinking. This was reflected by the finding that 65 per cent thought drinking was morally wrong, including 40 per cent of users of alcohol. Peers and family in that order provided incentives to drink. So strong was peer pressure, that almost all non-drinkers had been pressured to drink at some time, and pressure increased with the number of drinking friends. Tasting of alcohol and curiosity about alcohol by non-drinkers was also positively correlated with number of drinking friends.

Although one doesn't have to agree with the author's theoretical framework, nor with his operational definitions, Zucker (1968) illustrates some of the complex motivational



factors that may lead to the observable act of drinking. Zucker tested the hypothesis that drinking was associated with male-female identity patterns, using 2 groups of high school students. The first group contained 144 adolescents (68 boys, 76 girls), and the second group contained 267 subjects, (120 boys and 147 girls). The mean ages of the boys were 14.84 and 14.97 respectively, and those of the girls were 14.66 and 14.68. Two types of questionnaire were used, both asking for drinking histories, while one tested conscious sex-role identity and the second unconscious sex-role identity. The drinking history asked for: 1) the number of drinking occasions in the past year, and 2) the amount "usually" consumed at any one time. The femininity scale of the California Psychological Inventory (Gough Femininity Scale), was used to measure conscious sex-role identity. Unconscious sex-role identity was assessed on the basis of content codes for book and movie preferences, differentiating between masculine, feminine and non-sex type themes (Pp. 873-874).

The hypothesis was presented in 3 parts: 1) heavier-drinking males show a more masculine sex-role identity pattern than moderate drinkers; 2) heavier-drinking males show a more feminine identity pattern

(in terms of unconscious need patterns); 3) heavier-drinking women show a more masculine identity pattern. Heavier drinking was defined as 2 to 9 drinks per drinking session. Moderate drinking was therefore 1 drink per session.

Only the first part of the hypothesis was confirmed by the study. The heavy-drinking boys were significantly more masculine than the moderate drinkers, and this difference was interpreted by the author as one of sex-role facade.

Forslund and Gustafson (1970), like Maddox, found peer pressure to be the primary determining factor influencing the decision to drink. Information on peer and parental influences toward drinking were obtained by questionnaire from 331 male and 323 female high school students in New Mexico. For both sexes a positive correlation existed between drinking and the degree of peer pressure to drink. Also, regardless of peer pressure, students tended to drink when one or both parents were drinkers. Peer pressure was seen, however, to be the more important factor influencing the decision to drink.

Wechsler and Thum (1973) examined the drinking

practices of 1,235 high school students (grades 7 to 12) in a semi-industrialized city, and 678 high school students (grades 6 to 12) from a small residential town, both in Massachusetts. These were derived from a random sample of classes; all members of the classes selected were used. An anonymous questionnaire was given in class time to the subjects, asking about: 1) the respondents' own use of alcohol and "illicit drugs" (Amphetamines, barbiturates, heroin, L.S.D., marijuana, glue sniffing, and cough syrup for "kicks") in the past year; 2) participation in delinquent activities (cheating in school, fighting, shoplifting, theft, property damage, trouble in school, trouble with police); 3) personal and social characteristics of the respondent; 4) perception of the extent of drinking among friends of the respondent (P. 1222).

The subjects were divided into abstainers, light drinkers (users of beer, wine and spirits, without having been drunk in the past year), and heavy drinkers (users of beer, wine and spirits, and who had been drunk on any of these in the past year, P. 1222).

For example, 42.5 per cent of junior high school heavy drinkers had used marijuana, and 66.5 per cent of

senior high school heavy drinkers, as opposed to 3.5 per cent and 16.5 per cent respectively for light drinkers or abstainers. Those who had been drunk on spirits were "much more likely" than other students to have used illicit drugs for non-medical purposes (P. 1222).

Among senior students (grades 10 to 12), 66 per cent in the city and 44 per cent in the town were in the heavier drinking group, with no significant differences for sex. Among juniors (grades 6 to 9), the respective findings were 33 per cent and 18 per cent.

Heavier drinkers were more likely to have been involved in delinquent activities than abstainers or light drinkers; "about half" of the city heavy drinkers and one-third of the town heavy drinkers reported they had been in trouble with the police at least once in the previous year, as against "about 10 per cent" of abstainers and light drinkers (P. 1223). Drinkers were likely to have friends who drank, and tended to see drinking widespread among friends; (nearly all heavier drinkers reported at least 6 friends using beer or wine, and most gave "several" spirit users also, P. 1226). Heavier drinkers were also thought to have more personal

problems, have lower grades (below "B") and be more alienated from parents (for example, could not talk to mother about drugs, could not talk with father, did not feel "very close" to family, P. 1225).

Jessor and Jessor (1975) in a longitudinal study obtained findings in agreement with the Maddox review that drinking was an integral part of growing up. Subjects were drawn from 3 junior high schools (grades 7 to 9), in a small city in a Rocky Mountain region of the United States. A random sample of 1,126 subjects was obtained and a study made of their personality, social and behavioural development. Parental permission was obtained for 668 subjects, 589 of whom actually began the project and 432 of whom (188 boys and 244 girls) completed all data for the 4 years. The authors do not indicate to what extent the representativeness of their sample was compromised. Students were assessed by means of "an elaborate questionnaire, approximately 50 pages in length" (P. 33). The subjects' ages ranged from 12 to 15 years at the time the study began. In 1969 the abstinence rate was 53 per cent, but by 1972, the last year of the study, the abstinence rate was just 22 per cent. Abstainers differed from drinkers in being more achievement-oriented,

more successful academically, less independent, more intolerant of deviant behaviour, more religious, and possessing fewer drinking friends.

Smart (1976) describes 3 Canadian studies of high school students carried out in the 1970's. The information regarding the 2 Ontario studies has only been available through a secondary source and therefore the information is often insufficient methodologically. Asimi (1972) took a random sample of 2,533 students from 8 northern Ontario communities, representing 20 per cent of the high school population. The study's findings showed that 52 per cent of drinkers had their first drink before age 13, 29 per cent between 13 and 14, and the rest after age 15. Seventy-nine per cent of the sample were drinkers, 82 per cent of the males and 74 per cent of the females, but most drank only occasionally. Only 11 per cent of the boys and 8 per cent of the girls drank as often as 5 to 7 times weekly, and these tended to be in the older group.

A longitudinal study of Toronto high school students was conducted by Smart and Fejer (1974) between 1968 and 1974. Students were contacted in alternate years, during grades 7, 9, 11 and 13, and asked if they had

consumed alcohol in the previous 6 months. In 1968, 46.3 per cent had consumed alcohol, and in 1970 the figure had risen to 60 per cent. In 1972 and 1974 the figures were 70 per cent and 73 per cent (P. 19).

Few students were frequent consumers however, only 2.4 per cent reporting daily drinking while 90 per cent drank less often than once a week. The frequent drinkers tended to do poorly in school. A noticeable increase in female drinking was observed, from 49.6 per cent of girls in 1970 to 68.1 per cent 2 years later (P. 21). For the majority of subjects some or all of the drinking was done at home, but 36.1 per cent stated that none of their drinking was at home.

In Smart's opinion, in British Columbia Cutler and Storm (1973) found heavier drinking than in Ontario. (Although from the information available on this, it is not clear what this opinion is based on). By means of an anonymous questionnaire administered by teachers in randomly selected classrooms in 3 cities, Cutler and Storm found that of 1,771 participants (and it is not clear what the size of the original sample was), 25 per cent of males and 35 per cent of females said they never or seldom drank.

"Seldom" was defined as drinking less often than once a month. The questionnaire was also designed to obtain information on cigarette and marijuana use. Cutler and Storm found close to 23 per cent of students were regular drinkers, while 15 per cent drank more than 10 drinks per week. "Regular" was defined as drinking at least once a week.

About 50 per cent of students had been "high" (defined as a noticeable effect without going beyond socially accepted behaviour), in the previous 4 weeks, 40 per cent had been drunk ("marked loss of control over ordinary physical activities", P. 49), 15 per cent had been ill and 8 per cent had become unconscious while drinking. Between 7 per cent and 8 per cent had recently been drunk about once a week.

Lowden (1977) studied the relationship between drinking and academic achievement, using 153 students randomly selected from 3 Ottawa high schools, and 138 students found in summer school. All the students were from grades 11 to 13. Individually administered questionnaires and school records were the source of information regarding drinking habits and school marks

respectively.

Lowden found "a significant inverse relationship" (P. 21), between alcohol use and grade average. The summer school group, all of whom had had failing grades in the previous regular high school year, were all found to be users of alcohol, and these students drank more, and more often than "regular" students. More than one-third of the group drawn from high schools drank more than once a week, and almost half of the summer school students did so. Smart and Fejer (1974), and Smart, Goodstadt and Sone (1977), have also noted that frequent drinkers tended to do less well in school.

Smart, Goodstadt and Sone (1977) surveyed alcohol and illicit drug use in 104 high schools in Ontario, aiming at a sample of 7,500 students from grades 5, 7, 9, 11 and 13.

Letters were sent to 24 boards of education in all regions of the province requesting their cooperation. Five refused to take part, whereupon 2 others were approached, and in the end 20 boards participated. Only boards who could meet sample size requirements and who maintained

public and separate school systems were considered. Schools were then randomly selected from each board.

Principals from 118 schools were contacted and asked to cooperate. Fourteen schools did not take part because of refusals and closures due to bad weather on the day of the study.

Students were selected: 1) by class, and 2) individually, as representative of their grade. Either way, care was taken to ensure representativeness (P. 6). However, the selection of classes was in the control of the school. Of the 104 schools who took part, 85 required parental consent. Overall, 70 per cent of the students contacted took part in the study (5,862 in all). No significant difference was found between schools which required parental consent and those which did not, in the percentage of students using alcohol (P. 7).

The authors recognized the risk of sampling bias from: 1) introduction of parental consent; 2) the selection of classes in consultation with the principal; (principals may have selected classes "whose students were less likely to report illicit drug use", P. 7);

3) the fact that wet weather led to the closing of 9 schools with a reduction in the number of rural students participating. To these points could be added the refusal of 5 of the boards originally approached to participate.

Nevertheless, 240 classes in 104 schools were visited by 10 interviewers. All students completed an anonymous questionnaire asking about alcohol and illicit drug use in the past 12 months. (Illicit drugs included cannabis, barbiturates, speed, L.S.D., cocaine and heroin). Since grade 5 students had difficulty with the terminology in the questionnaire, their data was not included for analysis. Results showed that alcohol had been used more than any other substance listed, by 82 per cent (78.5 per cent of males and 74.3 per cent of females), of all students at least once in the past year.

Alcohol was drunk at least once a week by 18 per cent of all students. "About 16 per cent" of all students (23 per cent of all drinkers) had been drunk, and 23 per cent of all students (32 per cent of all drinkers) had had at least 5 drinks on some occasion in the previous month (P. 9). (The definition of "drunk" used in the study is not given in the abbreviated report of the results

used by this writer).

Age (positively) and grade average (negatively) were significantly related ($P < .001$), to alcohol use. Fifty-seven per cent of students under 12 had used alcohol, while 94.8 per cent of those aged 18 and over had done so (P. 10).

Sixty-nine per cent of students with the highest grade average (80 to 100) had used alcohol in the previous 12 months, while 78 per cent of those with the lowest grade average (below 60) had done so. These findings are consistent with those of Lowden (1977).

A significant relationship ($P < .001$) was found for sex and frequency of alcohol use, males drinking more often than females.

Summary

This review of the literature noted the association between alcohol consumption and crime among adjudicated offenders. It also noted that:

1. Official statistics tend to be incomplete and unreliable.
2. Self-report techniques represent an additional source of information.
3. Adjudicated offenders are not representative of the general population.
4. The drinking practices of youth merit special attention.

The Substantive Hypothesis

With the above considerations in mind, the present study examines the substantive hypothesis that there is a positive relationship between alcohol consumption and delinquent behaviour, and both of these measures have been obtained by self-report techniques from a group of high school students in the community.

The next chapter describes the procedures used to test this hypothesis.

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CHAPTER IIDesignSample

The sample for this study consisted of 3 classes, containing 100 students, representing all who were enrolled in the course "Law", during the academic year 1977-78 in one of Ottawa's oldest (103 years) academic high schools. This school and course was selected because of previous contacts with a former teacher of the law course. The school was known to be receptive to student researchers.¹

The subjects' ages ranged from 14 to 19 years, and the academic grades from 11 to 13. There were 65 males and 35 females in the sample pool. Fifteen of these (10 males and 5 females) had to be eliminated from the sample.

¹ This has been an assumption based primarily on the fact that a law teacher (no longer at the school) provided access to subjects for the Saturley (1976) study.

All 15 were eliminated for failing to complete one or more alcohol questions.² This left an experimental sample of 85 students, 55 males and 30 females, with a mean age of 16.03 (S.D. = 1.15) and 15.6 (S.D. = .93) respectively. The mean age of the whole group was 15.88 (S.D. = 1.09).

Self-Reported Measures of Alcohol Consumption and Self-Reported Delinquency

1. Alcohol Consumption

Whitehead and Smart (1972) in their survey of the validity and reliability of self-reported drug use with alcohol as one of the drugs, noted that there were very few studies directly testing the validity and the reliability of the techniques. On the basis of their

² Questions 1 and 3 were essential for testing of the experimental hypothesis. (For the 3 alcohol study questions see items A, B and C of the questionnaire in the appendix). One person, a male, omitted only the second question (B), and was eliminated in error. When the eliminated group was compared with the analyzed sample, t values showed no significant differences between males, females, or males and females together for SRD or age.

review of studies conducted mostly in Ontario, they concluded that there was reason for confidence in the validity and reliability of self-reported drug use.

A study by Whitehead and Brook (1971) is quoted by the authors as an example of a study which tested for both validity and reliability. This study examined 106 consecutive young drug users admitted to treatment facilities in London, Ontario. (In filling out a questionnaire on drug use history, 90 per cent reported the use of alcohol and marijuana respectively, and 51 per cent admitted heroin usage).

Validity of the report was estimated by counting the reported usage of 2 non-existent drugs included in the questionnaire. Seven patients reported using one or other of these drugs, 6 of whom reported use of both.

The data supporting the reliability of the questionnaire is much weaker, and raises some question about the authors' claim that there is reason to have confidence in the reliability of self-reports of drug use (P. 87), since only 9 of these patients were retested within a time period of a few days to more than a month.

Reliability was calculated by comparing individual responses to 20 different drugs on the questionnaire at 2 different periods in time. The authors reported that of a total of 180 responses, 154 or 86 per cent were identical. The small size of the sample and the question of their representativeness raises serious questions about the value of this reliability study.

Pernanen (1974) restricts his cross-cultural survey to the concept of aggregate validity, and suggests that it can be improved. Aggregate validity refers to the comparison of estimates of alcohol consumption obtained by self-report techniques to those obtained from the sale of alcoholic beverages.

After surveying close to 50 studies he finds that aggregate validity of family expenditure studies is about 40 per cent, ranging from 20 per cent to about 70 per cent. Self-reports of the actual amount consumed raises this figure to 50 per cent.

With regard to data-gathering, those factors determining aggregate validity (and it is not unreasonable to expect that they would apply to other

types of validity), are listed as: 1) the avoidance and/or over-representativeness of places like hostels and skid-row neighbourhoods where a large proportion of heavy drinking takes place; 2) the problem of non-response:- the heavier drinker, Pernanen says, is probably more likely to refuse to be interviewed; 3) forgetting, the effect of which depends upon the type of questions asked. For example, he refers to an unpublished study by the Finnish Foundation for Alcohol Studies in which people underestimated the frequency of their drinking occasion and overestimated the amount consumed on a typical occasion (P. 362); 4) when interviews are used, circumstances of the interview such as interviewers' characteristics may affect the results. For example, Mulford and Miller (1959) in one of their Iowa studies discovered that male interviewers found more female drinkers among respondents than did female interviewers, and female interviewers found more male drinkers than did male interviewers. In a later study it was found that drinkers without any commitment to use or non-use of alcohol were the ones most easily affected by characteristics of the interviewer (Mulford and Miller, 1963, quoted by Pernanen, P. 368).

2. Self-Reported Delinquency

Self-reported delinquency (SRD) refers to acts voluntarily admitted by juveniles in response to a questionnaire or in an interview, anonymously or otherwise, to non-law enforcement personnel. These reports may include offences known to the police, but also include many unofficial deviant acts, or offences not known to the police.

Three recent surveys of the literature of SRD were examined. Saturley (1976) suggests that the major source for the creation of the SRD measures (Porterfield, 1943, Nye and Short, 1957) was the dissatisfaction with official statistics, which were considered unrepresentative of both the offenders and of the volume and variety of offences. These concerns continue at the present time and account for the use of self-report techniques. They reveal that, at one time or another everyone has offended against some legal code (Nye and Short, 1957, quoted by Saturley, P. 20).

MacDonald and Blum (1977) supplemented Saturley's review by examining 22 recent references not covered by the latter. For this study one of the papers which deals

with methodological concerns is of special interest. Kulik (1968) compared self-reports under anonymous and non-anonymous conditions for a group of high school students and for institutionalized delinquents. For both groups the anonymous questionnaire yielded higher disclosures, but the correlations between the 2 forms were high for both groups. In terms of the total score, for instance, scores on the 2 administrations correlated at .98.

Hardt and Hardt (1977) noted that studies in the 1960's suggested that juveniles' social class tended to be a factor determining whether or not a young person was arrested (P. 247). The authors refer, however, to Deutscher (1966) who warned that the relationship between self-reports and actual behaviour may not be high and suggested that self-reports should be used cautiously and critically.

Gold (1966) used peers as informants to check the validity of self-reports, Short and Strodbeck (1965) used detached workers, and Clark and Tifft (1966) employed a polygraph test. On the basis of these studies, and one of their own in which they used 4 other estimates of

validity (known groups, lie scale, another source of data, and a test for internal consistency), Hardt and Hardt concluded that self-report techniques yield reasonably valid data for most respondents (P. 257).

3. The Questionnaire

Information about alcohol and delinquency was obtained by means of a single questionnaire which contained 38 questions about delinquency and 3 questions about the consumption of alcohol. In half of the questionnaires, the alcohol consumption questions preceded the delinquency questions, and in the other half the order was reversed. Questionnaires were anonymous with a front-sheet requesting the subjects' age at last birthday, sex, and grades presently attending.

The 3 questions about alcohol consumption were taken from Smart (1968) because he asked the 3 basic questions of what was consumed, how often, and how much, in a straight forward manner and with easily scored responses. There was one inadvertent alteration to the Smart format. His wording was, "How often during the past year did you have one or more drinks? Express the answer in times per month. Circle one." (Answers were

provided for 1 to 21 times per month). In the present study, the phrase "times per month" was omitted, and the answers provided for 1 to 21 times per year. (See appendix number 1, P. xiv.)

The second question referred to the beverage consumed, and since the original instrument used by Smart was no longer available (Smart, 1977), "beer", "wine", and "liquor" were the answers provided, as implied by Smart (P. 36). In the dozen cases where more than one response was given, beer was given priority over the other 2 beverages, and wine was given priority over liquor (Smart, 1968).

Smart's wording here was: "What beverage do you usually drink? For reasons of clarification the word "beverage" was dropped in the study and "usually" was defined in parenthesis as "most of the time". The question was then changed to read: "What did you usually (that is, most of the time) drink?".

The third alcohol question asked about the number of drinks per sitting and the subject was required to check a response from 1 to 10.

Since a return visit to the school was discouraged by the course teacher contacted, no experimental reliability estimate is available for the questionnaire used in the study. The alteration to 2 of the 3 questions about alcohol consumption would prevent the examination of a test-retest coefficient for a comparable sample. However, no test-retest is available for the 3 questions used by Smart (personal telephone communication with Smart, June 28, 1978).

The amount of alcohol consumed per year was calculated by multiplying the number of drinking occasions reported by the reported amounts ordinarily consumed per sitting.

Following Smart, 1 glass of beer was held to be the equivalent of a glass of wine or a glass of liquor.

A deliberate alteration to Smart's scale was made with respect to scoring. The phrase "or more" was added to the ceiling value of 21 drinking occasions. Three students, by making a personal notation on the questionnaire, extended the floor of the scale from 1 to that of 0. They were scored as zeros, thus yielding a scale of 0 to 21.

The 38 questions about delinquency represented the inventory adopted by and slightly altered by Saturley (1976) who took it from Gibson (1967). Saturley chose the Gibson scale because its administration and scoring, Saturley says, have recently been standardized (Saturley, P. 39).

In order to make the items more applicable to a Canadian high school Saturley made minor modifications to 8 of the delinquency items, such as converting British currency values into Canadian, and increasing monetary values to allow for inflation (Saturley, Pp. 50-51).

Subscales

The 38 delinquency items could also be scored along 5 subscales. (The figures in parentheses refer to the number of items in each subscale). These were: Minor (14), Under-age (7), Aggressive (7), Active Theft (7), and No Category (3).

Scoring

1. Alcohol

For the first alcohol question, a score of 1 was given for each drinking occasion reported. Thus scores ranged from 0 to 21 occasions. For the second alcohol question, pertaining to the type of alcoholic beverage usually consumed, "1" was given for beer, "2" for wine, and "3" for liquor. The third alcohol question, concerning the number of drinks ordinarily consumed at a sitting, was given a score of 1 for each drink reported in a typical session.

2. Self-Reported Delinquency

Each response received a value of 0 to 3. The response "never" received a value of 0, the frequency of "1-3 times" received a score of 1, "4-9 times" a score of 2, and "10 or more" a score of 3. The maximum total score was 114.

Validity

With respect to the Gibson scale, Saturley reports a single study by Farrington (1973) concerning the scale's

validity which was obtained by comparing the scores of a group of known offenders in a high school, with the non-delinquent remainder of the sample, and finding that the known offenders at the time of the administration of the inventory scored significantly higher than the non-delinquent group ($r = .58$, $P < .001$, P. 104).
pbis

Test-Retest Reliability

Saturley was able to do a test-retest reliability at the same school with a one-week interval between testing, and obtained a test-retest reliability of .96 (P. 83).³ He fails to give an exact number of students involved, but, because he does say (P. 43) that 2 classes were involved and his total sample consisted of 6 classes ($N = 151$), it is a reasonable guess that his sample size was around 50 students. Thus the reliability coefficient is highly satisfactory.

³ In light of questions raised later (Pp. 81-82 Ch. III), about the 7-item aggression scale, this value is suspect and may be a typing error.

Procedure

On November 3, 1977, the writer attended the School during regular hours and addressed 3 classes, explaining the purpose of the study and asking the students for their cooperation. Students were told by the writer that the purpose of the study was to learn something about young people's use of alcohol, and the extent to which they break the law.

The purpose of the study was explained by repeating the statement made on the cover-page of the questionnaire. Students were also asked to read the instructions for themselves, and question anything that was not clear. There were no questions and no refusal to participate. No time limit was specified, and the average time taken to complete the questionnaire was about 10 minutes.

The scoring was done by the writer and checked for accuracy by 1 other person.

To obtain subscale scores, each positive response received a value of 1, and these scores were then added for a total subscale score. For seriousness

of delinquency, the aggressive and active theft scores were multiplied by 2 and added to the remaining subscale scores.

Analysis

For statistical analysis correlational techniques were used after the calculations of the means and standard deviations for each variable. Separate analyses were done for males and females and the 2 sexes combined. Both t and F tests were used to assess statistical significance, with the criterion set at the conventional 5 per cent level.

Sample variance was calculated by computing the average sample sum of squares ($\frac{SS}{N}$), while the population variance was estimated by $\frac{SS}{N-1}$ (Loether and McTavish, 1976, Pp. 146, 500).

For most of the statistical analyses, the APL series of programs available at the University of Ottawa Computing Centre were used, specifically "Multiple Correlation and Regression" (MULREG), "Multiple Correlation" (MULCOR), "Frequency Distribution of a Set of Scores"

(FREQUE), "Statistics for a Simple Distribution of Scores"
(SIMDIS), "T-Test for Independent or Related Groups"
(STUDNT), and "Unit Normal Ordinates for a Set of Scores"
(NMLORD) (Cooper and Pelletier, 1977).

The major statistical (Null) hypothesis for the present study is the following:

There is no significant positive correlation between total alcohol consumption (the product of number of drinking occasions and the amount consumed on an occasion), and the total score of self-reported delinquency.

In the next chapter this hypothesis is tested, and the results are discussed.

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CHAPTER III

Results

This chapter consists of 3 sections. In the first part the result of the testing of the experimental hypothesis is reported. This is followed by further analysis of the data. Here the examination of sex and age differences was followed by a look at the relationship of alcohol consumption to the aggression score, and the single drug usage and under-age drinking items of the self-reported delinquency scale. The examination of beverage preferences, drinking occasions and the validity of the SAC scores is followed by a comparison of the findings to those of Saturley (1976). The thesis ends with suggestions for further research and a short summary.

Testing of the Hypothesis

The main hypothesis, that of an association between self-reported delinquency and reported drinking was confirmed. A correlation of .66 ($P < .05$) was obtained for the sample as a whole ($N = 85$). For males

(N = 55), the correlation was .63 ($P < .05$), and for females (N = 30), .67 ($P < .05$). The null hypothesis was thus rejected on the grounds that the value is greater than would be expected from sampling fluctuations.

Thus, SAC scores accounted for 41 per cent to 45 per cent of the variance in SRD scores. When age was added as a predictive variable, the accounted variance was less than 1 per cent in each case for the females (from .4553 to .4682), and less than 1 per cent for the males and the combined group. Due to the small sample sizes, one can regard the variances with or without the addition of age as being virtually identical, and consequently age can be ruled out as a confounding variable.

When age was considered, a correlation of only .09 was obtained with delinquency for both sexes combined, while for age and drinking the figure was .24. The respective figures for males were .10 and .27; the latter significant at $P < .05$. Females yielded negative correlations in both instances, -.19 and -.05.

Sex Differences for Self-Reported Delinquency and Alcohol Use

When SRD and SAC mean scores were compared for the 2 sexes, it was found that overall scores for males were higher than those of females.

The SRD means were 34.01 and 23.33, and the standard deviations were 21.46 and 12.72 respectively. The difference between means was 2.48, significant at $P < .05$. For the mean SAC scores the means were 76.29 and 45.10, with standard deviations of 72.54 and 36.57 respectively. The difference between means was 2.29, also significant at $P < .05$.

These findings are in accord with those of the literature that males were consistently higher than females with respect to alcohol consumption (Maddox, 1970), and self-reported delinquency (Saturley, 1976). Applying Fisher's z transformation to the respective correlation coefficients between SAC and SRD indicated no significant differences in z scores between the sexes.

Age

With respect to age, males were older ($\bar{x} = 16.03$, S.D. = 1.15) than females ($\bar{x} = 15.60$, S.D. = .93), though the t value of 1.88 failed to reach the required magnitude for significance at $P < .05$. There was no significant relationship between age and delinquency and age and alcohol consumption, or for the combined group. However, the direction of the relationships were different for the 2 sexes. With respect to alcohol consumption, the correlation coefficients were .27 for males and -.05 for females, while for SRD scores they were .10 and -.19 respectively. The negative sign of the age-delinquency correlation for females, and the inspection of the scattergram, indicated a possible tendency for an inverse relationship between age and delinquency. No attempt is made here at interpreting this trend. However, the account given on pages 86-87 for the mean difference of female SRD scores from those of a comparable sample taken in 1975 could also be applied to the negative age-delinquency correlation of the present study.

Analysis of the SRD

Following is a selected subscale and selected item analyses of the SRD composite measure. Each of the analyses is pertinent to some aspect of alcohol consumption. Primarily because of the small sample size, they should be considered as possible lead-ins to subsequent research rather than proper (item) analyses of the measures used.

1. Alcohol and Aggression

With the 7-item aggression subscale as a criterion, there was a significant positive correlation between alcohol consumption (SAC) and the 7-item aggression scale of the SRD: Specifically, the correlations for the males, females and the combined group were .55, .48 and .56 respectively, each correlation significant at $P < .01$. The distribution of the aggression scale was positively skewed for each category (which resulted in extremely large standard deviations compared to the mean), and due to technical problems attempts at normalizing the distribution have failed. The difference between the male and female scores, ($\bar{x}_M = 4.14$, S.D. = 4.11, and $\bar{x}_F = 2.26$, S.D. = 2.90) yielded a t value of 2.78 which

was significant at $P < .01$. This is in line with the findings of the literature concerning the alcohol-violence association.

An examination of the items revealed that 5 of the 7 items were open to broad interpretation. (For example, for item 10, "Have you ever annoyed, insulted or assaulted other people (strangers) in the street?") No information about the test-retest reliability of this scale is available, however, a low coefficient would be a reasonable expectation. It is suggested that prior to future research using this instrument, the wording of the aggression items and, for that matter, the wording of all the items be re-examined.

2. Alcohol and Drug Usage

Information about drug usage was obtained from the single item pertaining to drugs, "Have you ever taken L.S.D., mescaline, speed, marijuana, or hash?". This item was dichotomized into "yes" and "no" categories and was related to the total SAC scores. (Note that the total score on SRD did contain the drug item, with a range of 0 to 3.) Correlation coefficients of .45 and .49 were significant at $P < .01$ for males and females

respectively. A slightly higher proportion (.60) of the females than of the males (.50) answered "yes" to the drug question. The difference between the proportions, however, was not significant ($t = .80$).

3. Under-Age Drinking

A single item on the SRD, ("Have you ever drunk alcoholic beverages in hotels or pubs under the age of 18?") refers to under-age drinking. As in the case of drugs, this item was dichotomized. A higher proportion of girls than boys (.83, .63 respectively, $t = 1.91$, $P > .05$, but only barely), gave an affirmative answer. (This goes along with the common observation that girls at this age appear more mature than boys, and are hence less likely to be asked for proof of age.)

A correlation of this item with the total SAC scores was .53 for males ($P < .01$) and .29 for females (not significant). We cannot thus predict better than chance the amount a young female drinks by knowing that she does at least some of her drinking in hotels or pubs. No other information was obtained in this study about drinking in other settings. The lack of association between the amount of alcohol consumed and the drinking

locale suggests the possible value of exploring the drinking environment of young females, and its relation to the frequently reported high proportion of solitary drinkers among adult women (Wanberg and Knapp, 1970; Lindbeck, 1972). When the under-age drinking item was related to the total SRD scores, the findings were similar (.50 for males, .28 for females). Knowing that a young woman says she drinks in bars under-age therefore does not allow improved prediction about her total SRD score.

Analysis of the SAC

The 3 items of the SAC scale, hitherto not considered separately, may shed some light on the representativeness of the sample with regard to other high school drinking studies.

1. Beverage Preferences

Beer was a preferred beverage for both sexes, 61.81 per cent for males and 50 per cent for females, followed by wine for males (18.18 per cent) and liquor for females, 33.33 per cent. Beer was also a number one choice in Lowden's 1977 study of selected Ottawa high schools (Pp. 13, 21), and is in line with Maddox's

conclusion that in American high schools the most commonly used beverages are those of "low alcohol content" (P. 111).

2. Frequency of Drinking Occasions

Two hundred and thirty-nine subjects (82 per cent) in a recent survey of grade 11, 12, and 13 Ottawa high school students (Lowden, 1977), reported consumption of alcohol at some time during a one-year period prior to the study. The corresponding figure in this study was 96 per cent, (82 out of 85 subjects). It is not clear either how Lowden selected the participating schools he studied, or how the participating students were selected within these schools. The data for the present study was collected in the same year as Lowden's, and the corresponding percentage was 96 per cent, a significant difference ($t = 3.38$, $P < .01$). Although this information was obtained at about the same time, the difference between the sampling procedures and the instrument used illustrate some of the problems involved in interpreting the differences even among findings obtained by self-reporting techniques.

3. The Accuracy of the SAC

One problem of interpretation may be due to the trustworthiness of the SAC scores in the present study.

Six male subjects obtained maximum scores for both quantity consumed and frequency of drinking occasion. To what extent this represents accurate reporting of behaviour, or is a result of deliberate or unintentional response bias, falsification, or failure to understand the nature of the question, is not known. This problem might be ameliorated in future studies either by eliminating the extreme scores from the sample, or introducing some "Lie Scale", such as the one used by Hardt and Hardt (1977).

The Variability of the SRD

Another problem for interpretation is the variability (sampling fluctuations) of the SRD scores. With a sample of 151 students (67 males and 84 females) Saturley obtained significantly lower SRD scores for females, and males and females combined, than did this study ($t = 2.46, P < .05, t = 2.82, P < .01$ respectively).

The subjects for both his and the present study came from the same (law) classes of the same school. There were no significant differences in ages between either male or female groups. The females in the present study were younger and the males were older than the comparable groups

in Saturley's study, though the differences were not significant, (t values = 1.73 and 1.37 respectively).

After one dispenses with chance sampling fluctuation as the explanation for the obtained disparities, the following speculative and possibly interacting interpretations again illustrate the difficulties entailed in interpreting differences among self-reported delinquency measures.

(i) The person who taught the law classes has since left the school. That teacher made all the law classes accessible to Saturley, while this was the case for only 3 classes in the present study. The specific effect of this differential availability factor is not known.

(ii) Although knowledge about the attitudes towards the criminal justice system seem to be unrelated among high school students (Jayewardene, Lang, Gainer, 1977), it is not unlikely that teachers differ with respect to how they can influence students' attitudes towards the criminal justice system, and, conceivably, differentially affect student willingness to report delinquent acts.

(iii) The impact of the feminist movement on women generally is not clear, other than producing innovations in the thinking of college-educated middle-class women with regard to work roles outside the home, and career goals (Nelson, 1978). Since the present study took place as indicated earlier, in a high school with high academic standards, it is reasonable to assume that a significant proportion of the girls in the sample will go to college. It is plausible that during the 2-year period which elapsed between the 2 studies, a change in what constitutes appropriate/inappropriate behaviour for young women may have contributed to the recall and reporting of what traditionally were considered undesirable activities for girls.

Incidentally, it should be noted that while the respective statistics did not reach the required level of significance, there was a negative correlation ($r = -.19$) between age and SRD in the present study for females and they were younger than the females in Saturley's group. The relationship between age and self-reported delinquency for females is a promising area for future research to explore. ((The comparable coefficient in Saturley's study was $-.03$!))

Suggestions for Future Research

At various points in the text, suggestions, both explicit and implicit, have been made for further studies. In this section most of those recommendations have been brought together under 2 headings: replication, and theory.

1. Replication

The recommendations here may be interpreted as the acknowledgement of some of the major design weaknesses of this study. Especially because of the discrepancy from Saturley's findings of female alcohol use, a replication of the present research is suggested with the recommended improvements taken into account. With respect to sampling, it is obvious that attempts should be made to eliminate selection bias which may be introduced by restricting the sample to students attending specific classes and/or leaving the selection to a member of the school staff. While making this comment, the author is not unaware that the increased recent concern about parental rights make this selection even more difficult than it used to be only a few years ago. With respect to the instrument used, the students' understanding of the

instructions may be enhanced by pretesting the instruments in a high school sample, and adding a couple of practice items to the questionnaire. This might reduce the number of incorrectly completed questionnaires.

While it is realized that the relationship between actual behaviour and self-reported behaviour is complex, the veracity of the self-reports might be enhanced by the inclusion of some "lie scale" into the questionnaire.

A more representative and larger sample may allow for a more judicious statistical analysis. This was especially the case for the female sample, and for the crude approximations to item analysis. Indeed, to learn about the psychometric properties of the instruments used, having a substantially larger sample is advisable. Guilford (1954) recommends an N of about 400.

2. Theory

The impetus for the study was what could be called methodological, in the sense of focusing on a theoretically relevant measurement problem (Kerlinger, Pp. 703-4). The focus was the sorting out of variables which make the interpretation of the known association

between alcohol consumption and crime/delinquency difficult. No attempt was made to test any particular hypothesis which accounted for this association. Having confirmed the association by the techniques used, it is up to further research to test specific theory derived and causal hypotheses to account for the relationship, and thus increase our understanding of the phenomenon.

Summary and Conclusion

The literature has suggested that an alcohol-crime association exists and is complex in nature, and that this complexity must be recognized before meaningful research may be undertaken.

This study has demonstrated such an association between self-reported alcohol use and self-reported delinquent behaviour, for both male and female high school students. The study revealed the reported widespread use of alcohol in a high school sample of young people, as well as a broad range of delinquent behaviour. An increase in self-reported delinquent behaviour was found when compared with a previous study conducted 2 years earlier using an identical self-report delinquency scale.

The conclusion of this study is that although one must be extremely cautious in interpreting self-reports of behaviour as being the equivalent of actual behaviour, on the basis of self-reports, both delinquent acts and alcohol use are common features in the lives of young people.

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APPENDIX

INSTRUCTIONS

Everyone breaks some laws, rules and regulations during his/her lifetime. Some break them regularly, others less often. Below are some frequently broken. Check those that you have broken since beginning grade school.

Please answer each question truthfully, and as accurately as possible. All answers are confidential - there is no way by which your answers can be traced back to you. Do not put your name anywhere on your answer sheet.

Answer each question by checking (✓) in the appropriate space.

Take your time. You may have as long as you like to answer. If you wish to change your answer, cross it out (X) and put another check in the appropriate space.

If you have any questions, please ask them before beginning.

Thank you for your cooperation.

FACESHEET

Age (at last birthday) _____

Male _____ Female _____ (Check One)

Key to Subscales: (See Over)

(M) = Minor
(U) = Underage Offences
(A) = Aggressive Offences
(N-C) = No Category
(T) = Active Theft

- A. How often during the past year did you have one or more drinks?

Circle one (number of times)

1 2 3 4 5 6 7 8 9 10 11
12 13 14 15 16 17 18 19 20 21

- B. What did you usually (that is, most of the time) drink?

Beer Wine Liquor

- C. How much would you say you ordinarily consumed at a sitting? That is, from the time you started until you stopped.

Circle one (drinks of liquor, glasses of beer, glasses of wine)

1 2 3 4 5 6 7 8 9 10 or more.

- (M) 1. Have you ever ridden a bicycle without lights (or with no rear light) after dark?

never 1-3 times 4-9 times 10 or more times

- (U) 2. Have you ever driven a car, motor bike or motor scooter under the age of 16?

never 1-3 times 4-9 times 10 or more times

- (A) 3. Have you ever belonged to a group (5 people or more) who go around together, making a row, and sometimes get into fights or cause a disturbance?

never 1-3 times 4-9 times 10 or more times

- (U) 4. Have you ever played truant from school?
 never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___
- (M) 5. Have you ever deliberately travelled on a bus, etc.,
 without a ticket or paying the wrong fare?
 never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___
- (M) 6. Have you ever let off fireworks in the street?
 never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___
- (N.C.) 7. Have you ever taken money from home with no intention
 of returning it?
 never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___
- (T) 8. Have you ever taken an unknown person's car or motor
 bike for joyriding (with no intention of keeping it
 for good)?
 never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___
- (M) 9. Have you ever smashed, slashed or damaged things in
 public places -- in streets, cinemas, dance halls,
 railway carriages, buses, etc.?
 never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___
- (A) 10. Have you ever annoyed, insulted or assaulted other
 people (strangers) in the street?
 never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___
- (T) 11. Have you ever broken into a big store, garage,
 warehouse, pavilion, etc.?
 never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___

(T) 12. Have you ever broken into a small shop, candy store or corner grocery whether or not anything was stolen?

never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___

(T) 13. Have you ever stolen things out of cars?

never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___

(A) 14. Have you ever carried any kind of weapon in case it was needed in a fight: such as a knife, blackjack, bicycle chain, razor or broken bottle?

never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___

(A) 15. Have you ever attacked a person (without using any sort of weapon) in a public place?

never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___

(M) 16. Have you ever broken the windows of an empty house?

never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___

(A) 17. Have you ever used any kind of weapon in a fight -- knife, razor, broken bottle, etc.?

never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___

(U) 18. Have you ever drunk alcoholic beverages in hotels or pubs under the age of 18?

never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___

(U) 19. Have you ever gone into pub bars under the age of 16?

never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___

(M) 20. Have you ever stolen things from big stores, supermarkets, multiple shops (while shop was open)?

never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___

(M) 21. Have you ever stolen things from small shops or private tradesmen (while the shop was open)?

never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___

(M) 22. Have you ever bought or accepted as a present, anything known or suspected of being stolen?

never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___

(M) 23. Have you ever deliberately littered the streets or pavement by smashing bottles, tipping garbage cans, etc.?

never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___

(T) 24. Have you ever planned well in advance to get into a house, flat, etc., and steal valuables (and carried the plan through)?

never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___

(T) 25. Have you ever got into a house, flat, etc., and stolen things (do not count cases where stealing results from planning well in advance)?

never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___

(T) 26. Have you ever taken a bicycle belonging to another person and kept it?

never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___

(A) 27. Have you ever struggled or fought to get away from a policeman?

never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___

- (M) 28. Have you ever stolen school property worth more than two dollars?
never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___
- (A) 29. Have you ever attacked or fought with a policeman who is trying to arrest someone else?
never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___
- (M) 30. Have you ever stolen tools, materials or any other goods worth more than five dollars from a place where you work during working hours (do not count breaking-in here)?
never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___
- (M) 31. Have you ever trespassed (examples -- railway lines, goods yards, private gardens, empty houses)?
never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___
- (U) 32. Have you ever gone to a movie that was restricted and you were under age?
never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___
- (U) 33. Have you often spent three dollars or more a week on gambling under the age of sixteen?
never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___
- (U) 34. Have you been regularly smoking cigarettes under the age of fifteen?
never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___

(M) 35. Have you ever stolen goods or money from slot machines, telephones, juke boxes, etc.?

never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___

(M) 36. Have you ever stolen from people's clothes hanging up anywhere?

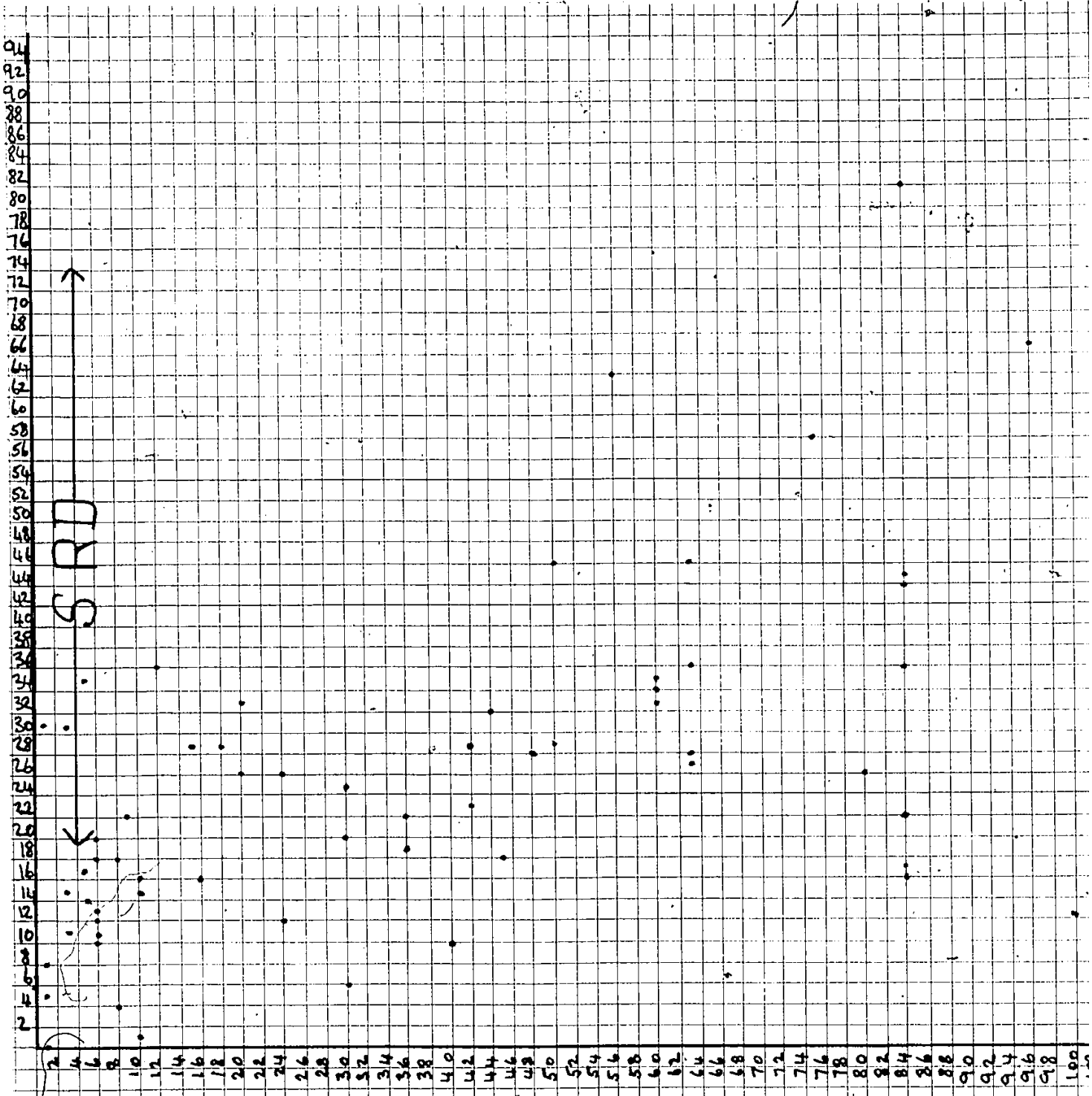
never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___

(N.C.) 37. Have you ever obtained money by false pretences (that is by getting someone to believe something that was false, in order to get his money)?

never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___

(N.C.) 38. Have you ever taken L.S.D., mescaline, speed, marijuana, or hash?

never ___ 1-3 times ___ 4-9 times ___ 10 or more times ___



108

← SAC

RANGE: SRD 1-94 MALES AND FEMALES

SAC 0-210*

N = 85

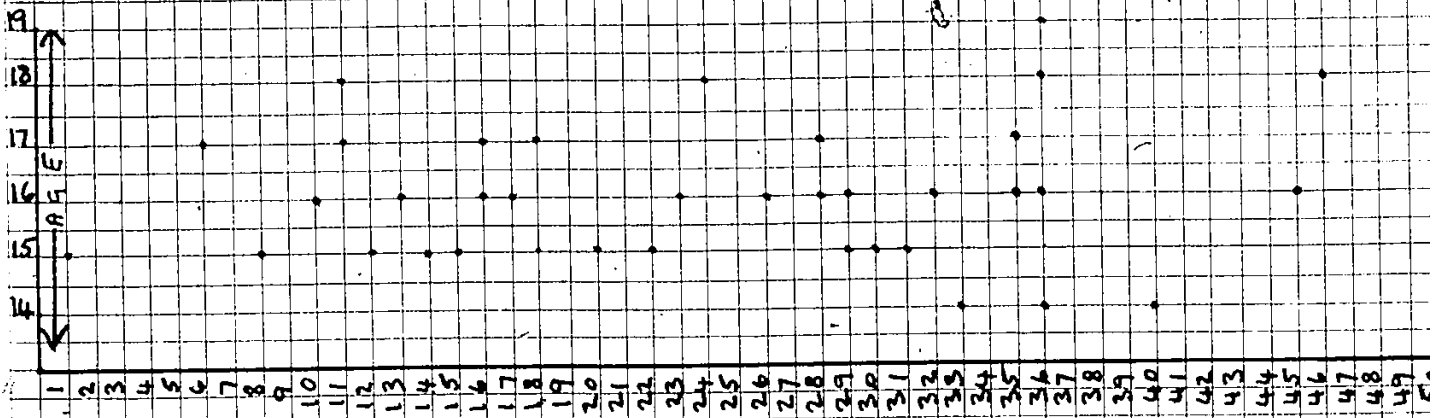
r = .665

NOT SHOWN: * MAXIMUM SCORES OF 210:

(6 MALES)

94
96
98
100
102
104
106
108
110
112
114
116
118
120
122
124
126
128
130
132
134
136
138
140
142
144
146
148
150
152
154
156
158
160
162
164
166
168
170
172
174
176
178
180
182
184
186
188

AC →



MALES

N = 55

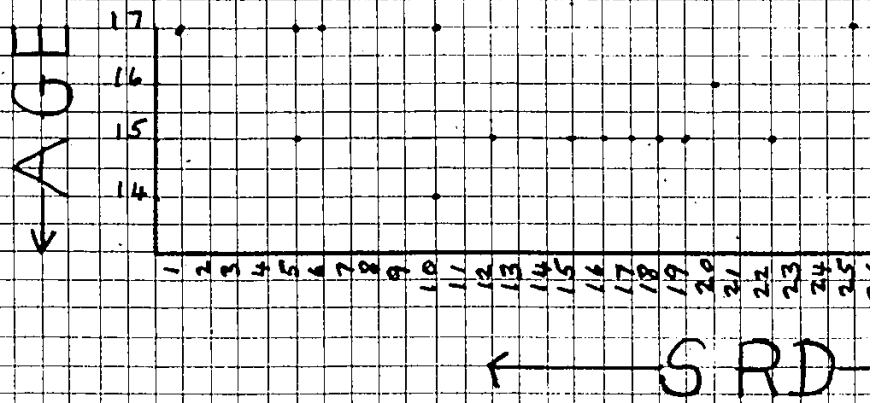
r = 103

RANGE AGE 14-18

SRD 1-9

47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94





1 of

FEMALES

N = 30

$\bar{x} = 194$

RANGE: AGE 14-17
SRD 1-48

42
44
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48



SUMMARY

SUMMARYSelf-Reported Delinquency and Alcohol Consumption

The positive relationship between alcohol usage and crime has often been noted in the criminological literature. The statistics, however, have been usually based on samples of adjudicated offenders. In the past two decades it has become increasingly clear that these statistics do not accurately convey the true incidence and dimensions of delinquent behaviour in the general population. In the present study, self-reported alcohol usage was correlated with self-reported delinquency for a group of academic high school students in Ottawa. The sample consisted of 55 males, 30 females, and correlation coefficients significant at the 1 per cent level were obtained for each of the sexes and the combined group. Further analysis revealed significantly higher scores for males on both measures, and a significant positive correlation between alcohol usage and self-reported aggression for each sex. The delinquency scores for women were significantly higher than those of a comparable group assessed two years previously.

Specific suggestions for methodological improvements were made, and the testing of particular hypotheses to account for the alcohol usage-delinquency relationship was advocated.