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DRUGS AND CRIME

Drug taking as a precursor to violent and property offending.

A thesis presented in partial fulfilment
of the requirements for the degree
of Master of Arts in Psychology
at Massey University.

Rebecca Joy Hathaway
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ABSTRACT

The aim of the present study was to investigate relationships between pre-offence drug use and offence type, using a sample of incarcerated New Zealand male offenders. Self-report data addressed drug (including alcohol) use in the 12 hours before the offence and in the month before the offence, motivation for offending, and causal attributions made by offenders, and a number of other variables. Half of the sample reported being under the influence of drugs while committing the offence for which they were incarcerated; over two-thirds of the sample had used drugs in the 12 hours before the offence. Most pre-offence users had used illegal drugs, or a combination of illegal drugs and alcohol. There was a non-significant relationship between pre-offence drug use and offence type. Violent offenders reported the lowest pre-offence drug use, and property offenders the highest, which did not support previous research reporting strong links between drug use prior to offending and violent offences. Fewer offenders reported that the reason for their offence was to obtain money for drugs than in U.S. studies. Problems and limitations in conducting research of this nature are addressed, and future research needs are identified, in particular the need for more information about the situation in which drug use and offending occurs. Implications of the present findings are also discussed.

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Chapter 1

OVERVIEW

Introduction

The link between drug taking and crime has produced lengthy debate in the relevant literature for well over two decades (Bean, 1971, 1974, cited in Bean & Wilkinson, 1988). Substance abuse and the commission of crimes have long been associated (Field, 1985; Gandossy, Williams, Cohen, & Harwood, 1980; McGlothlin, 1979; Nurco, Kinlock, & Balter, 1993; Tinklenberg, 1978; Weissman, 1978, cited in McBride, 1981; Wish & Johnson, 1986); studies of incarcerated populations show that the proportion of histories of alcohol and drug problems among inmates is at least seven to eight times higher than that of the general population (Roth, Rosenberg, & Levinson, 1971, cited in Field, 1985). The criminality of opiate addicts has also been shown to increase during the period of addiction and decrease when opiate use ceases (Ball, Shaffer, & Nurco, 1983). As Ladouceur and Temple (1985) state, "numerous studies have produced correlations between drug use and crime, but the actual percentage of offenders involved in substance use varies enormously from one study to another". For example, Room (1978, cited in Ladouceur & Temple, 1985) found that the percentage of offenders reported to be under the influence of alcohol at the time of the offence ranged from 4 to 87% for arrest populations, and 14 to 100% for prison populations. In 1989 the report of the New Zealand Ministerial Commission of Inquiry into the Prison System cited 1986 Justice Department research which reported that 67% of the total prison population had committed drug offences or were identified in probation reports as drug users. Research has shown that drug and alcohol use often precedes criminal events (Ladouceur & Temple, 1985). Surveys have found that as much as 80% of violent crimes, including homicides, involve alcohol and drugs (Gise & Paddison, 1988; Reid, 1988; both cited in Miller, Gold, & Mahler, 1990). A television advertisement shown in this country during 1994 stated, "Almost 80% of violent offenders in New Zealand are affected by alcohol...Drink is the Link". However we do not know the role that drugs other than alcohol play. An Australian study conducted by Ellard (1987) estimated that some 60% of male prisoners in New South Wales were users of illicit drugs before their arrest. Although it is obvious that drugs and offending are related, there is great variation in reported correlations (Room, 1978, cited in Ladouceur & Temple, 1985), and few studies have devoted attention to the <u>nature</u> of the substance use-crime relationship. Greenwood (1981, cited in Ladouceur & Temple, 1985) and O'Donnell, Voss, Clayton, Slatin, and Room (1976, cited in Ladouceur and Temple, 1985) have suggested that "specific crime types or attributes may be an important influence on the significance of

alcohol and drug use in a criminal event" (Ladouceur & Temple, 1985, p. 274). For example, Ladouceur and Temple reported that the literature as a whole seemed to indicate that alcohol use before the offence was more often associated with violent crime, whereas drug use was more commonly correlated with nonviolent property crime.

It has been suggested (Roizen & Schneberk, 1977, cited in Ladouceur & Temple, 1985) that most studies of drug use and crime stop with the establishment of the association, and do not pay enough attention to characteristics of the criminal event and other contributions of situational or general sociocultural factors (for example age, social context, and race have shown relationships with crime and drug use (Ladouceur & Temple, 1985, p. 275)).

There is at present no available data concerning the use of drugs prior to the commission of offences in New Zealand, drugs as a motivating force for offending, or the types of offences associated with drug use. The small number of studies which have been conducted to address the question of drug use prior to offending, have been, for the most part, carried out in the United States.

Wish and Johnson (1986), in their review of U.S. research on the impact of substance abuse on criminal careers, say:

> "Despite the strong link between drug use and crime documented in the previous sections of this paper, there is a dearth of literature examining the specific nature of that link...*Examples of questions that have not been addressed are: Were you high or experiencing withdrawal symptoms during the crime? When and which substances were taken, and with whom? How did the drug affect the crime? What drugs were taken after the crime, and how soon?"* [italics added] (p. 67).

Wish and Johnson (1986) conclude with the fact that the evidence is scanty regarding the exact timing of drug use and crime:

> "Information from urine-testing programmes tells us only that about one-half of arrestees in two eastern cities had used a drug sometime near the arrest. *Whether other cities have this degree of drug use among arrestees is unknown*[italics added]. Findings from studies of active criminal drug users do indicate that alcohol and other drugs may be used to prepare for a crime and are almost surely used after the crime, if money has been obtained. The generalizability of these findings to other offenders is unknown, pending replication of the studies in other sites" (p. 68).

The authors also conclude that surveys of the general population cannot offer a great deal towards an understanding of how often drug use is concurrent with the commission of a crime, because use of hard drugs such as cocaine and heroin and commission of serious crimes are infrequent in persons under age eighteen. They suggest that to obtain information on this topic, one must focus on samples of high risk youths or "persons who have had some contact with the criminal justice system" (p. 68). The present research will investigate drug use in a sample of prison inmates and incorporates Wish and Johnson's (1986) research suggestions.

This introduction will address research from this country and overseas, regarding various perspectives of the drugs-crime nexus. However the main focus is on the psychopharmacological model, and secondarily the economic-compulsive model.

In this thesis, drugs are defined as substances used to change peoples' state of consciousness for non-medical purposes (Black & Casswell, 1993). The two most commonly used drugs in New Zealand are alcohol and tobacco, both of which are legal. However, tobacco will not be included as a 'drug' for the purposes of this research. In following with much of the previous literature, alcohol will be listed seperately to "drugs", although it is, of course, a drug. The terms "illicit drugs" or "illegal drugs" will exclude alcohol, and on occasions where alcohol is included in the term "drugs", this will be made clear.

New Zealand Research

In July 1992, the Group Manager of Corrections in New Zealand, wrote in the foreword to *Substance Abuse: A Survey of the Treatment Needs of Prison Inmates* (Whitney, 1992); "Whilst it is unclear...how much their involvement in alcohol and/or drug taking contributed to the actual criminal act which resulted in a court appearance and subsequent sentence to imprisonment or a community based sentence, there can be little doubt that involvement with alcohol and drugs has placed them at risk in terms of offending against the law and in terms of their general health and welfare". Whitney (1992) points out that few studies have attempted to assess the degree of alcohol consumption and drug use among those given a custodial sentence in New Zealand. One New Zealand study (McLean, 1988) which investigated lifetime alcohol-related behaviour of people who were serving a prison term, classified around 50-60% of a sample of male and female inmates as "alcoholics" on a recognised alcoholism screening test (the Michigan Alcoholism Screening Test), while Bakker's (1991) study of 147 New Zealand prison inmates, using the M.A.S.T. and the Diagnostic Interview Schedule, found an alcoholism prevalence of 80%. Another recent study (Bakker & Bushnell, in press, cited in Whitney, 1992) examined alcohol and drug use in a sample of 100 male inmates, finding that a markedly higher proportion of the prison sample had a drug abuse or dependence disorder when compared to a community sample. The rate of substance abuse identification in the 17 prisons in Whitney's (1992) survey ranged from 17% to 85% with the average being 50%. However when the information from two of the prisons, which had unusually high proportions of missing data, is deleted, the median rate of identification of substance abuse for men rises to 59%. The nature of the substance abuse problems were identified as being 35% drug and alcohol; 16% alcohol only; 12% drug only, and in over one third (37%), the drugs were unspecified. Whitney reported, "Eighty eight per cent of men and 87% of women identified as substance abusers reported having used at least one drug group. Over two thirds of these men and four fifths of these women reported using a drug or drugs other than marijuana. Apart from marijuana, regular use of tranquillisers and opiates was reported most frequently" (p. 56). Reported use of drugs by inmates in McLean's (1988) study was compared to a recent survey (Black & Casswell, 1991) which examined drug use in the New Zealand population, the survey period for both studies coinciding. There was a marked difference between the proportion of the inmate and general population samples that reported trying amphetamines, tranquillisers, cocaine, heroin, opiates, hallucinogens, and solvents. Up to 12% of the men in the general population sample reported trying the different drug types, while different drugs were used by between 15 and 54% of the male inmates. Asher's (1988) review of parole decisions by district prison boards, showed that 62% of

released offenders were ordered to undergo an alcohol or drug programme: "It is clear that programmes to treat alcohol or drug related problems were seen as necessary for a high proportion of released offenders, and were much more numerous than any other type" (Asher, 1988, p. 15).

A Significant Overseas Study

A recent report by Harlow (1991) for the U.S. Bureau of Justice Statistics, analysing the results of 395,554 self-report interviews with prison inmates carried out in 1989, included the following observations:

- 27% of all convicted inmates reported that they were under the influence of drugs at the time of the crime.
- 18% said they were under the influence of a major drug (including heroin, crack, cocaine, PCP, LSD, and marijuana) at the time of the crime.
- 44% had used drugs in the month before the crime: 30% daily or almost daily. (About 50% of these daily users had been using cocaine or crack).
- Obtaining money for illegal drugs was cited by 13% of convicted inmates as a reason they had committed their offence.
- Of inmates who had used drugs in the month before the offence, 27% said that they had committed their crimes to obtain money for drugs.
- Of all convicted inmates, drug offenders (39%), burglars (38%), and robbers (36%) were the most likely to report being under the influence of drugs.
- Almost a third of those convicted of robbery and burglary had committed their crime to obtain money for drugs, as had about a quarter of those in prison for larceny and fraud.
- Cocaine or crack users were three times more likely than other drug users to have committed their current offence to obtain money for drugs - 39% of the users of cocaine or crack said they were trying to get money for drugs when committing their crime.

- Prison inmates were twice as likely as persons in the general population to have ever used drugs and seven times more likely than those in the general population to have been current users of drugs.

- The reported drug use of inmates with different educational backgrounds had no consistent pattern.

- Use of drugs in the month before the offence was reported by nearly seven in ten inmates convicted of drug possession and by more than one in two inmates convicted of robbery, burglary, larceny, and drug trafficking. Reported use of drugs during the month was lowest among violent offenders (excluding robbers) and public order offenders.

- The majority of users of major drugs (65%) were in prison for drug crimes and crimes for economic gain. Violent and public-order offences were more prevalent among inmates who had never used drugs than among drug users or major drug users.

The Possible Links Between Drugs and Crime

Although research has consistently demonstrated a high degree of correlation between drug use and criminal behaviours (e.g. Anglin & Speckart, 1988; Ellinwood, 1971; Gandossy et al., 1980; Hunt, Lipton, & Spunt, 1984; Inciardi, 1986; Inciardi & Pottieger, 1991; Johnson, Elmoghazy, & Dunlap, 1990, cited in Harrison & Gfroerer, 1992; Kozel, DuPont, & Brown, 1972; McBride & McCoy, 1982; Nurco, Hanlon, Kinlock, & Duszynski, 1989; Parker & Newcombe, 1987; Research Triangle Institute, 1976; Solursh, 1975; Speckart & Anglin, 1987; Tinklenberg, Murphy, Murphy, Darley, Roth, & Kopell, 1974; Wish & Johnson, 1986), there is no firm evidence of a causal relationship. For example, analyses of results from the 1991 U.S. National Household Survey on Drug Abuse (Harrison & Gfroerer, 1992) show that drug use in general, and cocaine use in particular, are the most important correlates of being booked for property and violent crimes: but this does not show, however, that drug use causes crime. A mere relationship or association is not sufficient evidence of causality. It may be that drug users behave in a more risk-taking fashion with regard to their criminal activity, which places them at greater risk of being apprehended and charged. It may also be that upon questioning by police, drug users are more likely to behave in a way that results in their being charged (Harrison & Gfroerer, 1992). A common conclusion is that deviant

behaviours such as drug use and criminal behaviours occur within the context of a *general deviance syndrome* (Akers, 1984, cited in Harrison & Gfroerer, 1992; Donovan & Jessor, 1985; Elliot, Huizinga, & Ageton, 1985; Jessor, Chase, & Donovan, 1980; Kaplan, Martin, Johnston, & Robbins, 1986; Osgood, Johnston, O'Malley, & Bachman, 1988); i.e. those likely to engage in one form of deviant behaviour (crime) are also likely to engage in other forms of deviant behaviour (drug use). According to Elliot et al. (1985), "there is considerable empirical evidence that the use of alcohol and marijuana, the most frequently used drugs, is part of a general deviance syndrome that involves a wide range of minor criminal acts and other forms of norm-violating behavior (Jessor et al., 1968; Robbins & Murphy, 1967; Hindelang & Weis, 1972; Elliot & Ageton, 1976; Jessor & Jessor, 1977; Bachman et al., 1978; Kandel, 1980; Brennan et al., 1981; Huizinga & Elliot, 1981; Donovan & Jessor, 1984; Elliot & Huizinga, 1984)" (p. 12).

Reiss and Roth (1993) describe neurobiologic relationships which have been discovered between certain psychoactive drugs (including alcohol) and violence, but state that there is "certainly no basis for a blanket assertion that taking any of them causes people to behave violently" (p. 183). The biological changes produced by any drug affecting violent behaviour "depend not only on interactions with endocrine, neurochemical, and genetic mechanisms, but also on interactions with processes at the micro- and macrosocial levels" (p. 183).

Weisheit (1990) refers to "drug-intoxicated individuals who commit crimes because they have lost their natural inhibitions while under the influence", but states that these are only a small proportion of drug-related offences, and "even for these cases there is dispute about whether the influence of the drugs caused crime or merely provided a rationalisation for it" (p. 139).

Chaiken and Chaiken (1990, cited in Reiss & Roth, 1993), concluded that only "small fractions" of drug-users ever commit a 'predatory' offence (i.e. robbery or other crime for gain).

Ojesjo (1983) reported that the most frequent crimes related to alcohol and drugs in American society were "causing disturbances by being drunk in public, driving while intoxicated, driving while ability to drive is impaired, and unlawful possession of narcotics" (p. 733). Ojesjo went on to say that "In the overwhelming majority of instances, however, the use of alcohol or drugs is not followed by any crime at all" (p.733).

Goldstein's Tripartite Conceptual Framework

Although the relationship between abuse of various illicit drugs and criminal behaviour has not been widely investigated or agreed upon, crimes associated with drug use generally fall into one of three categories: (1) crimes committed under the influence of drugs owing to direct effects on brain function, (2) crimes committed in order to obtain money to buy drugs, and (3) drug dealing and violent crimes associated with drug dealing (Fishbein & Pease, 1990). A popular explanation for the correlation between drug use and crime, especially property crime, is the economic motivation: illicit drugs are expensive. For example, there is evidence that opiate use leads to crime for economic gain (Anglin & Speckart, 1988; Nurco, Hanlon, Kinlock, & Duszynski, 1988; McGlothlin, 1978; Wallters, Reinarman, & Fagan, 1985, cited in Harrison & Gfroerer, 1992).

When looking at the relationship between drugs (including alcohol) and violent crime, it is useful to note a prominent theory in the drugs-crime field; Goldstein's (1985) tripartite conceptual framework. This tripartite conceptualisation emerged from, and has been tested in, a number of different empirical studies (Goldstein, 1986, 1991; Goldstein, Bellucci, Spunt, & Miller, 1991; Goldstein, Brownstein, Ryan, & Bellucci, 1989; Ryan, Goldstein, Brownstein, & Bellucci, 1990; Spunt, Goldstein, Bellucci, & Miller, 1990a, 1990b; all cited in Goldstein, 1992). According to Goldstein (1992), though he says so himself, "it currently holds the most promise for achieving a uniform and policy-relevant definition of drug-related violence" (p. 461).

Goldstein suggests that drugs and violence are related to each other in three different ways: psychopharmacologically, economically compulsive, and systemically. Within a psychopharmacological framework, violence results from short- or long-term effects of drug ingestion, such as barbiturate or PCP use. An economic-compulsive view recognises that violence is committed to obtain money to buy drugs, as in the case of heroin or cocaine. Finally, from a "systemic" standpoint, violence results from the traditionally aggressive patterns of interaction between participants in the drug distribution system. Different drugs differentially promote violence depending upon which model is operating: Goldstein (1985, 1989) lists barbiturates, stimulants, PCP and alcohol as most often associated with psychopharmacological violence, heroin and cocaine as most often associated with economically compulsive violence, and any illicit drug can be associated with systemic violence.

Brownstein and Goldstein (1990) used Goldstein's typology of motivators for drug-related violence and combined it with a primary/secondary classification of homicides, to create a possible ten homicide styles. Using police records, they found that most drug-related homicides were psychopharmacological, i.e. the killing resulted from long- or short-term drug use (over half of the 129 cases). Only a few cases (3%) were homicides arising from economic desperation due to a drug lifestyle, and about 20% were homicides resulting from participation in the drug business.

It is worth noting that although the work of Brownstein and Goldstein (1990) supported the usefulness of the tripartite framework, Moss and Tarter (1993) have suggested an alternative paradigm, stating that although Goldstein's model

> "is appealing in its recognition of the importance of situational variables in motivating violent behaviour, it falls short in the recognition of the critical role played by the individual psychological characteristics that interact with both situational stimuli and pharmacologic drug effects to produce an outcome...We propose a structural model suggesting that the strength of the relationship between an individual's aggressive and antisocial disposition and the production of drug-related violence is moderated by both the specific pharmacologic effects of the drug in question and the situational context that either demands or is permissive to violent behaviour" (p. 157).

Pallone: Engine/Lubricant/Motive

Pallone (1990) conceptualises the use or abuse of psychoactive substances and their possible association with crime in several ways: as "*engine*", functioning so as to induce a person "under the influence" to commit a criminal act of which he/she might otherwise seem incapable (e.g. an otherwise peaceful male ingests a large dose of a mood-altering central nervous system stimulant, such as amphetamine, and gets involved in a physical fight, resulting in a charge of aggravated assault); as "*lubricant*", functioning so as to facilitate what, at least post-hoc, seems to be a predisposition to criminal behaviour (e.g. an otherwise well-controlled but sexually undiscriminating middle-aged man ingests a central nervous system depressant, such as barbiturates, and "while under the influence" appears to lose the capacity to differentiate the ages of women younger than himself, and is charged with statutory rape); or as "*motive*", functioning as the goal to which criminal activity is directed (e.g. a heroin addict burgles a house in order to obtain goods that can

be sold to support his habit) - with the crime committed typically while the offender is *not* "under the influence" (p. 87).

The *engine* and *lubricant* functions correspond to what McGlothlin (1985) has called the "direct pharmacological effects" of drug use (see "Psychopharmacological Effects", p. 12), while the *motive* function corresponds to what he has called an "indirect pharmacological effect" (cited in Pallone, 1990, p. 88).

Pallone (1990) states:

> "As catalogued in a variety of standard sources on psychopharmacology...each of the major classes of "abusable" drugs possesses specific biochemical properties which produce predictable neuropsychological sequelae; these range from euphoria, aggressivity, and overwhelming impulsivity (as in the case of psychotomimetic central nervous system stimulants, such as cocaine and the amphetamines) to persistent passivity and withdrawal (as in the case of narcoleptic central nervous system sedatives and depressants)....it is biochemically credible to suppose that the use or abuse of *central nervous system stimulants* and perhaps of hallucinogens accelerates *crimes of violence and personal victimisation*. Among the property crimes, it seems likely that *burglary* alone might be accelerated by stimulants. Conversely, it is likely that the *central nervous system depressants retard violent behaviour* of all sorts" (p.89, all italics his).

Pallone points out that these speculations do not necessarily point to drug use or abuse as the primary *engine* for crime; instead, drug use might more realistically be regarded as a *lubricant* which potentiates other pre-disposing factors, both intra- and extra-personal. And almost certainly it is the "profit crimes" of burglary and robbery that are implicated when the acquisition of drugs functions as *motive*. McGlothlin's (1985, cited in Pallone, 1990) study of 581 narcotic addicts and review of data from 45 other studies led him to the conclusion that the crimes committed by these subjects are predominantly property crimes, arguing that for abusers of opiates, drug use functions primarily as *motive*.

Methodological Limitations of Previous Research

Pallone (1990) admits that biochemical evidence concerning whether arrestees were "under the influence" at the point of arrest, especially if not under "hot pursuit" circumstances, may be insufficient to determine whether drug use/abuse functions phenomenologically either as engine or as lubricant for criminal behaviour: "Self-reports may be the only viable route to determining whether drug use functioned biochemically as "engine" or "lubricant" in criminal behaviour" (p.107).

Self-reports of drug use can be more useful than urine testing in the investigation of crime-related drug use. Drug-positive urine test results may be found in cases of psychopharmacological, economically compulsive, or systemic violence. Drug positivity can also be seen in cases where drugs were consumed prior to a crime, but in which the drug consumption was totally unrelated to the crime event. If there is a time lag between the crime event and testing, drug positivity may also result from drugs consumed after the violent event. It is not uncommon for robbers to celebrate a successful project by "partying" with drugs afterwards (Goldstein, 1989). Research by Johnson, Wish, and Huizinga (1983, cited in Gropper, 1985) indicated that "both hard-core and less intensive users tend to modulate or defer their use until the social or criminal situation is more appropriate, typically taking few or no drugs before critical events - such as before committing a theft - and deferring intensive usage for safer situations or settings, such as after the crime is completed" (p.5).

Methodological problems limiting conclusions from previous studies of the association between alcohol (and drugs) and violence, include

- Small sample sizes
- Nonstandardised definitions of violence, alcohol/drug use, and other terms
- Inadequate measures of alcohol/drug consumption
- Failure to distinguish between acute effects of alcohol/drug ingestion from chronic/long-term effects
- Biased samples
- Failure to distinguish subgroups of alcohol/drug users and violent offenders
- Lack of information on the contexts in which drinking/drug-taking and violence occur

(from Martin, 1992)

Chapter 2

DRUGS AND CRIMINAL OFFENDING

Psychopharmacological Effects

Possible direct pharmacological effects of drugs (including alcohol) noted in the literature include drug-induced disinhibition resulting in impulsive actions, violence caused by drug-related paranoia or psychosis, crimes of negligence such as those resulting from driver-impaired performance, and references to individuals using drugs as a means of fortifying themselves to engage in criminal activities (McGlothlin, 1979).

In 18 of the 23 U.S. cities included in the Drug Use Forecasting Study in 1990 (National Institute of Justice, 1991), 50% or more of those who had been recently arrested and criminally charged tested positive for some illicit drug. Cocaine was the drug for which arrested people were most likely to test positive (up to 68%), followed by marijuana (up to 42%) and opiates (up to 27%). Other drugs giving positive tests across the U.S. included amphetamines (up to 30%), PCP (up to 15%), benzodiazepines (up to 17%), and methadone (up to 7%). The national U.S. study of jail inmates conducted by Harlow (1991) found that 30% of prison inmates reported daily illicit drug use in the month prior to committing the offence that led to their incarceration (and at least four in every ten convicted inmates said they were using drugs during the month before the crime), and over a quarter (27%) reported that they were under the influence of an illegal drug when they committed the offence. According to a 1986 survey of inmates in 275 U.S. state correctional facilities (Innes, 1988), 35% of 13,711 prisoners surveyed reported that they were under the influence of drugs at the time they committed their current offence, compared to 32% in the 1979 survey (Bureau of Justice Statistics, 1983). In the month before their current offence, 43% of the inmates in Innes' survey were using illegal drugs on a daily or near daily basis; 19% were using a major drug (heroin, methadone, cocaine, PCP or LSD) on a daily or near daily basis. Inmates were more likely to report that they were under the influence of cocaine but less likely to report using heroin at the time of the offence than in earlier surveys. Alcohol, marijuana and hashish were the drugs most frequently used at the time of the offence, followed by cocaine and heroin. Of prisoners sentenced for robbery, burglary, theft, or a drug offence, 50% were daily drug users, and about 40% were under the influence of an illegal drug at the time they committed the crime. These proportions were higher than those reported by inmates convicted of other crimes (Innes, 1988). About 13% of inmates could be classified as drug dependents who were committing crimes in order to get their drug (or money for their drug).

Wish (1987, cited in Brochu, Desjardins, Douyon, & Forget, 1992) reported that in New York in 1984, 56% of arrestees tested positive for opiates, cocaine, PCP, or methadone (which indicates that the drugs were probably used within the past 24 to 48 hours): two years later this percentage rose to 80% (partly owing to increased cocaine abuse). Regarding large American cities in general, Wish and O'Neil (1989, cited in Brochu et al., 1992) estimate that between 50% and 80% of male arrestees test positive to at least one illicit substance (also Toborg, 1984; Wish, 1986; Wish, Anderson et al., 1984, all cited in Wish & Johnson, 1986). There was no indication in these studies whether the drug use played a role in the arrest. (N.B. A difficulty with interpreting these figures arises from the fact that because the urine samples are collected at the time of arrest, they tell us little about drug use at the time of the offence for individuals who were not arrested at the scene - traces of drug use leave the body at different rates for different drugs (Reiss & Roth, 1993)).

In Canada, Lightfoot and Hodgins (1988) found that of 275 volunteer male prison inmates, 80% reported having used at least one type of drug (excluding alcohol) in the six months prior to incarceration, and 79% reported having used alcohol and/or drugs on the day they committed the crime for which they were incarcerated (although the voluntary nature of the study may have some bearing on these high incidences). Berzins and Colette-Carriere (1979, cited in Brochu et al., 1992) reported that for 58% of the 91 women incarcerated in a Canadian prison, "alcohol or drug use played an important part in the commission of the crime of which they were accused" (p. 106). Brochu et al. (1992) aggregated data from three simultaneous Canadian studies (Brochu & Douyon, 1990; Desjardins, Brochu, & Biron, 1991; Forget, 1991), and found, among other things, that 58.4% of male offenders experienced at least a moderate level of drug abuse:

> "Considering these data, it is possible to affirm that the drug/crime connection is certainly not artificial. In order to get a better understanding of the nature of this relationship, adult offenders were asked to report on the role played by the drug on the crime they were accused of. Twenty six percent of men and 41% of women thought that drugs gave them courage to commit the crime; 24% of male and 16% of female answered that drugs did not affect them in any way; 24% of men and 26% of women said that drugs calmed them; 18% of male and 29% of female reported having become more aggressive because of drugs; and 16% of men and 26% of women were made nervous (the total is not equal to 100% because some subjects attributed more than one role to the drug)." (Brochu et al., 1992, p.109)

The authors concluded "These data do not mean that drug use causes crime, but it could sometimes facilitate criminal activities for people already engaged in a criminal career. For this reason, it is important to intervene" (p. 110).

The U.S. Department of Justice Bulletins, *Prisoners and Alcohol* (1983a) and *Prisoners and Drugs* (1983b), indicate that among inmates in correctional facilities, a third were under the influence of a drug and approximately half were under the influence of alcohol at the time of the offence (cited in Miller & Welte, 1987).

Using data from the Bureau of Justice Statistics, U.S. Department of Justice (1981, 1983), *Survey of Inmates of State Correctional Facilities, 1979* and *Survey of Jail Inmates, 1978*, Miller and Welte (1987) reported that 46.2% of offenders were under the influence of alcohol when they committed the offence for which they were incarcerated, and 38.1% were under the influence of some other drug. Offenders who use drugs only before the offence were more likely to have committed drug offences as compared to those who used alcohol and drugs, alcohol only, or neither alcohol or drugs. They were also slightly more likely to have committed property crimes. However, they were the least likely to have a current offence in the violent category. Welte and Miller (1987) found only slight differences between the use of alcohol before the crimes of violent and property offenders: "The proportions of violent offenders who drank before the crime were greater than the proportion of property offenders, but this was not true for offenders with low education. The disinhibition theory of alcohol involvement in violent crime was not supported" (Welte & Miller, 1987, p. 313). The researchers conclude from their study that "While our data do not allow exploration of the various roles for alcohol and/or drug use in criminal activity, there is sufficient evidence to warrant further investigation into the different patterns of substance use for all types of criminal activity" (Miller & Welte, 1987, p. 387).

A large-scale study by the U.S. Bureau of Justice Statistics in 1980 (cited in Pallone, 1990), obtained self-reports from 91,411 jail inmates (94% male): 22% of the subjects in this largely misdemeanour pool were, at the time of the offence "under the influence of drugs". When the data was re-arrayed by major category, it was found that 30% of the incarcerated felons convicted of violent crimes and 35% of those convicted of property crimes self-reported as "under the influence" at the time of the offence. When the data was re-arrayed according to sub-categories, the self-reported "positive" rate was 21% among prisoners convicted of homicide, 27% among those convicted of assault, 22% among those convicted of robbery, 34% among those convicted of "other" violent

crimes, 40% among those convicted of burglary, 25% among those convicted of forgery or fraud, and 30% among those convicted of theft.

Reiss and Roth (1993), reviewing urine testing results from the United States, report that "the lower prevalence of positive tests among arrestees for violent offences compared with arrestees for other offences would argue against the presumption that using psychedelic drugs causes violent offending" (p. 186).

Drugs and Violence

The relationship between drug use and violent crime has not been well researched, although in the news media reporters often link the two (Franklin, Allison, & Sutton, 1992), and much of the literature of the first few decades of this century tended to assume a causal relationship between drug use and violence, portraying an exaggerated stereotype of the violent drug user (McBride & Swartz, 1990), but in the more modern research literature it has been commonly reported that drug addicts commit few violent offences (Ball, Shaffer, & Nurco, 1983; Hunt et al., 1984; Johnson et al., 1991) and those who do are involved in systemic violence linked to the drug trade (Goldstein, Brownstein, & Ryan, 1992; Harrison & Gfroerer, 1992; McBride, 1981). Systemic violence is described on page 33, as part of Goldstein's (1985) tripartite conceptual framework.

Research contrasting claimed substance intoxication at the time of crime commission for North Carolina prison admissions (Franklin et al., 1992) found that "intoxicated criminals committed no more violent offenses than sober offenders. Inmates inebriated with illegal drugs committed fewer violent crimes than either sober offenders, poly-abusers, or alcohol abusers. Results suggest that intoxication with alcohol free mood altering drugs contribute to a reduction of violent crime among incarcerated criminal offenders" (p. 101). (Self-report prevalence rates of substance intoxication (54%) were similar to the percentages of positive urine samples randomly taken from parolees and probationers. Some inmates of all ages reported using drugs at the time of their crime). Similarly, Miller and Welte (1987), as described on page 14, reported that exclusively nonalcohol substance abusers committed fewer assaults. Alcohol, on the other hand, as Murdoch, Pihl and Ross (1990) state, "...is associated with violent crime at a greater than chance level and at a significantly higher level than it is associated with nonviolent crime" (p. 1065). Myers (1982), in a study of self-reported alcohol use by Scottish male prisoners, found that inmates convicted of violent offences were more likely to have consumed

alcohol at the time of the offence than were inmates convicted of non-violent offences. Norton and Morgan (1989, cited in Hall, Bell, & Carless, 1993) have also demonstrated a clear relationship between alcohol intoxication and violent crime.

White (1990) reported that "...research supports the notion that alcohol use is associated with violent crime (see Collins, 1981, 1988; Pernanen, 1976, 1981) while other drug (especially heroin) use is associated with a high proportion of property crime (see Ball et al., 1981; Nurco et al., 1984; McGlothlin et al., 1978)" (pp. 215-216). However, White (1990) points out that a substantial proportion of property offenders were under the influence of alcohol at the time of the offence, according to the Bureau of Justice Statistics (1983a, b). Greenberg's (1981, cited in Reiss and Roth, 1993, p. 184) review found "substantial alcohol involvement in nonviolent crimes as well as violent ones". Roizen and Schneberk (1977, cited in Pernanen, 1991), reanalysing data collected by the U.S. Department of Justice (1975), found high alcohol involvement figures for property offences as well as violent offences. Reiss and Roth (1993) point out that

> "Prevalence data are not sufficient to show that alcohol use or intoxication increases the general risk of violence. To test that hypothesis with prevalence rates, one would need a benchmark: the fractions of people not involved in violence or crime while drinking - with appropriate adjustments for demographic characteristics of participants, time of day, day of week, and place of occurrence. The panel has been unable to locate or construct such benchmark data. However, an array of studies...finds connections between situational drinking and aggressive or violent behavior at the biological, social, and cultural levels" (p. 194).

The role of drug abuse as a causal agent of violence has been questioned by other researchers; for example Gorney (1989, cited in Franklin, et al., 1992) proposed that "once violence becomes established in an individual's behavioural repertoire it continues under conditions of total abstinence" (p. 102). Similarly, Gelles and Straus (1988, cited in Franklin et al., 1992) saw drug abuse as "capable of mobilising latent violence in persons so disposed rather than a causal agent" (p.102). McBride and Swartz (1990) described how, while a drug's pharmacological effects are relevant, social patterns of use and economic factors also shape the link between drugs and violence.

Ladouceur and Temple (1985) state, "Overall, it appears that drug use tends to be most often correlated with nonviolent property crime (BJS, 1983a), although the relationship of drug use to rape and other types of violent or sexual crime among adults has largely been ignored (Rabkin, 1979)" (p. 273). Gandossy et al. (1980), emphasised that narcotic

addicts tended to prefer income-generating crimes over crimes against persons and were less violent than other offenders. Harrison and Gfroerer (1992) inferred that there seemed to be a hierarchy of criminal activity among drug abusers, with drug dealing as the preferred means of support, followed by property crimes and, infrequently, violent acts.

Other proponents of the drug-property crime model (based on the notion that addicts commit crimes in order to obtain money for drugs) include Anglin and Speckart, 1988; Ball et al., 1981; Nurco et al., 1984; and McGlothlin et al., 1978 (cited in White, 1990).

However, findings from subsequently conducted self-report studies have indicated that, as a group, addicts commit far more violent crimes than previously assumed (Nurco, Hanlon, & Kinlock, 1991; Chambers, 1974; Stephens & Ellis, 1975; both cited in Cohn, 1984). As McBride and Swartz (1990) put it, "Other work...was beginning to suggest that the pendulum had now swung too far in the other direction; narcotics addicts were not crazed and malicious maniacs but neither were they strangers to aggressive acts and violent crimes" (p. 148). According to a research report by the U.S. National Institute of Justice (Gropper, 1985), "The evidence...indicates that intensive narcotics abusers are heavily involved in crime, much of it violent. Contrary to what has been believed, heroin-using criminals appear to be just as likely as non-drug-using offenders to commit violent crimes such as homicide and rape and even more likely to commit robberies and weapons offences" (p. 1). Gandossy et al. (1980) suggest: "...although there is some basis for the image of the stereotypic, passive addict, we should not lose sight of the fact that some addicts will resort to violence if there is an opportunity for financial gain" (p. 52). Eckerman, Poole, Rachal, and Hubbard (1971) concurred with the conclusion reached by Preble and Casey (1969) that it "...is not that heroin users avoid crimes of violence compared to non-addicts, but that they avoid crimes not involving financial gain..." (cited in Gandossy et al., 1980). Reiss and Roth (1993) report that "a body of evidence concurs that, except during withdrawal periods, heroin users in need of funds tend to avoid violent crimes if nonviolent alternatives are available (Anglin and Speckart, 1988). Despite users' general aversion to violence, robbery by heroin users is common, and users are prevalent among robbers (Blumstein et al., 1986; Chaiken & Chaiken, 1990; Goldstein, 1989)" (p. 201). Some addicts will commit a violent act while in the process of committing a property offence (Cohn, 1984). Wish and Johnson (1986) review research demonstrating that some offenders who use hard drugs, such as Chaiken and Chaiken's (1982a) "violent predators", may have rates of violent crimes against persons that equal or exceed those found among offenders not using drugs. Wish (1982, cited in Wish & Johnson 1986) analysed the rates of arrest over a 6-year period for a

sample of 7,087 arrestees, and found that persons with a positive urinalysis test (at the time of at least one of their arrests) had rates of arrest for bail violations, theft, robbery, burglary, and drug offences that were two to three times higher than the rates for persons not detected to be using hard drugs. Drug users' rates of arrest for all other crimes were similar to those found for the nonusers.

Users of heroin in particular, have in the past been considered to be unlikely to commit crimes against persons, but more recent studies (Wish, 1982, cited in Wish & Johnson, 1986; Chaiken & Chaiken, 1982; Goldstein, 1985) suggest that hard-drug users commit violent crimes at least as often as nonusing offenders. Analysis of data gathered from a representative sample of 2,500 U.S. males (Voss, 1976, cited in Wish & Johnson, 1986), showed a relation between crime and types of drugs used, e.g. only 0.1% of those who restricted their use to marijuana reported committing an armed robbery compared to 11% of those having ever used heroin. Other studies which have examined the associational relationship between drugs and crime have yielded similar results (Brill & Christie, 1974; Elliot & Ageton, 1986; Jacoby, Weiner, Thornberry, & Wolfgang, 1973; Johnston, O'Malley, & Eveland, 1976; all cited in McGlothlin, 1979).

Researchers of family violence have reported a 48% to 87% prevalence of drug/alcohol use among batterers who assault their partners (Appleton, 1980; Gelles, 1972; Sonkin, Martin & Walker, 1985; all cited in Franklin et al., 1992; Carlson, 1977; Fitch & Papantonio, 1983; both cited in Bergman & Brismar, 1993). Bergman and Brismar (1993) found that alcohol and drug problems were common in their sample of eighteen wife beaters, and only one of these men had been sober at the time of the offence. Alcohol, in particular, is present in more than half of domestic violence incidents (Hamilton & Collins, 1981), but the relationship is complex: Kanter and Strauss (1987) found that cultural approval of violence was a stronger correlate of wife abuse than was drinking (cited in Collins & Messerschmidt, 1993).

McBride (1981) presented data indicating that users of narcotics, cocaine, PCP, and inhalant users were overrepresented in crimes against persons compared to other types of drug users or nondrug users. He suggested that this might represent a new trend of increased violence among narcotics users. Fry (1985), who looked at drug abuse and crime in a Swedish birth cohort, reported that "the male drug-using sub-populations accounted for roughly 40 per cent of all male violent offence arrests. These data support the notion that drug abusers are increasingly involved in more crime against the person" (p. 57). (Known drug abusers were over-represented in every category of arrest). According to McBride and Swartz (1990), there are a number of possible reasons why

more recent findings of violent behaviour among narcotics users seem to contradict earlier reports, so that it now appears that "narcotics addicts have been somewhat less prone towards violent crime than their non-addicted counterparts, but not to the extent previously thought". Firstly, while it is true that narcotics have a sedative effect shortly after administration, the withdrawal period can be most uncomfortable, causing irritation and a strong craving for a "fix". It is during this period that the direct physiological effects of the drug can induce an addict to act violently, as Goldstein (1979, cited in Goldstein, 1989) described. Secondly, many studies did not include robbery as a violent crime, but as a property crime. When robbery is classified as a violent crime, the difference between drug users and non-drug users is less apparent (e.g., Eckerman, Poole, Rachal, & Hubbard, 1976, cited in McBride & Swartz, 1990). Thirdly, it appears that heroin users who initiated use later than 1970, represented a different cultural cohort of users, who seemed more willing and likely to commit violent acts (Stephens & Ellis, 1975; Zahn & Bencivengo, 1974; both cited in McBride & Swartz, 1990). This could be due to a cultural promotion of violent behaviour, or the fact that opiate addicts from the 1970s onwards tended to be polydrug abusers (especially using cocaine), which has been found to be associated with a higher probability of committing violent crimes (Chaiken & Chaiken, 1982; Ellinwood, 1971; both cited in McBride & Swartz, 1990). In addition, in the U.S.A. there has been an increasing proliferation of guns, which has contributed to the lethality of drug-related violence. According to Berkowitz (1993), the marked growth in criminal homicide in the United States since the 1960s, cannot be explained by increasing drug use: "While drug use and drug dealing probably do play a part in violent crimes, much of the growth in homicides seems to be independent of drugs" (p. 278). He cites crime statistics from two major U.S. cities which show that drug dealing and addiction were involved in decreasing proportions of the homicides between 1988 and 1990, even though the total number of killings increased substantially over those two years. Berkowitz proposes, citing research by Zimring (1979), that "a better case can be made for the role of weapons in the growth of felony-produced deaths" (p. 279).

Franklin et al. (1992) suggest that the contrast between some studies' findings that substance use and violence are positively related, and some that they are negatively related, may be explained by the finding that violence is NOT equally distributed across all classes of psychoactive substance abuse. The results of their study suggest that "alcohol intoxication, rather than illicit drug use encourages violent crime" (p. 108), and "given the substantial statistical power of the study, these results indicate that any suggestion that non-alcohol drugs cause violent crime is highly suspect" (p. 109). Marijuana has been shown to reduce aggression (Myerscough & Taylor, 1985), while alcohol has been identified as a causal agent of aggression (Bushman & Cooper, 1990,

cited in Franklin et al., 1992). Franklin et al. (1992) state, "It seems that aggressive prisoners engage in assaults at uniform frequencies whether sober or intoxicated. Perhaps prisoners intoxicated with drugs alone lack either the energy, capacity, or interest for violence. However, clinical impressions suggest that interactions between individual differences and learning histories produce several 'types' of drug offenders as proposed by Hodgins and Lightfoot (1988)" (pp. 108-9). These types were a 'problem free' group; a group who abused drugs other than alcohol and led a 'generally criminal lifestyle'; a group who abused only alcohol and was more socially stable; and two groups which abused both alcohol and other drugs, with one needing more emotional assistance and the other showing signs of organic deficits (Hodgins & Lightfoot, 1988).

Martin (1992, p. 238) cites "one of the few studies examining the relationship between other psychoactive drugs, alcohol and violence" (Visher, 1990), which found that 29% of a sample of men arrested for violent offences had used only alcohol; 21% had used alcohol and other drugs; 26% had used neither drugs nor alcohol, and 17% had used only other drugs.

According to Ladouceur and Temple (1985),

> "Although a number of studies have demonstrated that substance use and crime are strongly correlated, few studies explore the nature of this correlation. The characteristics of criminal events that may have important implications for understanding the role of the substance use-crime relationship are seldom examined. For example, substance use (particularly alcohol) has been found to be associated with violent and sex-related crimes more often than any other type of crime. Yet, detailed studies of the context of violent and sex-related criminal events and the place of alcohol and drugs in these events have been rare, despite their having been seen as crucial to understanding the nature and strength of the substance use-crime link (Pernanen, 1981)" (p. 270).

Despite an increase in the last two decades of the use of other psychoactive drugs in general, alcohol is still reported to be implicated in a large proportion of homicides (Pernanen, 1991). Murdoch and colleagues (1990), reviewing 15 studies that examined the alcohol use of homicide offenders, found that the percentage who were drinking when they committed the offence, ranged from 7% to 85%, with most studies reporting a figure over 60%. Of assault offenders, 24% to 82% had been drinking. Pernanen (1991) reported that between 36% and 70% of homicide offenders drank directly prior to the offence. For assault offenders, the figures were similar to those found by Murdoch et al.

(1990). A comparison of three separate surveys (Collins & Messerchmidt, 1993) of juvenile correctional institution inmates (Beck et al., 1988, cited in Collins & Messerschmidt, 1993), jail inmates (Beck, 1991, cited in Collins & Messerschmidt, 1993), and prison inmates (Innes, 1988), showed that 63% of jail inmates who committed homicides reported being under the influence of alcohol (or alcohol and other drugs) at the time of their offence, while 43% of prison inmates incarcerated for homicide, and 27% of juvenile correctional institution inmates incarcerated for homicide, did so. Of assault offenders, 54% of jail inmates, 42% of prison inmates, and 34% of juvenile correctional institution inmates reported being under the influence of alcohol (or alcohol and other drugs). Other studies which have consistently found alcohol to be involved in half to two-thirds of homicides, one-quarter to one-half of serious assaults, and more than one-quarter of rapes, include Wolfgang (1958), Voss and Hepburn (1968), Zahn (1991), Virkkunen (1974), Gerson and Preston (1979), Lindquist (1986), Verkko (1951), Tardif (1966) (all cited in Martin, 1992), and Bureau of Justice Statistics (1983). Pernanen (1991)'s interview study found that alcohol was used by assailants prior to 51% of violent offences.. The association between acute alcohol use and violence varies in strength depending on the type of data and methods used and the geographic area studied (Pernanen, 1993). Another complication involves the interpretation of words such as 'violence', 'aggression', and 'crime' (Martin, 1992).

However, as Collins and Messerchmidt (1993) point out, these percentages of people who had been drinking prior to offending "do not indicate that alcohol influenced the offence, but merely suggest the proportion of cases in which alcohol may have affected the outcome" (p. 94). Mayfield (1976, cited in Collins & Messerschmidt, 1993) did try to separate the presence of alcohol with no causal role, from the presence of alcohol with a causal role. Over half of the assaulters in his study reported drinking at the time of the offence, but only 13% of these thought that alcohol <u>caused</u> their assaultive behaviour, and 28% thought that it was contributory. This suggests that the remaining 59% did <u>not</u> think that drinking was relevant to the assault.

As Pernanen (1993) states, "Taken together, the low risk of violence during typical drinking occasions and the high alcohol involvement in serious violence indicates that although drinking increases the risk of violence, it does this only in some situations or for certain people or both. It is still unclear exactly what these situations are and who these high risk people are" (p. 103). Research has generally indicated that "the violence varies with the age, gender, race, and ethnicity of the participants and with the size of the group of people drinking together; with the relationship of the victim and perpetrator; with the availability of weapons, and with the location and time of the event" (Martin, 1992, p.

233). Clearly, alcohol is only one among many individual, situational, and sociocultural factors that accompany violence (see Evans, 1985). The relationship between alcohol and violence is generally believed to be different according to the type of violence; "And most characterise alcohol's relationship to violence as modest in statistical terms - other factors or combinations of factors seem more important than alcohol (Collins & Messerschmidt, 1993, p. 98).

The presumption that alcohol and violence are inextricably linked is challenged by Pernanen's (1991) survey of alcohol use and violence in the general population, which found that for most people, "other types of affective behaviour typically predominate in alcohol use situations", the most common being "behaviour usually linked to positive affect" (p.199).

The research to date suggests that the relationship between alcohol and violence is primarily the result of (a) alcohol-induced cognitive impairment (violence often evolves from verbal conflict between indviduals: alcohol is known to impair drinkers' cognitive abilities and to modify their demeanor and verbal responses, so miscommunication and misinterpretation are more likely to occur - coupled with increased aggression, this increases the likelihood of violence), (b) drinkers' expectancies that alcohol increases the tendency toward aggression, and (c) socioculturally grounded beliefs that people are not accountable for their behaviour after drinking (Collins & Messerchmidt, 1993). Mitchell (1988) says, "Overall, the evidence supports the expectancy model whereby people learn that normally inappropriate behaviour will be tolerated when it occurs under alcohol's influence" (p. 87). As Hall et al. (1993) point out, many drug users take advantage ot the 'out of control' addict stereotype, reducing their responsibility for their actions (see also Collins & Schlenger, 1988). Mitchell (1988) suggests that alcohol may be connected with aggression in specific ways: alcohol, being a sedative, can make the individual less scared in conditions of threat or annoyance (Zillmann, 1979); alcohol can reduce anxiety about a crime's risks (Yochelson & Samenow, 1981); an alcohol abusing type of person may also be a violent type of person (Leonard, Bromet, Parkinson, et al., 1985); and cultural expectations about alcohol's effects can influence aggressive behaviour (Coid, 1986).

Likewise, Ladouceur and Temple (1985) describe a number of hypotheses which have been proposed as explanations as to why alcohol is overwhelmingly associated with violent and sex-related crimes. The most popular explanation involves the theory that alcohol releases normal inhibitions. Alcohol is seen as promoting aggressive behaviour

and enhancing the likelihood of aggression in certain situations (Pihl & Peterson, 1993; Tinklenberg, 1973).

In her review of research findings on adolescents, alcohol and aggression, Milgram (1993) states, "Although research has not determined that alcohol/drugs cause crime or produce the motivation to commit crimes, a relationship between alcohol/drug use and aggressive behavior is apparent" (p. 53), while Bushman and Cooper's (1990) research review concluded that alcohol does indeed cause aggression. Murdoch et al. (1990) reported that alcohol was associated with violent crime at a significantly higher level than it was associated with nonviolent crime; "Alcohol and aggression are more strongly related than expected, with violent offenders demostrating psychopathology... Although there exists a strong correlational relationship between alcohol and violent crime, the nature of the evidence prohibits the establishment of a causal link" (p. 1065).

According to Mitchell (1988), there are four possible connections between drug (and alcohol) use and **aggression:** (1) drug use could directly incite aggression; (2) drug-related effects could indirectly contribute to aggression; (3) common motives and interests could lead to the coincidence of drug use and aggression; or (4) drug use could occur in situations, times, and places conducive to violence and aggression (p. 84). He cites Myers (1982) who cautioned that recent reviews have "virtually rejected simple cause-and-effect theories of violence". Siann (1985, cited in Mitchell, 1988) reported that aggressive individuals can become more aggressive with alcohol use, but they can also become less aggressive. Mitchell says that drug effects are ambiguous; for example Bennett and Wright's (1984, cited in Mitchell, 1988) study of convicted British burglars established that most used alcohol before their offences, but not many reported a causal connection between alcohol and the crime. Those who did blame alcohol referred to disinhibition and impaired judgement. Mitchell draws attention to Miller and Welte's (1987) data indicating that "about 60% of all convicted offenders used drugs prior to their crimes. Among this group, 68% of those charged with property crimes consumed considerable alcohol beforehand as opposed to 60% of those charged with violent offences" (Mitchell, 1988, p. 84). Mitchell also cites Wilson and Hernstein (1985) who, after reviewing the literature on alcohol and crime, admitted that "despite all the research that has been done, we do not yet know enough to discount the possibility that the crime-alcohol connection is spurious or non-causal" (Mitchell, 1988, pp. 84-85).

Ladouceur and Temple (1985) describe potential artifacts that may be contributing to this strong association between alcohol and sexual crimes; for example, "sex offenders may overreport drunkenness as a form of 'deviance disavowal'" (p. 272). Essentially, the

sex offender can substitute a lesser, more acceptable and temporary deviance for one that is greater and far more damaging to his identity; in 1968 McCaghy (cited in Mitchell, 1988) also suggested this. Also, drunken arrestees are more often diverted to arrangements other than prison; "alcohol may be used to avoid or reduce the punishment and stigma associated with particular types of offences" (p. 273).

A study of rapes committed by 63 Californian adolescents (Vinogradov, Dishotsky, Doty, & Tinklenberg, 1988) found that in 48 of the 67 total rapes, the offender described himself as under the influence of one or more psychoactive drugs (alcohol, marijuana, and other drugs, alone or in combination). About 15% of all rapists reported taking a drug less than 15 minutes prior to the rape. However according to a study of forcible rape (Rabkin, 1979), few rapists are drug abusers. Although the relationship between rape and drinking has been recognised for a long time, Rada (1978, cited in Rabkin, 1979) noted that defendants may overreport alcohol use at the time they committed the offence, so as to reduce the charges against them. Rabkin reported that somewhere between one-third and two-thirds of offenders drink before commission of the rape. According to Collins and Messerchmidt (1993), "most studies estimate that between one-third and three-quarters of sexual assaults involve alcohol consumption by either or both participants" (p. 95). Koss et al. (1988) reported that 64 percent of rapists (as reported by college students who were their victims) had used alcohol, or alcohol and other drugs, before the rape. Surveys of juvenile correctional institution inmates, and jail and prison inmates (Beck, 1991; Beck et al., 1988, both cited in Collins & Messerschmidt, 1993; Innes, 1988) show high percentages of sexual assault offenders reported being under the influence of alcohol or alcohol and other drugs before the offence that led to their incarceration. For example, of the prison inmates, 25% of rapists and 21% of sexual assaulters used alcohol only, while another 25% of rapists and 20% of sexual assaulters used alcohol and other drugs (Innes, 1988). Once more, as with other violent offences, it cannot be assumed that alcohol is a causal factor. Alcohol expectancy effects and sociocultural factors may play a role (Coid, 1986; Abbey, 1991; both cited in Collins & Messerchmidt, 1993).

Regarding the relationship between sexual offences and drugs other than alcohol, less is known. Alcohol is often included in the statistics; for example, Scully and Marolla (1984) reported that 75% of the convicted rapists they interviewed used alcohol or other drugs before the offence. "Rada (1978)...suggested that, among alcoholic rapists, most drink at the time of commission of the crime, while among rapists without such a history, most do not. In contrast to this association between alcohol and rape, no such relationship has been reported for drug use" (Rabkin, 1979, p. 644).

Ladouceur and Temple (1985) point out that most of the research on crime and drug/alcohol use has focussed on single types of criminal events, such as homicide or assault (Roizen & Schneberk, 1977, cited in Ladouceur & Temple, 1985). Apart from the Bureau of Justice Statistics (1983a) (which reported that almost a third of State prison inmates said they had drunk very heavily just before they committed the offence for which they were convicted, and that habitual offenders and persons convicted of assault, burglary, and rape were more likely to be very heavy drinkers than other prisoners), few studies compare these results with those for other crime types, "and even fewer examine drug use for any type of adult criminal population" (p. 271).

Findings from a study using data from the 1979 *Survey of Inmates in Correctional Institutions*, by Ladouceur and Temple (1985), indicated that "although there is a slight difference between offender types for drug use, no difference between offender types was found for alcohol use. In addition, these findings did not appear to be modified by race, age, or social context factors. Finally, it was found that use at the time of the offence does not differ markedly from typical use patterns" (p. 269). Contrary to what they expected, Ladouceur and Temple found that violent offenders were only slightly more likely than other offenders to be drinking immediately prior to the offence for which they were convicted. Among the four offence types studied - rape, other sex offences, assault, and burglary - there was little difference in the likelihood of the offender having been drinking at the time of the offence. However, different groups of offenders appeared to feel differently about the effects of alcohol; although all four groups drank at about the same level, more of the rapists and burglars reported feeling drunk than the assaulters or sex offenders. There seemed to be "no clear division regarding the perceived effects of alcohol on the basis of a violent versus nonviolent offence, or a sexual versus nonsexual offence" (p. 279). The authors felt that these findings "raise questions about the hypothesis that alcohol has a direct effect influence on type of crime" (p. 280).

As Martin (1992) puts it, "There is little doubt that violent offenders have higher rates of alcohol problems than does the general population. It is less clear whether violent offenders are more likely than nonviolent offenders to have chronic alcohol problems or to have been drinking at the time of their offence" (p. 236). The Bureau of Justice Statistics (1983) survey of 10,000 state prison inmates found that 50 percent of violent offenders had been drinking prior to their offence, but so had 46 percent of property offenders and 47 percent of public order offenders, and there were widespread drinking problems among all types of prisoner.

Pernanen (1993) reported that "episodic drinking explains more of the association between alcohol use and violence than do relatively long-term patterns of drinking" (p.101). Correspondingly, Collins and Schlenger's (1988) study of 1149 prison inmates found that drinking just prior to offending was signficantly associated with incarceration for a violent offence, but having symptoms of alcohol abuse or dependence was not. "This finding suggests that alcohol has direct effects on violence and that the association between problem drinking and violence may reflect the high use of drinking episodes characteristic of the alcohol dependent population" (Martin, 1992, p. 236).

Ladouceur and Temple (1985) also found that sex offenders were more likely to be drinking alone than were other types of offenders. Burglars were most likely to be drinking with friends at the time of the offence; "It appears then that one influence of alcohol on crime, especially burglary, may be modified in part by the context in which the drinking occurs...the importance of alcohol in terms of the occurrence of crime may be that it influences whether or not offenders commit crimes in groups or alone, rather than whether or not they commit a crime at all" (p. 281).

An interesting question is raised by the research of Cordilia (1985), who suggests that property crimes may be facilitated by a group-drinking context. These crimes are likely to be spontaneous: alcohol use creates a sense of camaraderie among group members and permits the criminal activity to occur. The importance here is on the alcohol use within a social context that results in criminal activity. While similar social networks exist among drug users, it is hypothesised by Miller and Welte (1987) that the sense of cameraderie described by Cordilia (1985) may be absent in the drug scene owing to the lack of trust among drug users: "Thus the social context of drug use may not allow similar types of criminal activity to occur" (p. 368).

A third type of relationship examined by Ladouceur and Temple (1985) was between drug use and type of crime: their results were consistent with previous literature in that drug use was most likely to be found among nonviolent property offenders and least likely to be found among violent sex-related crimes. Burglars reported the highest use at time of offence for "any drug" and for use of each specific drug, while sex offenders reported the lowest rates of use of any drug except barbiturates. Rapists reported higher use than assaulters for marijuana, amphetamines, and cocaine, while assaulters reported higher use than rapists for "any drug", heroin, and barbiturates. There were no significant differences between offenders for alcohol use.

The percentage of offenders under the influence of drugs at time of offence was relatively small for all four types of offender. Seventy five percent of rapists, 84% of sex offenders, 70% of assaulters, and 58% of burglars all reported using no drug(s) at the time of the offence. "...it would seem that the most likely conclusion is that drug use is only one of a combination of factors that influence a specific crime, if in fact it has an influence at all" (Ladouceur and Temple, 1985, p. 282).

Regarding drug use in the month before the offence, 43% of the rapists in Ladouceur and Temple's (1985) study who did use drugs in the month prior, did not also use drugs immediately prior to the offence for which they were convicted. For sex offenders, assaulters, and burglars, between 38% and 57% of those who used drugs during the past month did not use them at the time of the offence. Offenders also tended to drink less at the time of offence than on a typical drinking occasion during the past year. This is in contrast to an interesting American study (Collins % Schlenger, 1988) which investigated acute and chronic effects of alcohol use on violence. Data collected from 1,149 male prison inmates showed that the acute (drinking just before the violent event) effects of alcohol were significantly associated with incarceration for a violent offence, but the chronic (a diagnosis of alcohol use or dependence) effects were not. The researchers concluded that "alcohol affects violence directly, acting through the effects of use, rather than indirectly through the effects of underlying or mediating factors" (p. 516).

Ladouceur and Temple state,

> "If there was a causal link between alcohol use and crime, such that heavy drinking increased the probability of committing the crime, then we would expect offenders to drink more heavily at the time of offense than on typical drinking occasions. Similarly, offenders are less likely to use drugs at the time of offense than on other occasions during the past month. It is, of course, still possible that a drug might serve as the motivation to commit crime. However, this research suggests that while the crime is in progress, many offenders who use drugs are not under the influence" (p. 285).

However, other researchers have reported substantially different results. For example, as well as the "criminal lifestyle" being intricately linked with drug use, Fishbein and Pease (1990) present strong evidence in their discussion of neurological links between substance abuse and crime that "*strongly support the notion that drug use, specific to type of drug, directly precipitates criminal acts* [italics added]. Most particularly,

aggressive or violent behaviour may be directly induced via neurological mechanisms by virtue of the pharmacologic properties of a specific drug" (p. 234).

Sorrells (1977, cited in Ojesjo, 1983) reported that about one quarter of juvenile killers and assaulters were on drugs and alcohol at the time of the offence. Langevin, Paitich, Orchard, Handy, and Russon (1982, cited in Lindquist, 1991) compared the use of alcohol and drugs at the time of the offence, suicide attempts, and situational strains in 109 killers and 38 nonviolent offenders seen for psychiatric assessment. More killers than nonviolent offenders had used alcohol and drugs at the time of their offence, and the results indicated that "the use of intoxicants in violence-prone individuals is the most important factor in manslaughter and homicide" (Ojesjo, 1983, p. 741).

Holcomb and Anderson (1983) divided a sample of 110 male murderers who had received pretrial evaluations into groups containing those who had ingested only alcohol, alcohol and drugs in combination, drugs only, or those who were sober at the time of the crime. Of the accused murderers, less than half (45%) were not taking alcohol, drugs, or a combination of both at the time of the murder. The study showed a considerable percentage (36%) of accused murderers who abused drugs. The authors suggested that an implication of their results was that "a focus of therapeutic intervention for many violent individuals should be on alcohol and drug abuse" (p. 164).

Lindquist (1991) reported, "I have not found a systematic study on the fraction of abusers of illicit drugs who commit homicide, although drug users are reported to be frequently arrested for violent crimes (Fry, 1985)" (p. 321). The percentage of homicide offenders having a history of drug abuse (excluding alcohol) has been reported to be 25% among murderers in Missouri, USA (Holcomb & Anderson, 1983), 20% among adolescent killers in Minnesota, USA (Malmquist, 1971), 11% among 'life-timers' (mostly killers) in England (Taylor, 1986), 15% among offenders examined by a forensic psychiatrist in Denmark (Gottlieb, Gabrielson, & Kramp, 1988, cited in Lindquist, 1991) and 6% among offenders examined by a forensic psychiatrist in Canada (Langevin et al., 1982, cited in Lindquist, 1991). Gottlieb and Gabrielsen (1992) found that 55% of 251 homicide offenders in Copenhagen were intoxicated by alcohol and/or other drugs at the time of the alleged homicide, and a similar proportion were habitual abusers. "'Pure' drug cases were relatively few, and an alcohol-drug combination was more common than drugs alone, concerning abuse as well as intoxication" (p. 81). Lindquist (1991) investigated homicides committed by abusers of illicit drugs and alcohol in Stockholm and Northern Sweden. The category of drug abusers was considerably younger than the

offenders who were abusers of alcohol, and they had almost without exception a record of juvenile delinquency.

Similarly, Senay and Wettstein (1983) report 24 cases in which there was a homicide or homicides committed in association with the use of large amounts of drugs: "Many, if not most of these homicides, would not have occurred without drug effects, for frequently there was evidence of grossly illogical thinking in close temporal association with use of intoxicants ...We theorize that high doses of psychoactive drugs impaired severely the brain systems upon which reality testing and judgement depend" (p. 157). In many of the cases studied there was no previous history of violence, no evidence of premeditation, no plan to avoid arrest, and little or no visible motivation. The authors maintain that the relationship between drug effects and the commission of a homicide can be understood by the proposed existence of a critical threshold for drug effects on the ego functions of reality testing and judgement. While some mental functions e.g. alertness can be manipulated by alternating use of stimulants and depressants, the brain systems involved in reality testing and judgement are impaired by both stimulants and depressants, at high enough doses.

In DSM-III-R there is no specific diagnosis of "toxic psychosis", a term that is frequently used to describe the relationships in question. It is often confused with drug intoxication per se or with the production of hallucinations, delirium, disorientation or other drug induced mental changes. In DSM-III-R, "toxic psychosis" most closely corresponds to the "delirium" category. (DSM-III-R describes the substance-induced organic mental disorders as including delirium, dementia, amnestic disorder, delusional disorder, hallucinosis, mood disorder, anxiety disorder, personality disorder, intoxication, and withdrawal.) Burrowes, Hales, and Arrington (1988) list the psychoactive substances most frequently associated with violence, via psychoactive substance-induced organic mental disorders: alcohol, amphetamines and sympathomimetics, barbiturates, cannabis, cocaine, hallucinogens, inhalants (glue, amyl nitrate), and steroids.

Goldstein and Kalant (1990) conclude that "radical steps to repeal the prohibitions on presently illicit drugs would be likely, on balance, to make matters worse rather than better" (p. 1513). Arguing that psychoactive drugs are dangerous, they explain, "An example of a significant threat to both the user and society is the paranoid psychosis, sometimes accompanied by violence, that can result from repeated use of amphetamine or cocaine" (pp. 1513-1514). They give the example of Griffith's (1972) experiment where administration of amphetamine or cocaine to normal volunteers produced paranoid psychotic behaviour. "Such studies showed that no previous psychopathology

was required and that paranoid reactions to drugs of this class by addicts cannot be attributed to fear of law enforcement but are due to direct drug effects on the brain" (p. 1514).

Specific Drug Types

Goldstein's (1985, 1989) psychopharmacological model suggests that "some individuals, as a result of short- or long-term ingestion of specific substances, may become excitable and/or irrational and may exhibit violent behavior" (Goldstein, 1989, p. 4). (In addition, an individual experiencing withdrawal symptoms from drugs might experience high levels of anxiety or irritability which are expressed in violent action. Also, individuals may purposely engage in substance use to relieve anxieties or stimulate courage in order to carry out previously planned violent acts). Goldstein lists alcohol, stimulants, barbiturates and PCP as probably the most relevant substances, and a lengthy literature exists examining the relationship between these substances and violence (Asnis & Smith, 1978; d'Orban, 1976; Ellinwood, 1971; Feldman, Agar, & Beschner, 1979; Gerson & Preston, 1979; Glaser, 1974, cited in Goldstein, 1989; Smith, 1972, cited in Goldstein, 1989; Tinklenberg, 1973; Virkunnen, 1974). Furthermore, Goldstein (1989) reports that on a per ingestion basis, barbiturates appear most likely to lead to violence. Tinklenberg et al. (1974, 1976, 1981) found in three separate studies of incarcerated delinquents that a barbiturate (secobarbital) was identified as the single substance most likely to enhance assaultiveness. Collins (1982, cited in Goldstein, 1989) reported that out of nearly 8000 self-reports of aggravated assaults and robberies by drug-treatment programme new admissions in 10 U.S. cities, the highest proportion of individuals committing one or more robberies were those who identified their primary drug problem as barbiturate abuse. Barbiturates were most strongly correlated with assault, followed by alcohol and amphetamines. Barbiturates were also most clearly correlated with robbery, followed by heroin.

Heroin and cocaine are the two drugs, along with alcohol, that have been most frequently studied in relationship to crime; studies indicate that "as levels of illicit drug use (especially of heroin and cocaine) increase so does criminal activity (both drug-distribution offences and nondrug-related serious offences" (Wish & Johnson, 1986, p. 53). Some researchers have noted an apparent relationship between some psychoactive drugs such as LSD and PCP and violent behaviour (McBride & McCoy, 1982). Amphetamines have been associated with homicides through paranoid delusions

(Ellinwood, 1971). Barbiturates seem most likely, according to Tinklenberg (1973), to potentiate criminal behaviour, in particular assaultiveness.

"The psychopharmacological explanation of the drugs-crime relationship has largely been refuted in the literature with regard to heroin and marijuana" (White, 1990, p. 221). Research on the relationship between marijuana use and crime has generally found little evidence that the drug induces any type of criminal behaviour other than, possibly, selling the drug. Youths have reported that marijuana use reduces their inclination towards violent behaviour (Tinklenberg, Roth, Kopell, & Murphy, 1976). It may simply be that marijuana use and deviant or problem behaviour both share similar etiological variables (Jessor, 1979): the 'general deviance syndrome'.

Goldstein (1985, 1989) states that early reports which attempted to use a psychpharmacological model to attribute violent behaviour to opiates and marijuana, have now been largely discredited (Finestone, 1967; Greenberg & Adler, 1974; Inciardi & Chambers, 1972; Kozel et al., 1972; Kramer, 1976; Schatzman, 1975; all cited in Goldstein, 1989). However Goldstein (1989) does suggest that the irritability associated with the withdrawal syndrome from opiates may indeed lead to violence: an example is Mednick, Pollock, Volavka, and Gabrielli's (1982) report that workers in drug-treatment programmes are familiar with irritable, hostile, and sometimes aggressive clients in withdrawal. Goldstein (1979, cited in Goldstein, 1989) has also reported that heroin using prostitutes often linked robbing and/or assaulting clients with the withdrawal experience.

Simonds and Kashani's (1980) study of 112 institutionalised delinquent boys found that about 43% (25) of the person offenders took a drug within 24 hours of committing an offence against a person, the most frequently taken drugs being alcohol and marijuana:

> "Many of these boys stated that they took the drugs to give themselves courage to commit an act of violence. Sometimes an act of violence against a person was not intended since the boys initially wanted to steal goods or money to support a drug habit. Each of the 25 subjects who took drugs prior to an act of violence considered the dose taken to be significant and to have contributed significantly to their commission of the crime. In fact, they speculated that the crimes would not have occurred if they had not taken the drugs in question. About 17% of the total person offences committed by all subjects were preceded by significant drug taking within 24h of the offence" (Simonds & Kashani, 1980, p.308).

In Simonds and Kashani's (1980) study, barbiturates, PCP, cocaine, and to a lesser extent Valium and amphetamines were the drugs whose use was most significantly correlated with the number of offences against persons. In this study, alcohol use had only a small nonsignificant correlation with the number of person offences. A pattern of drug taking within 24 hours of committing a property offence was also noted: 47 (46%) of 102 property offenders admitted being under the influence of a drug just prior to a property offence. Approximately 15% of the total property offences were preceded by significant drug taking within 24 hours of the offence.

Tinklenberg et al's (1974) study of drug (including alcohol) involvement in criminal assaults by adolescents, found that in 36 of the 56 assaults resulting in tissue damage, the assailant described himself as under the influence of a drug at the time of the offence. However, subjects who had never been charged with any assaultive or sexual offence generally reported that they used a greater variety of drugs more frequently than individuals who committed serious assaultive crimes. This finding suggests that extensive drug use per se does not unavoidably lead to violent crime. Nevertheless, when serious assaultive crimes were committed, the youths involved frequently described themselves under the influence of drugs. The subjects overwhelmingly selected secobarbital (apart from alcohol) as the drug most likely to enhance assaultive tendencies. The relatively few assaults associated with marijuana and hashish were consistent with other studies as well as subjective reports from Tinklenberg et al's study: none of the subjects selected marijuana or hashish as the drug most likely to enhance assaultiveness. The authors were surprised to find a relatively low number of amphetamine-related assaults in this sample. They concluded that "*drugs whose predominate actions induce CNS depression seem more likely to facilitate brain mechanisms subserving assaultiveness than do agents that primarily evoke perceptual distortions or CNS stimulation*"(Tinklenberg et al., 1974, p. 685).

Siomopoulos (1979), investigating crimes committed by mental patients within 24 hours of intake of various illicit drugs, including amphetamines, LSD, heroin, marijuana, and phencyclidine, found that significantly more crimes were committed under the influence of amphetamines and amphetamine-like substances than were committed under the influence of any other single substance. Siomopoulos noted with interest the absence of barbiturates relating to crimes, in view of other researcher's findings in which the number of arrests for criminal behaviour associated with barbiturate abuse exceeded the number of arrests for crimes committed under the influence of amphetamines.

Other Variables

Ojesjo (1983) suggested that drug use and crime might have a common background in personality disorder and the "subculture of violence". His examples include the use of amphetamines and cocaine contributing to crimes of violence arising from paranoid ideas in a psychotic state, and excessive alcohol intake sometimes stimulating the flashback phenomenon following LSD trips, creating "hallucinations, delusions, and related violent behaviour, even homicide" (p. 735). He points out, referencing Ellinwood (1971), that "Many drug users seem to have moved through three fairly distinct phases leading to the violent act: (1) chronic amphetamine abuse, leading to (2) an acute change in the individual's state of emotional arousal, and (3) a situation that triggers the specific events leading to the act of violence" (p. 735).

Obviously, investigation of the relationship between drug/alcohol abuse and crime is complicated by nonpharmacological variables such as the individual's personality and by the circumstances surrounding the intake of the drug and the perpetration of the crime (social and cultural context, prevailing mood, dose, quantity, and method of administration of the drug, expectations). As Goldman (1981) commented, in his essay on drug abuse, crime, and economics:

> "...the euphoria, craving, desperation, and the like, which help form the bridge between consumption activities and income-generating activities, are as much the captive of psychological phenomena as they are the biophysiological "addictive" properties of particular drugs. The importance of these properties dissolves still further with recognition that even they are a function of social conditions, the "setting" or "total environment" in which drugs are consumed (Canadian Government's Commission of Inquiry, 1973; Hofmann, 1975; Platt and Labate, 1976; Robins, 1978). In fact, the setting 'may completely obscure the typical pharmacological response to the drug' (Canadian Government's Commission of Inquiry, 1973: 285)" (Goldman, 1981, p. 165).

In Siomopoulos' (1979) study, personality and situational factors were considered to play an important role in the crimes associated with intake of LSD and heroin, whereas impairment of judgement rather than an upsurge of violence was implicated in crimes involving phencyclidine abuse. Reiss and Roth (1993) describe a number of individual differences which affect the relationships between violent behaviour and drugs; these

include gender, individual's histories of aggressive and violent behaviour, childhood aggression, and dual diagnoses of personality disorder with alcohol or drug abuse.

A study of hostility, crime, and drug dependence (Gossop & Roy, 1977) found that convicted addicts tended to score more highly on measures of hostility than non-convicted addicts, and the differences in hostility were seen most clearly on the violent crimes variable. However addicts convicted of drug-possession and of non-drug crimes were also more hostile than non-convicted subjects. The authors suggested that "hostility acts as a personality factor which predisposes the individual towards criminal behaviour, and that the more hostile subjects may also be more likely to be apprehended and convicted" (p. 272). It was suggested that both of these effects are complicated by the effects of the drugs themselves. A self-medication model of drug dependence may be relevant when noting that the most hostile group of patients in Gossop and Roy's study were the intravenous narcotic addicts - "narcotics have been suggested to have a pacifying or hostility reducing effect (Itil & Wadud, 1975; Gossop & Roy, 1976)" (p. 277).

Goldstein (1985, 1989) also reported that some drugs, such as heroin, tranquillisers, and marijuana, may have a reverse psychopharmacological effect and ameliorate violent tendencies: individuals who are prone to acting violently may engage in self-medication to control their violent impulses.

Conversely, some drugs may be ingested on purpose because the user is familiar with specific effects and views them as positive for the perpetration of criminal acts. Goldstein's (1989) examples of such functional drug use include tranquilliser and marijuana use to control nervousness and barbiturate and alcohol use to give courage. An Interdisciplinary Research Centre (New York) study of 59 unapprehended street criminals, by Strug, Wish, Johnson, Anderson, and Miller (1984) found that alcohol was frequently taken in large quantities before a crime, often to make committing the crime easier by calming nervousness. Cocaine and heroin were also taken for these reasons. Most of these persons had no cocaine or heroin to take before the crime and used their criminal income to purchase drugs and alcohol shortly after the crime. Silberman (1978, cited in Goldman, 1981) wrote, "To reduce their tension and control their fear, many criminals drink and use drugs before going out on a job", but the advantage of this is uncertain, since "whereas liquor and drugs fortify the nerves, they also muddy the judgement". As Johnson and Wish (1987, cited in Hall et al., 1993) found, "drug users reported using alcohol or other drugs to enable tham to more successfully carry out crime...Any drug which reduces anxiety or diminishes normal inhibitions on behaviour

allows people to do things they would be less likely to do when not intoxicated. Drug use may thus serve an important 'permissive' role in promoting criminal activity" (Hall et al., 1993, p. 123).

Alcohol use, in particular, has been reported to increase the probability of apprehension for committing the offence. Cordilia (1985) states that although 'professional' property criminals tend not to involve alcohol in their 'work', as it makes them unreliable, she "considers the relationship between alcohol and casual, opportunistic crime to be direct and result in a high likelihood of arrests because a drinking offender is a less competent one" (p. 97)).

Drugs, Offending and the Law

Mitchell (1988) points out in the International Journal of Law and Psychiatry that "a central assertion of the prohibitionists is that cocaine, cannabis, heroin, alcohol, and other nonmedically approved psychoactives cause their users to become more aggressive and hence, more violent. If true, if intoxication or drug use increases violence and aggression then voluntary drug use should amplify not reduce criminal law penalties" (p. 83). This line of reasoning, that intoxication aggravates an offence, can be traced back to Aristotle, and according to Mitchell, accounts for the increased penalties authorised against offenders who voluntarily arm themselves. He reports that even though the courts officially deny this belief, and "while some academics disparage the 18th-century practice of treating intoxicated offenders more harshly, in fact, intoxicated offenders can be dealt with more severely than sober offenders. This occurs overtly when intoxicated offenders are held strictly liable for "general intent" crimes but it also occurs covertly when judges presume that intoxication and violence are natural companions" (p. 84). Collins and Messerchmidt (1993) state that "an offender who was drinking at the time of the offence is rarely successful in fully avoiding legal responsibility for violence (De Burca, 1991)" (p. 49). In New Zealand, according to the report of the Criminal Law Reform Committee (1984), "In some cases voluntary intoxication may aggravate the offence and justify a more severe penalty than would otherwise be appropriate (for example, driving offences). More commonly, however, intoxication is put forward in mitigation of sentence, for it will often support a claim that an offence was out of character or was unpremeditated" (pp. 20-21).

According to the Criminal Law Reform Committee (1984), there was no statutory provision in New Zealand law dealing with the extent to which intoxication (alcohol and

drugs being synonymous) may support a defence to a criminal charge, so the position therefore depended on the common law developed by decisions of the courts.

> "It must be stressed that intoxication in itself is not and never has been a defence in English or New Zealand criminal law. It is not a defence that intoxication impaired the defendant's judgement of right and wrong, or weakened his inhibitions so that he behaved impusively or in a way he would not have done had he been sober. it is not a defence that a defendant intentionally committed an offence while intoxicated, even if he cannot later remember what he did: 'a drunken intent is nevertheless an intent' (Sheehan, 1975). On the other hand, intoxication may impair awareness, perception and foresight, and if intoxication results in the absence of a state of mind required by the definition of an offence the courts have accepted that the absence of that state of mind may provide a defence. Intoxicaton is never itself a defence, but in some cases it may be relevant to a defence that a required state of mind was absent. The cases in which such a defence is likely to succeed will be unusual,and the true scope of the principle itself remains a matter of some dispute" (para 12).

> "In the past there has been some suggestion that intoxication might justify acquittal only if it rendered the defendant 'incapable' of forming a required intent. This was open to the criticism that the defendant might be capable of forming a required intent yet fail to form it in fact. It is now clear that the question is whether the requisite state of mind was in fact present and it is wrong to suggest that intoxication may be relevant only if it deprived the defendant of the ability to form it" (para 14).

Regarding violent offences, the Criminal Justice Act 1985 was amended in 1987 (Criminal Justice Amendment No.3) to read after Section 12:

> **"12A. Court not to take into account alcohol or drugs, etc., in certain cases- (1) Subject to subsection (2) of this section, where-**
>
> **(a) An offender is convicted of an offence; and**
>
> **(b) The court is satisfied that, in the course of committing the offence, the offender used violence against, or caused danger to, any other person,-**

the court, in imposing a sentence, shall not take into account by way of mitigation the fact that the offender was, at the time of committing the offence, affected by alcohol or any drug or other substance, unless the court is satisfied that the offender did not consume or use the alcohol, drug, or other substance voluntarily.

(2) Nothing in subsection (1) of this section shall limit the power of the court to impose any sentence or to make any order or to give any direction intended to promote the rehabilitation of the offender."

As Bywater (1982) notes, "There is an inevitable lack of certainty of medical opinion when considering drugs or intoxicants which may affect the mind and hence mens rea or criminal intent" (p. 615). Mitchell (1988) criticises many of the commonly held beliefs as to why intoxication at the time of crime commission should change the liability of the offender:

Recklessness: Mitchell reports that recklessness is equivalent to intention, legally speaking. "When an offensive side-effect is unavoidable or very likely to occur, the offender should be treated as directly intending that consequence" (p. 88). Examples include arsonists or bombers who directly intend property damage but consider and disregard possible fatalities. Mitchell describes two claims which are made about intoxication and recklessness: one is that intoxication may make an accused incapable of recognising possible "side-effect" consequences, or of estimating their probability. However he points out that intoxication usually renders people less concerned about consequences rather than ignorant of harmful possibilities. The other claim is that for some offenders, the probability of criminal behaviour after intoxication is so high, that their becoming intoxicated is itself criminal recklessness: Mitchell states that this claim lacks empirical support.

In New Zealand, as France (1990) has reported, recklessness is generally regarded as the second limb of traditional mens rea (the first being Intention), so it therefore occupies an important position in assessing liability (p. 44). According to the Criminal Law Reform Committee (1984), "When statute does not define the mental element required for a truly criminal offence it is usually held that the defendant must act with either intention or recklessness, and sometimes statute expressly provides that recklessness is sufficient" (para 25). Before a 1982 ruling by the House of Lords, "recklessness" was taken to require that the defendant actually realised that the offence might arise from his conduct,

and unjustifiably took that risk; this view was then rejected as being too narrow. Now, in New Zealand it is usually no defence that because the defendant was intoxicated, he/she was unaware of the risk of endangering life when that risk would have been obvious had he/she been sober (para 25).

Intention, Knowledge, and Memory: There has been a long line of authorities asserting that intoxication can take away a person's "wits" or render them non compos mentis, and "medical witnesses still testify that intoxicated persons can act without knowledge or awareness of what they are doing, but the scientific evidence does not support the 'blind drunk' thesis" (Mitchell, 1988, p. 90). Finagarette and Hasse (1979, cited in Mitchell, 1988) concluded that it was almost always false to say intoxicated defendants did not know what they were doing or did not intend their actions. This was supported by Morse (1984, cited in Mitchell, 1988). Hall (cited in Mitchell, 1988) said decades ago that if courts applied the intoxication doctrine honestly there would be little effect since intent is present in harm done by intoxicated persons; "what is lacking is control and ethical sensitivity". As Bywater (1982) notes, the only choice is to rely on acknowledged law, i.e. that 'drunken' intent is still an intent. Mitchell (1988) acknowledges that alcohol and other sedatives (e.g. marijuana, benzodiazepines) can seriously obstruct memory (Hutchinson, 1964; Ryback, 1970; both cited in Mitchell, 1988); but drug-related memory loss does not mean a lack of awareness or intent while intoxicated (Talland, 1970; cited in Mitchell, 1988). "Lack of recall does not imply lack of awareness at the time, yet medical witnesses repeatedly make this claim in court" (p. 92).

In established English (and New Zealand) law, the effects of self-induced intoxication can provide a defence only if the offence charged requires a "specific intent"; such intoxication, however gross it might be, can not support a defence when the mental element is no more than a "basic intent". This is a controversial rule, because it means that when an offence is classified as one of "specific intent" (e.g. murder, theft), the defendant may be acquitted by using voluntary intoxication to support a defence. However an offence classified as one of "basic intent" (e.g. manslaughter, assault, rape, breaking and entering), means that the defendant who was intoxicated may be convicted although he/she may never have intended or foreseen the consequences for which he/she is held responsible.

> "These differences may well seem strange but apparently the answer is that where recklessness is an element of the offence, it is a crime of 'basic intent', and self-intoxication by the accused so that he was unaware of a risk he would otherwise

> have appreciated, is no defence. Where, however, any other element such as intent or knowledge is involved without the option of proving recklessness as an alternative, the jury must consider evidence of intoxication in order to establish if in effect the accused was really incapable of knowing what he was doing. In other words recklessness replaces criminal intent where it forms an element of the offence" (Bywater, 1982, p. 615).

There are arguments against to this rule, including the fact that the distinction between 'specific' and 'basic' intent is "arbitrary and uncertain" (Criminal Law Reform Committee, 1984, para 20), and there have been cases in New Zealand courts where the rule has not been adopted. There have been occasional cases where defendants have been acquitted of 'basic intent' offences, on the ground that evidence of voluntary intoxication raised a reasonable doubt whether the required intent to commit the offence was present (para 24).

Automatism: Drug consumption can cause involuntary effects such as dizziness, slurred speech, vomiting, and hangover, but Mitchell asserts that these are hardly relevant in criminal law apart from nuisance offences and impaired driving. "Neither alcohol nor other drugs compel users to perform goal-directed damaging actions. The consequence of drug-induced mental aberration is 'typically one of no activity rather than aberrant activity' as Bywater (1982) notes" (Mitchell, 1988, p. 94). Bywater (1982) also noted that "...contrary to what is often argued in criminal cases, the state of automatism is more likely to control the individual's correct course of action rather then cause him or her to commit crimes 'without knowing what they were doing'" (p. 616). Mitchell discusses a number of cases where odd, intoxicated behaviour was incorrectly alleged to be irrational, motiveless and thus involuntary. He criticises medical authorities for pushing "the notion that substance abusers were sick compulsives who needed help" (Tournier, 1985, cited in Mitchell, 1988), and that alcoholism is a disease (thus intoxication is 'involuntary', and seen as an excuse for acts arising out of such intoxication, creating the potential for full acquittal): Mitchell states, "But the evidence does not support the central tenets of the disease concept of drug addiction" (p. 96), and that "no effective basis exists for predicting on any occasion that anyone is compelled to drink or become intoxicated" (p. 97). This statement is supported by Beauchamp (1980, cited in Mitchell, 1988).

As Ojesjo (1983) reports, in the laws of most countries a person is criminally liable if the criminal act was considered conscious and voluntary; however "there is an uneasiness in the criminal law over punishing the actor, who at the time of the commission of the

offence may not have been fully responsible for his actions...the general rule is that voluntary intoxication is no defense to a criminal charge based on acts committed while intoxicated" (p. 736). The act of consuming alcohol or drugs is considered to be a voluntary act, so "a person would be held responsible for all consequences, even if the behaviour is a product of a mind seriously affected in its functioning by alcohol or other drugs" (p. 736). One exception that Ojesjo (1983) acknowledges is that the effects of a hallucinogenic drug such as LSD are not predictable, so in this case drug intoxication may sometimes be a valid defence. The only other exception is when drug intoxication is involuntary.

In New Zealand involuntary intoxication is regarded differently from voluntary intoxication. The 1987 amendment to the Criminal Justice Act 1985 (as cited on page 33), stated that when an offender has committed a violent offence, alcohol or drug intoxication cannot be a mitigating factor in sentencing, except in cases where the offender did not consume the substance(s) voluntarily.

Regarding 'involuntary intoxication' in this country, the Criminal Law Reform Committee (1984) states that there is no doubt that it provides a defence to any offence if it results in the absence of any required state of mind. Cameron (1990) objected to the Crimes Bill 1989's (which did not get passed into law) position on involuntary intoxication, which in clause 19 made it clear that involuntariness produced by intoxication, whether voluntary or involuntary, cannot absolve from criminal responsibility. Cameron believes that it is unjustifiable to punish a person who is involuntarily intoxicated, and who acts unconsciously or is heedless, and that "involuntary intoxication should provide a defence if it renders the accused's acts involuntary in terms of clause 19" (p. 67). Although involuntary intoxication was not to be allowed as a defence (clause 19), clause 29 made it clear that "intoxication may be taken into account in deciding whether the defendant had the necessary intention, knowledge or recklessness for the offence. As such, intoxication, whether voluntary or not, is thus being treated simply as a factor in ascertaining the existence of mens rea, rather than as a defence...(Cameron, 1990, p. 67).

Personality: Mitchell holds that even if intoxication is involuntary (cases of which are extremely rare anyway, if they exist at all (Hall, 1960)), this should be hardly relevant since "intoxication does not function as an independent or coercive third party" (p. 98). The demonic possession theory, popular and even influencing the formation of legal doctrine, uses the (false) idea that under the influence of drugs users are truly different people, their personality, will, and knowledge taken over by the drug, and therefore not responsible or liable for their criminal actions. Liability is often believed to belong to the

person who administered the drugs and the drug itself. "This fairy tale of domination by a chemical persona is fantastic yet it represents respected schools of thought. Antidrug propaganda throughout this century warned that certain drugs (heroin, alcohol, PCP, cocaine) could transform unsuspecting users into maniacs bent on rape, murder, and mayhem" (Mitchell, 1988, p. 98). Mitchell believes that "self-absorption, asocialism, and introspection" are more common drug effects than heightened aggression. "Metaphorically, the mind is more akin to a finely layered onion than to a simple, sunny bungalow with a dark, sininster basement. In any important sense, it is meaningless to say 'I wasn't myself'" (p. 98).

Insanity and diminished capacity: Mitchell believes that all the special rules used in some countries for insanity, intoxication, and diminished capacity should be abolished (though diminished capacity is not used in New Zealand). It is mens rea in intoxication that should be the focus, rather than mental disorder. As Anthony (1988) has stated (in the U.S.), "As it currently stands, neither sociopathy nor substance abuse is considered to be a severe mental disease or defect for the purposes of criminal prosecution. Nevertheless, the intentionality and mental capacity (mens rea) criteria have been used to determine guilt or if there were mitigating factors at the time of sentencing" (p. 31).

Economic Gain / Need for Drugs

The relationship between specific types of drugs and types of crime has been examined by a number of researchers (Kozel & DuPont, 1977; McBride & McCoy, 1980, 1981; McGlothlin, 1979; O'Donnell et al., 1976; Weissman, 1978; all cited in McBride, 1981), and it has been a major focus of policy makers for some time. As Weissman (1978, cited in McBride, 1981) noted, "a presumed direct connection between narcotics use and the commission of property-acquisitive crime has been a time honoured principle of American drug control policy". (This position has frequently been broadened to include other psychoactive drugs). Research indicates that narcotic (opiate) addicts greatly increase their level of property crime during times of increased narcotic use, and there is also some evidence that cocaine use leads to crime for economic gain (Anglin & Speckart, 1988; Nurco, Hanlon et al., 1988; McGlothlin, 1978). Research also indicates that nonproperty crime does not covary with levels of narcotic use, suggesting that the relationship between narcotic use and crime is attributable to economic motivations (Anglin & Speckart, 1988).

In one of the main post-World War II studies of the crime-drug relationship, Finestone (1967, cited in Goldstein, 1989) found that heroin users engaged chiefly in nonviolent property crimes. He claimed that as rates of heroin addiction increased in a given area, crimes against persons decreased and property crime increased. His perspective was that heroin addicts concentrated on behaviours that would result in the most monetary gain so that they could purchase heroin. Noneconomically productive activities such as assault were avoided. Subsequent studies, especially those of the early 1970s tended to confirm Finestone's findings that heroin addicts concentrate their activities on acquisitory property crimes (McBride & Swartz, 1990). Nurco et al. (1988) supported Goldstein's (1985) conclusion that "because heroin and cocaine are expensive and their use is typified by compulsive patterns of demand, their use is more directly associated with crime specifically committed to pay for drugs" (Nurco et al., 1988, p. 419). Inciardi and Chambers (1972, cited in Goldstein, 1989) and Inciardi (1979, cited in Cohn, 1984) found that heroin addicts in New York City were more likely to commit property crimes than crimes against persons. Elliot and colleagues (1976) found a strong correlation between the use of all types of illicit drugs - particularly marijuana - and property crime. O'Donnell et al. (1976, cited in McBride, 1981), Jacoby et al. (1973, cited in McGlothlin, 1979), and Johnston et al. (1976, cited in McGlothlin, 1979) all found that all types of illicit-drug users were more likely to commit property crimes than other types of crime, and that drug users were more likely to commit property crimes than were nondrug users. Eckerman, Bates, Rachal, and Poole (1971, cited in Cohn, 1984) and Bass et al. (1971, cited in Cohn, 1984) reported that drug using arrestees committed significantly more property crimes than crimes against persons. In a survey of drug users among arrestees in Florida, McBride (1976, cited in McBride, 1981) found that all categories of illicit drug users in general, and heroin users particularly, were overrepresented in the property charge categories. Barton (1976, cited in Cohn, 1984) and Kozel and DuPont (1977, cited in McBride, 1981) reported similar findings, and also that illicit-drug users were underrepresented in crimes against persons. Nondrug users were more likely to commit crimes against persons than were all types of drug users.

As Ojesjo (1983) stated, "Psychiatric studies have not been able to confirm that narcotic drugs turn normal individuals into degenerate dope fiends liable to commit crimes of violence indiscriminately. The addict comes into conflict with the law first through the unlawful purchase, importation, or possession of drugs. Addicts may also support their drug habit by the sale of drugs, theft, prostitution, or other crimes (MacDonald, 1976)" (p.734). Johnson, Goldstein, Preble, Schneidler, Lipton, Spunt, and Miller (1985) cite a number of authors who have noted that "many addicts, especially those with large habits, are either full- or part-time dealers. Such dealers are assumed to be infrequently involved

in nondrug crime". However, Johnson et al. (1985) report that growing evidence supports the belief that the criminal addict supports his habit by shoplifting, theft, burglary, and robbery (citing Ball et al., 1979, 1981, 1982; Ball, Shaffer, & Nurco, 1983; Chaiken & Chaiken, 1982a, 1982b; Nurco, Cisin, & Balter, 1981a, 1981b, 1981c, 1981d). "Many addicts prefer crimes that do not involve contact with victims...and therefore minimise the threat of arrest" (p. 5).

Ellard (1987) cited a New South Wales study (Dobinson and Ward, 1984) which reported that 90% of imprisoned drug users said that the main reason they committed major offences was to pay for their drugs. The most frequently reported reason for non-users was "unemployment", followed by "being under the influence of alcohol and/or drugs".

An indication of some element of the need for money for drugs in generating crime can be seen by looking at methadone maintenance treatment programmes. Methadone is a drug which produces a cross-tolerance to other opiates in the user, making continued heroin use difficult. Ideally, if crime is generated from drug needs, criminal activity in methadone-stabilized clients should be dramatically reduced. Studies that indicate that criminal activity may be reduced by methadone maintenance include Smith and Watkins (1975), Smith and Stephens (1976), Stephens and Weppner (1975), Hunt, Lipton, and Spunt (1983), Hunt et al. (1982, 1984, all cited in Johnson et al, 1985); and Schut, Steer and Gonzales (1975; cited in Gossop & Roy, 1977). Results of a study by Hunt, Lipton, and Spunt (1984) of 368 methadone maintenance clients and 142 narcotics users, indicated that methadone clients were less involved in criminal activity than users not in treatment. Also, among those clients who did continue criminal activity, there was less involvement in more serious crimes such as robbery, burglary, or dealing heroin and cocaine. The differences between the methadone treatment clients and the narcotics users not in treatment were not a function of a lower level of criminal activity prior to treatment, but related to being in treatment. Methadone clients who continued to commit crime were either clients continuing to use heroin and/or cocaine or clients for whom crime was an income or an income supplement (e.g. the unemployed).

Johnson, Wish, Schmeidler, and Huizinga (1991) reported that annual rates of delinquent offending increased directly with more serious drug involvements, even when controlling for delinquent type. Less than 2% of their national probability sample were responsible for 40%-60% of various felony crimes and a disproportionate share of all drugs used. However less than a quarter of these youths reported that their recent non-drug crimes were primarily motivated to obtain money for drugs. The authors suggested that this

motivation may be more relevant among near daily heroin and cocaine abusers. Anglin and Speckart (1988) reported that the largest increase in property crime during the addiction career occurred at the point when daily narcotic use started.

Johnson et al. (1985) and Collins, Hubbard, and Rachal (1985, cited in Hammersley Forsyth, Morrison, & Davies, 1989) both found that the funds available from crime better predicted drug use than drug use predicted amount of crime (see also Goldman, 1981; Johnson et al., 1985; both cited in White, 1990, p.223). Hammersley et al. (1989) state, "All drugs tended to be associated with crimes. This may be in part due to the 'need' for drugs leading to crime but it is also, probably in greater part, due to the income from crime leading to greater expenditure on drugs" (p.1041). Hammersley, Forsyth, and Lavelle (1990) examined the drug use and crime of 210 teenage illicit drug users, and found that the frequency of use of all licit and illicit drugs and the frequency of all crimes were intercorrelated. However, as with Hammersley et al's (1989) study, crime explained drug use more than drug use explained crime and drug use was not a major unique predictor of theft. (Crime frequency was explained by a combination of drug use, prior criminal experience, and friends' behaviour.) Anglin and Speckart (1988) suggest that "narcotics addiction usually does not 'cause' property crime as an initiator but rather as a multiplier of existing criminological predispositions" (p.227). White (1990) states that "while it is indeed probable that crime leads to drug usage under certain conditions for certain persons, a direct causal path from crime to drugs is not likely to reflect the dominant pattern" (p. 223).

Although, as stated earlier, "researchers have tended to conclude that illicit-drug users are not driven to violence by the use of drugs and are, in fact less violent than nondrug using criminals, because of the economic demands of drug usage" (McBride, 1981, p. 111), more recently there has been dissent from the general notion that crime among drug users is nonviolent. As noted earlier (p. 13) Zahn and Bencivengo (1974, cited in McBride & Swartz, 1990) and Stephens and Ellis (1975) argued that the criminal behaviour patterns of heroin users were changing. They suggested that, while older cohorts of heroin users may have been relatively nonviolent, newer cohorts were increasingly engaged in crimes against persons. Chaiken and Chaiken (1982b) and Nurco et al. (1988) both inferred from their studies that violent crimes are performed more frequently by younger criminals and tend to be less associated with narcotic addiction than are property crimes.

Goldstein's Economic Model for violent crimes

The economically compulsive model in Goldstein's (1985) tripartite conceptual framework suggests that some drug users participate in economically oriented violent crime (such as robbery) in order to support expensive drug use. Heroin and cocaine are the most relevant substances here, because of their high cost and compulsive patterns of use; Speckart and Anglin (1986, cited in McBride & Swartz, 1990) showed that the greater the cost of a drug habit, the more likely that high-risk crimes such as robbery will be committed. Economically compulsive actors are not primarily motivated by impulses to act violently; rather their primary motivation is to obtain money to purchase drugs. Violence usually results from some factor in the social context of the crime, such as the perpetrator's own nervousness, the victim's reaction, the presence (or absence of) weapons carried by either the offender or victim, the mediation of bystanders, and so on (Goldstein, 1985; 1989). As McBride and Swartz (1990) point out, "violence may occur due to the emotional state of an addict desperate to obtain drugs".

Research has indicated that most heroin users avoid violent acquisitive crime if viable non-violent alternatives exist (Cushman, 1974; Goldstein & Duchaine, 1980; Gould, 1974; Johnson et al., 1985; Preble & Casey, 1969; Swezy, 1973; all cited in Goldstein, 1985; Goldstein, 1981). However, Goldstein (1985) points out: "While research does indicate that most of the crimes committed by most of the drug users are of the nonviolent variety, e.g. shoplifting, prostitution, drug selling, there are little data that indicate what proportion of violent economic crimes are committed for drug related reasons" (Goldstein, 1985, p. 496).

Harlow (1991) reports that out of the 395,554 jail inmates in the survey she analysed, money for illegal drugs was cited by 13% of convicted inmates as a reason they had committed their offence. Among inmates who had used drugs in the month before the offence for which they were convicted, 27% said that they had committed the crime to get money for drugs. Nearly one in three robbers and burglars said they had committed their crimes to obtain money for drugs.

A study of 49 male incarcerated armed robbers in California, who reported committing a total of 855 robberies (Petersilia, Greenwood, & Lavin, 1978, cited in Goldstein, 1989) found that over half the sample reported regular use of drugs, alcohol, or both; and 60% said they were under the influence of drugs or alcohol while committing their crimes. The desire for money to buy drugs was the single most frequently cited reason for committing crimes.

Out of 17,745 arrestee's urine specimens in Washington, D.C., Wish, Klumpp, Moorer, Brady, and Williams (1981, cited in Goldstein, 1989) found that 22% of the male robbery arrestees and 29% of the female robbery arrestees had drug-positive test results, mainly for opiates. Goldstein (1989) points out that "Not all studies are able to claim that robberies are, in fact, motivated by the compulsion to obtain money to purchase drugs. In some cases the perpetrator may be under the influence of drugs, such as barbiturates, and the robbery may have more of a psychopharmacological motivation than an economically compulsive one" (p. 29).

Goldstein's Systemic Model (1985)

The third model in Goldstein's framework is the systemic model: violence is intrinsic to involvement with any illicit substance. Systemic violence is the established aggressive patterns of interaction within the system of drug distribution and use, and includes violence between rival dealers and within dealing hierarchies, disputes over drugs and payments, and so on. In the U.S. at least, drug users often reside in high-violence areas, and violence is an integral part of the street drug using lifestyle (Agar, 1973; McBride & McCoy, 1981; Preble & Casey, 1969; all cited in McBride & Swartz, 1990; Goldstein, 1985).

Goldstein (1985) believes that the three models of the drugs/violence nexus contained in the tripartite conceptual framework should be viewed as ideal types, and that overlap can occur between them. He gives the example of a heroin user preparing to commit an act of economic compulsive violence, e.g. a robbery, who might ingest some stimulants to give himself the courage to do the crime. If the target of the robbery is a drug dealer, this event contains elements of economic compulsive, psychopharmacological, and systemic violence (p. 501).

Chapter 3

SPECIFIC DRUG EFFECTS

While there is substantial evidence of a relationship between narcotic drug use (opiates) and crime (e.g. Ball, Rosen, Flueck, & Nurco, 1981; Nurco et al., 1989), the situation is less clear regarding non-narcotic drugs. In 1980, Gandossy and colleagues found that relatively few studies on the non-narcotic-crime relationship had been conducted and that the evidence relating the use of various non-narcotic drugs to crime was rather weak. They indicated at that time that no clear relationship between criminal activity and use of substances such as cocaine, hallucinogens, and marijuana had yet been established.

However, Reiss and Roth (1993) in their overview of drugs and violence, claim that use of marijuana or opiates in moderate doses temporarily inhibits violent and aggressive behaviour; while amphetamines, cocaine, LSD and PCP resemble one another in that in high doses, they can be pharmacologically linked to violent behaviour (although this can be dependent on the sample, and whether the drug users have pre-existing psychopathology). Studies by Nurco, Kinlock, Hanlon and Ball (1988) and Shaffer, Nurco, Ball, and Kinlock (1985) reported that cocaine use was highly related to several types of crime, including drug distribution, theft, violence, and confidence games. It has been shown that acute intoxication by, or chronic abuse of, some illicit substances, such as amphetamines, can induce a type of paranoia that can provoke antisocial and criminal behaviour (Asnis & Smith, 1978; Ellinwood, 1971; Smith, 1972, cited in Goldstein, 1989). Opiates, PCP and cocaine are all drugs whose pharmacological properties may increase the probability of bizarre and violent behaviour: these acts of violence are usually impulsive and unpremeditated (McBride, 1981). However, the findings concerning acute or chronic abuse of other drugs such as LSD and marijuana have been the subject of controversy. Aside from PCP, little study has been made of the relationship of hallucinogens to crime. There does appear to be some evidence that the hallucinogenic drugs may so strongly affect perceptions or the brain's chemistry that bizarre, aggressive, and violent behaviour may occur (Burns & Lerner, 1976; McBride & Russe, 1979, Tinklenberg & Woodrow, 1974; all cited in McBride, 1981). McBride (1981) points out that "It should be noted that neither researchers nor the popular media have argued that hallucinogenic drugs produce violent crime in the sense of crimes planned and carried out against persons. Rather, the evidence is that the violent behaviour these drugs produce is to a large extent unpredictable in its specific direction; it is, rather, unpremeditated and random in its course" (p. 111). Research on the relationship between marijuana use and crime (e.g. Gandossy et al., 1980; Wish & Johnson, 1986) has generally found little

evidence that the drug induces any type of criminal behaviour other than, possibly, selling the drug. Youths have reported that marijuana use reduces their inclination toward violent behaviour (Tinklenberg, Murphy, Murphy, & Pfefferbaum, 1981; Tinklenberg et al., 1976). There is conflicting evidence regarding the extent to which substances such as amphetamines, barbiturates, sedatives, and tranquillisers are associated with crime (Gandossy et al., 1980; Greenberg, 1976, cited in Nurco, Hanlon, & Kinlock, 1991). However, in ethnographic accounts of violent drug abusers in New York City, Goldstein (1985) reports that, on a per ingestion basis, barbiturates seem most likely to lead to violence. Goldstein reports that amphetamine use is also correlated with offences against persons, but to a lesser degree than barbiturate use. There is some evidence of a link between inhalant use and criminal behaviour (Nurco et al., 1989; Reed & May, 1984, cited in Nurco et al., 1991), although inhalants tend to be used most frequently among juveniles.

In McGlothlin's (1985) summary:

> "...there is some evidence that drug use contributes to crime directly by potentiating impulsive and violent behaviour; however, the overall significance of this contribution is certainly small... barbiturates have been found to potentiate assaultiveness...amphetamines and cocaine in high doses can produce paranoid reactions resulting in violence, although there are relatively few such accounts in the literature...Marijuana and the stronger hallucinogens are also capable of producing psychotic reactions, and there are occasional references to violent behaviour during these episodes [but] marijuana typically decreases both expressed and experienced hostility...there is growing evidence that the pseudo-hallucinogen, phencyclidine, has a fairly high potential for producing combative and violent behaviour...Opiates produce a reliable sedating reaction without the increased emotional lability and aggressiveness accompanying alcohol and barbiturate use. Thus, the pharmacological properties of opiates would be expected to decrease rather than potentiate criminal behaviour, and this is generally consistent with the available evidence...Finally, and perhaps this is the issue of major concern, there is the question of income-generating crime among individuals with expensive drug habits [and] commission of acquisitive crimes during a period of withdrawal" (pp. 154-155, cited in Pallone, 1990, pp. 89-90).

Moyer (1987), in the conclusion of his review of drug-induced aggression, claims that, "There is unequivocal evidence that a large number of drugs can profoundly influence the

tendency to hostility. The threshold for aggressive behavior tendencies can be reduced in some individuals by alcohol, the amphetamines, and paradoxically by Librium and Valium" (p. 72).

Alcohol, which has been discussed in a previous section, is a central nervous system depressant, reducing anxiety, tension, and inhibitions. In moderate quantities, it produces a feeling of relaxation and confidence, increasing sociability and talkativeness. With increasing amounts, concentration and judgement are progressively impaired, and the body's reactions are increasingly slowed. As blood alcohol levels rise, violent or aggressive behaviour is possible (Robinson, 1990).

Opiates have, as stated above, a reliable sedating effect. There is little or no tendency to produce psychosis or paranoid reactions, so that the direct pharmacological properties tend to decrease rather than potentiate violent behaviour (Tinklenberg, 1979). However, acquisitive crimes committed while undergoing withdrawal symptoms might be considered a direct pharmacological effect of opiate use.

The euphoria experienced by the opiate user produces a relaxed feeling of well-being and indifference to anxiety-provoking stresses or pain. Users generally refer to the "rush" that is experienced immediately after injection of heroin - a sensation of extreme pleasure, tingling, and euphoria. Later, sedation sets in, and there is little inclination toward physical activity (Fishbein & Pease, 1990). The analgesic effects peak about 20 minutes after IV injection or one hour after subcutaneous injection, and usually wear off in from five to eight hours, depending on the user's tolerance (Bartol & Bartol, 1986) although sources differ (e.g., O'Brien, Cohen, Evans, & Fine (1992) say three to six hours, with 12 to 24 hours for methadone). Withdrawal from opiates begins six to eight hours after the last dose, usually after a one to two week period of continuous use. Withdrawal symptoms include cramps, bone aches, diarrhoea, fever, irritability, depression, and restlessness. At any time during the abstinence syndrome, a single injection of morphine or heroin eliminates all symptoms. Fear of withdrawal effects may be a strong inducement to carry on using the drug (Robinson, 1990). Methadone, a manufactured substitute for heroin, does not produce the same "high" as illegal drugs such as heroin, but it prevents withdrawal symptoms and the craving for heroin.

Animal studies have demonstrated that "withdrawal from opiates increases the probability of heightened aggressive and defensive acts that continue after other withdrawal symptoms have subsided" (Reiss & Roth, 1993, p. 192). Reiss and Roth also

suggest that preexisting feelings of rage among heroin addicts may amplify relationships among opiate addiction, withdrawal and violent behaviour.

Research indicates that opiate addicts do not as a rule participate in violent crimes such as assault, rape, or murder. In strictly pharmacologic terms, opiates tend to reduce aggressive and hostile tendencies; aggressive behaviours may actually be attenuated due to drug effects (Finestone 1967; Greenberg & Adler, 1974; Inciardi & Chambers, 1972; Julien, 1981; Kozel et al., 1972; Wikler, 1952; all cited in Fishbein & Pease, 1990). A number of studies (e.g. Nurco, Hanlon, Kinlock, & Duszynski, 1988) have shown that during active opiate abuse periods, users commit significantly more crimes, including violent crime. "This finding appears to indicate the existence of a situational factor reflecting needs associated with maintaining a narcotic habit" (Nurco et al., 1988, p. 407). As the biological effects serve to directly suppress aggression, circumstances, and social environment probably contribute more (Fishbein & Pease, 1990). The relationship between heroin addiction and money-producing crime is unclear. According to Fishbein and Pease (1990), "aggression resulting from the addiction to heroin is primarily economically motivated and reinforced by learned contingencies. Someone addicted to heroin might commit an act of aggression to obtain money to buy the drug, but there is no known association between the pharmacological effects of heroin and aggressive behaviour in humans" (p. 225). Moss and Tarter (1993) point out that, "violence associated with heroin addiction may best be ascribed to a social artifact of illegal heroin trade, its distribution network, and the high cost of obtaining the illegal drug. Individual predispositions to violence may also accentuate the risk for an aggressive or violent interaction" (p. 156).

On the other hand, additional research suggests that individuals prone to abuse opiates (and possibly other drugs) require a level of stimulation over and above that which is normally provided by conventional appetitive behaviours. They may find pleasure and reward from stimulating the brain's natural opiate system that can be achieved by both the use of opiate drugs and by engaging in certain types of criminal activities (Fishbein & Pease, 1990, p. 225).

One explanation for violence committed by opiate users, may be that opiates were not in fact directly involved: an interesting study of illicit drug users in Edinburgh (Morrison & Plant, 1991) noted that opiate users reported experiencing some alcohol-related problems, including trouble with the police, and being involved in alcohol-related violence.

Hallucinogens such as LSD, psilocybin (mushrooms), and mescaline (peyote) can produce effects ranging from mood changes to florid hallucinatory experiences. Visual hallucinations, paranoid ideation, a false sense of achievment and strength, suicidal or homicidal tendencies, depersonalisation, and derealisation are all possible. LSD 'trips' usually begin between 30 and 60 minutes after taking the drug, and the peak experience is reached after about two hours (Manning, 1985). The behavioural effects are of 8 to 12 hours duration, and long-term there can be flashback experiences or psychotic reactions after abstinence (Brown, Manderson, O'Callaghan, & Thompson, 1986). According to Reiss and Roth (1993), human studies suggest that "LSD does not trigger violent behaviour, but does sometimes aggravate the effects of preexisting psychopathology, includiong violent outbursts" (p. 195).

Mescaline is considerably less potent than LSD. It is usually taken orally but it can be inhaled by smoking ground peyote buttons. The hallucinatory effects of peyote and mescaline are reported to be fairly similar to the effects of LSD. At low doses the effects appear within 1 to 3 hours and last for 4 to 12 hours or more (O'Brien et al., 1992).

The active hallucinogenic ingredient of "magic mushrooms" is psilocybin, the potency of which lies somewhere between that of mescaline and LSD, the effects reported as being much like those of LSD (O'Brien et al., 1992). When taken orally psilocybin is one of the most rapid-acting hallucinogens, with initial effects being felt 10 to 15 minutes after ingestion. After about 90 minutes reactions usually reach maximum intensity, and do not begin to subside until two to three hours later. The effects usually last five to six hours in total, but doses larger than 8mg probably prolong their duration. Physical dependence on psilocybin has not been reported (O'Brien et al., 1992).

"With the exception of several case studies, the available evidence suggests that there is little or no relationship between hallucinogens and crime (Tinklenberg, 1973b)" (Gandossy et al., 1980, p. 55).

PCP (phencyclidine), as well as being often classed as a hallucinogen, is considered to be a central nervous system depressant and stimulant; the exact action in humans depends on the dose. In low doses, it elicits feelings of euphoria, but with increasing quantities the user becomes incoherent, uncommunicative and disoriented, and sensory mechanisms are blocked so that incoming stimuli are dampened. Behavioural sypmptoms of PCP use are due mostly to dopaminergic effects: either PCP binds to sites on dopaminergic terminals or it blocks the reuptake of dopamine, decreasing the number of binding sites. In either case, the symptoms associated with dopaminergic activation include conceptual

disorganisation, posturing, stereotypic and psychotic symptoms, violent behaviour, delusions, and hallucinations (Fishbein & Pease, 1990). The behavioural effects of PCP are usually of 8 to 12 hours duration. Although the initial effects of PCP are generally experienced as euphoria and are intensely rewarding, continued usage is described as having unpredictable and frequently distressing effects. Usual usage produces frequent episodes of substantial dysphoria. Furthermore, memory loss or impairment during PCP experiences is common, whether the episode is pleasant or agonising (Fishbein & Pease, 1990). Showalter and Thornton (1977) reported, "Phencyclidine appears to be unique in action compared with other psychedelic drugs, and its effects are less dependent upon the individual's personality than are the effects of either LSD or mescaline...the phencyclidine experience is more likely to be unpleasant, with impaired clarity of thought, marked anxiety, and psychosis" (pp. 1234-5).

Chronic use of PCP has been associated with extreme violence to self and others in individuals both with and without histories of violent behaviour (Aronow, Micell, & Done, 1980; Fauman & Fauman, 1980; Linder, Lerner, & Burns, 1981; Smith & Wesson 1980; all cited in Fishbein & Pease 1990; Burns & Lerner, 1976; Rainey & Crowder, 1975; both cited in McGlothlin, 1979). However the available literature on PCP use and crime is sparse and consists mainly of case studies of individuals who have committed violent, often bizarre acts (Wish & Johnson 1986). Brecher, Wang, Wong, and Morgan (1988) point out that "the assumption that PCP causes violence does not arise from an experimental scientific literature, but rather arises almost entirely from clinical reports. The medical and psychiatric literature often uncritically refers to PCP as a violence-inducing drug" (p. 397). According to some anecdotal reports, violent reactions appear to be an extension of PCP toxic psychosis that affects some users (Fauman & Fauman, 1980). PCP-induced psychosis lasts from hours to weeks (Allen & Young, 1978; Rainey & Crowder, 1975) and is characterised by cognitive disorganisation, disorientation, hallucinations, and paranoia, i.e. all the features of an acute brain syndrome. A second well recognised feature of PCP intoxication is analgesia: the individual has impaired senses of touch, proprioception, and pain, and may not be restrained by pain. This may account for reports of individuals high on PCP who seem to have extraordinary strength (Siegal, 1980), and those who inflict injuries upon themselves. The potential link between PCP use and violent crimes is based on the idea that some individuals become so disoriented when using the drug that they commit acts for which they are not responsible: there has been some debate in the U.S. regarding the viability of the legal defence of diminished capacity for crimes committed during PCP intoxication (Baxley, 1980, cited in Wish & Johnson, 1986). Brecher, Wang, Wong, & Morgan (1988) reviewed 81 clinical reports of PCP toxicity in humans published mainly

in U.S. medical journals, critically analysing each report with a set of criteria for descriptions of PCP involvement and violent behaviour (such as laboratory documentation of PCP and no other intoxicants in the body, violent acts having been confirmed by other observers, and so on) and were led to conclude that "clinical and forensic assumptions about PCP and violence are not warranted" (p. 397). Other researchers who share this view include Khajawall, Erickson, and Simpson (1982); Feldman (1979); and James and Anderson (1979) (all cited in Brecher et al., 1988). Brecher and colleagues explain the contradiction between these authors and the common psychiatric literature as resulting from a failure to distinguish "between violence directed against other persons and the severe agitation and hyperactivity that is often a feature of an acute PCP psychosis in which there is serious risk of injury to the patient and the medical staff" (p. 400). Wish et al. (1986, cited in Brecher et al., 1988), in a preliminary assessment of drug use based on urinary analysis, have noted that individuals charged with crime who were positive for PCP did not have a notable incidence of violence, but were most often arrested for burglary. PCP users were not frequently represented among those arrested for murder, assault, or rape. Brecher et al. (1988) point out that they are well aware that the failure of most case reports to meet their criteria does not prove that PCP does not induce violence. "However, our data led us to these conclusions: the combination of cognitive disorganisation, paranoia, analgesia, and activation contributes to a toxic state that is difficult to manage clinically and which carries with it a potential for injury. PCP psychosis, however, should be distinguished from criminal behaviour, which is usually goal (money, lust) oriented and often committed by individuals with histories of violence and criminality" (p. 400). Fishbein (1990), reviewing observations from a range of PCP studies, suggests that the consequences of PCP use, independent of the drug's purity and varying strengths, are determined by a number of factors, including pharmacological, psychological, and situational.

Cocaine is a central nervous system, psychomotor, and behavioural stimulant. It is used because of its euphoric effect and alleged aphrodisiac qualities (Brown, Manderson, O'Callaghan, & Thompson, 1986). Psychologically, it elevates mood, producing euphoria and alertness, and reduces fatigue. Confidence, friendliness, calmness, disinhibition, and so on, are enhanced. However high doses can cause irritability, suspiciousness, anxiety, and psychotic behaviour. Like PCP, cocaine mimics stimulation of the sympathetic nervous system by initiating "fight or flight" responses to stress, with the release (and reuptake blockage) of the biogenic amines, which include norepinephrine, epinephrine, and dopamine. These amines have been associated with aggressiveness, impulsivity, and hyperactivity, owing to effects on the amygdala, frontal lobe, and septum (Giannini, Miller, and Loiselle, 1993). The user experiences arousal, agitation, and a rush of

euphoria, causing habit formation. Chronic repetitive use of cocaine increases the sensitivity of the postsynaptic receptors; their enhanced response to dopamine in the mesolimbic area of the brain may be associated with paranoia (Burrowes et al., 1988; Sheard, 1988).

As with other drugs, the effects of cocaine depend on its purity, route and chronicity of administration, environment, personality, and expectations of the user (Gold and Vereby, 1984, cited in Busch and Schnoll, 1985). Cocaine is well absorbed from all mucous membranes and has a biologic half-life of about 2.6 hours (Mule, 1984, cited in Busch and Schnoll, 1985). The effects of cocaine are much shorter than those of amphetamine, peaking within 15 to 20 minutes and usually lasting 30 minutes to an hour after intravenous or intranasal use, after which there is often a period of depression.

Cocaine is known to be one of the most powerful chemical rewards in the brain, even more so than heroin. It used to be thought only psychologically addictive, but current heavy usage shows both tolerance and withdrawal properties. It may be the most addictive drug available to drug users: psychological dependence can occur after a single dose (Fishbein and Pease, 1990). Miller, Gold, and Mahler (1990) state that the addictive behaviour surrounding cocaine use is "especially strong and dramatic": the loss of control underlying the preoccupation, compulsive use, and relapse to cocaine use is potent and greater than that related to other drugs. Clinical experience and laboratory investigations in humans and animals have confirmed that the powerful reinforcing properties of stimulants are stronger than for the other drugs of abuse and addiction such as opiates, sedative/hypnotics, and alcohol (Miller, Gold, and Millman, 1989, cited in Miller et al., 1990; Siegal, 1982).

One behavioural effect of cocaine use, especially crack cocaine, is the tendency toward aggression or violence (Fishbein and Pease, 1990), although "the limited pharmacological and psychiatric literature has not yet established direct neurobiologic links between violent behaviour and acute or chronic cocaine use" (Reiss and Roth, 1993, p. 194). As with stimulants/ amphetamines, the initial feelings following cocaine use are vitality, assertiveness, and alertness, but feelings of irritability, nervousness, and a "frenzied" state frequently ensue after prolonged use. Cocaine users many become hypervigilant, highly suspicious/paranoid, which can lead to violence. Crack, a potent, ready to smoke form of cocaine, is even more likely to be associated with psychotic symptoms and thoughts or acts of violence (Goldstein, Brownstein, Ryan, and Bellucci, 1989; Honer, Gewirtz, and Turey, 1987). A review of the literature on cocaine by Busch and Schnoll (1985) reported that the stages of cocaine intoxication were (I) euphoria, (II) dysphoria, (III)

paranoia, and (IV) psychosis - this fourth stage characterised by hallucinations, disorientation, persecutory delusions, delirium, loss of impulse control, and violence.

Reiss and Roth (1993) report that "the animal literature is quite consistent with the finding of Goldstein et al. (1989) that homicide arising from the pharmacological effects of cocaine is falrly rare" (p. 194). However, Giannini et al. (1993), citing Bennett (1989), assert that "those geographic areas that have a high concentration of crack cocaine users also have an inordinately high level of violent crime, especially felonious assault and murder" (p. 67). This may due to a difference because crack cocaine and cocaine: "Crack/freebase use, which provides rapid onset and rapid clearance, is associated with greater violence than other means of administration in situations that do not require sustained action, such as violent behavior against people and objects as well as child and spousal abuse. No difference is found with violence requiring more sustained action, that is, rape, burglary, and armed robbery" (Giannini et al., 1993, p. 69).

Siegal (1982) reported a high level of violence and paranoia in the group of 32 free-base cocaine users which he studied. An indirect retrospective study conducted by the National Household Survey in Drug Abuse(1985, cited in Miller et al., 1990) also reported a high incidence of cocaine-associated violence (also, 83% of the respondents reported paranoia as a primary cocaine-related effect). A study of problem cocaine users by Washton and Gold (1984, cited in Busch and Schnoll, 1985) reported fighting and violent arguments (66%) while they were high on cocaine. Washton and Tatarsky (1984, cited in Busch and Schnoll, 1985), using data from self-identified problem users, reported that 18% felt violent, 11% physically injured someone, 7% had suicidal ideation, and 7% attempted suicide. One subject reported committing a murder while high on cocaine. Miller, Gold, and Mahler (1990) state: "Although violence has been associated with many drugs of abuse and addiction...Clinical evidence and one study suggest that violence may be induced by cocaine with prevalence and severity...perhaps greater than by other drugs, including alcohol" (p. 67). Miller et al. (1990) assessed the violent behaviour associated with cocaine use reported by 452 male telephone interviewees: the types of violent behaviour ranged from minor psychological aggressions to major physical acts that included murder. Tentative conclusions from their study were as follows: (1) violent behaviour is associated with cocaine use; (2) suspicious/paranoid thinking is common among cocaine users; (3) violent crimes are associated with cocaine use; (4) cocaine addicts believe that cocaine causes violence; and (5) the violence from cocaine use may be associated with paranoid thinking and the need to obtain money to buy more cocaine. According to the authors, cocaine's propensity to induce violence may be attributed to several factors. According to animal and human

studies, the pharmacological effects of cocaine alter neurotransmitter systems in key locations in the brain. Those neurotransmitter systems involve norepinephrine, epinephrine, dopamine, serotonin, and gamma aminobutyric acid (GABA). The main neuroanatomical locations of suspected involvement by cocaine are cortical areas, particularly the frontal lobe (impairing insight and judgement), the limbic system, including the septal and amygdala regions (provoking aggression), the basal ganglia (stimulating motor behaviour), and the mesolimbic system (inducing paranoia) (Burrowes et al., 1988; Jones, 1987, cited in McGlothlin, 1979; Sheard, 1988). Miller et al. (1990) found that 13% of the cocaine users had committed crimes immediately following use, 17% a few hours later, and 19% during acute withdrawal. Seventeen percent thought that cocaine use had induced them to carry a weapon, 83% thought it induced committing violence in general, and 82% thought it induced committing violence to get money for cocaine. The following behavioural effects were associated with addictive cocaine use: Angry (42%), violent (32%), suspicious/paranoid (84%), increased strength (32%), violent crimes (46%). Miller et al's results were comparable to those reported by Siegal (1982) and the National Institute on Drug Abuse (1985, cited in Miller et al., 1990). The common symptoms of suspiciousness and paranoia in these studies may suggest that violence may be in part a defensive reaction against fear. The low rates in Miller et al's study for some of the violent behaviour such as murder and rape did not conform to police reports and other surveys. For example, the survey performed by the NIDA (1985) found high rates of violent behaviour associated with cocaine use. However in Miller et al's study the positive response rate for violent behaviour with fewer legal implications was high (probably owing to reluctance to disclose potentially incriminating evidence). Giannini et al. (1993), investigating 194 male and female cocaine abusers, found that of the males' reported symptoms of cocaine use, 71% reported increased anger; 55% reported violent behaviour (this included 45% reporting violent behaviour against objects, and 34% reporting violent behaviour against people); 8% reported rape/sexual assault; 12% reported child abuse; 16% reported spousal abuse, 21% reported burglary; and 3% reported armed robbery.

Regarding criminal behaviour other than violence, Washton and Gold (1984, cited in Busch and Schnoll, 1985) reported that 39% of their sample of problem users were dealing cocaine, 29% were stealing from family, work, and/or friends to help support their habits, 12% had been arrested for dealing or possession, and 11% had car accidents while high on cocaine.

Because of cocaine's unique range of effects on human thought and behaviour, the legal criteria for the insanity defence in the U.S. as it applies to cocaine-related crimes is

difficult to define. Bunt (1992) states that "the personal responsibility attributed to an individual with regard to criminal behaviour while seeking, acquiring, or being intoxicated with cocaine remains a disputable issue...Most professionals in the field of addiction treatment would agree that an individual who is addicted to cocaine may have control over drug-seeking behaviour under certain circumstances, and may lose volitional control over compulsive drug-seeking under different circumstances. Of greater controversy is whether during periods of intoxication an individual may be prone to certain uncontrollable compulsive criminal acts, or may have contextually dependent diminished capacity" (p.895). Bunt believes that with the "disastrous" effects of the U.S. cocaine epidemic, there must be firm legally sanctioned limits put into place and enforced regarding cocaine-related crime, and also that there must be provisions made for rehabilitation of criminally charged or convicted cocaine addicts.

Withdrawal from cocaine consists of two phases: the immediate, acute "crash", and the chronic long-term effects, where there is a return of craving as well as irritability, depression, fatigue, and dysphoria. When the crash (dysphoric mood) lasts more than 24 hours after last use of cocaine, it becomes withdrawal. As an alternative, people may use alcohol, sedatives, or antianxiety agents such as Valium, to alleviate these symptoms. Withdrawal symptoms reach a peak in 2 to 4 days but depression and irritability may persist for weeks. Because of the compulsion that has developed in many users to obtain more cocaine and the depression and irritability that set in, it is during this stage that users may resort to illegal and violent means of acquiring the drug (Estroff and Gold, 1985, cited in Fishbein and Pease, 1990; Moss and Tarter, 1993).

Busch and Schnoll (1985) point out that,

> "the literature is too premature to draw conclusions about whether cocaine users have a statistically higher rate of violent or other criminal behavior, excluding possession or dealing, than the general population. In individual cases, however, it is clear that violence or theft to support habits is seen. If there is a statistically significant association between cocaine and criminal behaviour, there are several possible explanations; a direct pharmacological effect of cocaine; an as yet, unidentified factor which leads to both the cocaine use and the criminal behavior; the criminal behavior is a result of "situational" factors with many contributing sources other than the cocaine' or a "spurious" connection where the association is an artifact of nonrepresentative sampling methods" (Busch and Schnoll, 1985, p. 294).

Moss and Tarter (1993) suggest that "societal factors are probably more influential than direct drug effects in the production of aggression among cocaine-using individuals" (p. 155). An extensive criminal subculture has developed, which is involved in the importation, sale and distribution of the drug, and in which disputes over cocaine supplies, territory and money are often dealt with through violence.

Amphetamines are appealing to some individuals in their effect of supposedly prolonging concentration and wakefulness. Amphetamine sulphate (Benzedrine), dexamphetamine sulphate (Dexedrine), and methylamphetamine (Desoxyn) all have similar effects. The effects of amphetamines are similar to those of cocaine; increasing wakefulness, alertness and vigilance, inproving concentration, producing a feeling of clear thinking, elevation of mood, mild euphoria, and a belief that one can do just about anything. According to Moyer (1987), "there is general agreement that moderate use and occasional abuse of amphetamines does not result in violence (Blum, 1969; Tinklenberg and Stillman, 1970)". Reiss and Roth (1993), in their review of drugs and violence, agree. Blum (1969) "goes so far as to say that there is no research linking amphetamines and violence. That appears to be true for moderate abuse, particularly if the drug is taken orally. However, long-term users of high doses are potentially dangerous..." (cited in Moyer, 1987, pp. 61-62). In large doses, the effects of amphetamines may be irritability, hypersensitivity, delirium, panic, aggression, visual and tactile hallucinations, and psychosis. Injected at high doses, these drugs may precipitate "toxic psychosis", a syndrome with many of the psychotic features of paranoid schizophrenia, although the prevalence of amphetamine-related psychosis varies across samples (Reiss and Roth, 1993). Heavy users of amphetamines typically inject directly into the bloodstream, cranking up with several hundred milligrams at a time; during these speed "runs", which produce a paranoid panic state, the user may engage in aggressive or violent behaviour (Tinklenberg and Stillman 1970; Hofmann 1975; National Commission on Marihuana and Drug Abuse 1973; all cited in Bartol and Bartol, 1986). Grinspoon and Hedblom (1975) and Carey and Mandel (1968) both cited evidence that amphetamines were linked to violence (both cited in Ladouceur and Temple, 1985). According to the United Nations (1972, cited in Goldman, 1981), amphetamine abuse is related to criminal activity, "primarily of an aggressive and violent nature" (p. 167). Ellinwood (1971) described 13 case studies of persons who committed homicide while intoxicated with amphetamines. He stated that "In most of these cases, the events leading to the homicidal act were directly related to amphetamine-induced paranoid thinking, panic, emotional lability, or lowered impulse control" (p. 1170). Ellinwood (1973) cited several clinical reports that "strongly suggest that assaultive behaviour can directly result from the pharmacological properties of the amphetamines, particularly when they are used

repetitively in high doses" (cited in Gandossy et al., 1980, p. 54). However according to some researchers, there is not yet enough evidence to conclude that amphetamines facilitate either violent or property crime (Greenberg, 1976, cited in Nurco et al., 1991). Greenberg claimed that conclusions such as those of Ellinwood (1971), were based on clinical observations of a few individuals who had manifested violent behaviour, not on carefully designed, large-scale investigations. She argued that existing data imply that amphetamine users are not more likely to be involved in crimes against persons than are other types of drug users or nondrug users (see Eckerman et al., 1971, cited in McBride, 1981). Eckerman et al. found that "amphetamine users were more likely than any other group - including nondrug users - to be arrested for criminal homicide and forcible rape" (cited in Gandossy et al., 1980). However in Eckerman et al's study, too few amphetamine users were detected to make any definitive statements about its relationship to crime. Burrowes and colleagues (1988), citing research by Cherek, Steinberg, Kelly et al. (1986), claim that amphetamines have been found to have a biphasic relationship with aggressive acts; "consumption of low doses of amphetamines has been shown to increase aggressive responses, and higher doses tend to elicit aggressive responses at the same or lower frequency and intensity as placebo". However, McBride (1981) considers that "the clinical evidence suggesting the causal relationship between amphetamine use and violent behaviour cannot be ignored" (p. 112). Long-term effects of amphetamine use are reported to include amphetamine psychosis, violence, depression, and lethargy (Brown, Manderson, O'Callagham, and Thompson, 1986). According to Moyer (1987), "there is general agreement that moderate use and occasional abuse of amphetamines does not result in violence" (p. 60), but for long-term users of high doses there is potential danger of impulsive and violent actions owing to hyper-irritability, aggressiveness, and loss of judgement during acute intoxication.

Moss and Tarter (1993) citing an early study by Angrist (1969), point out that "As with other forms of illicit drug abuse, a substantial proportion of amphetamine-abusing individuals have a history of antisocial or criminal behaviour and poor psychosocial functioning prior to the onset of substance abuse" (p. 154). Moss and Tarter suggest that the induction of aggression via amphetamine use is similar to other drug-aggression interactions, in that it is influenced by (1) pharmacologic factors, such as amphetamine dose and chronicity; (2) individual factors, such as presence of paranoid psychosis, predisposing sociopathy, or aggressiveness; and (3) the situational context in which the drug is used. Ellinwood (1970, cited in Asnis and Smith, 1978), in his analysis of amphetamine-related homicides, suggested that the most important factors which precipitated acting out on amphetamine-induced delusions were predisposing personality factors, the envronmental conditions of use and the use of other drugs. Reiss and Roth

(1993) suggest that the strength of the relationship between amphetamine use and violent behaviour depends on the user's prior psychiatric condition.

The psychological effects of **marijuana** are so subjective and dependent upon such a wide range of variables that it is very difficult to generalise. As was noted earlier, the mood of the user, the user's expectations about the drug, the social context in which it is used, and the user's past experiences with the drug, are all influential, together with the widespread variation in delta -9-tetrahydrocannibinol (THC) content in any sample of marijuana. Immediate effects include euphoria; sleepiness; short-term memory, mental and motor skills impairment; enhanced senses; possible hallucinations; delusion; and anxiety. When smoked, THC's effects manifest in a few minutes, peak in 10-30 minutes and last 2 to 3 hours, depending on the potency (O'Brien et al., 1992). (However the NZ Police Association (1991) tells us, "It takes at least four to six hours for the effects of a single cannabis cigarette to wear off"! (p. 23)). One of the predominant effects of THC is relaxation and a marked decrease in physical activity: being "stoned". In the last twenty years, "five major scientific reviews of the research literature have concluded that violent human behaviour is either decreased or unaffected by cannabis use" (Reiss and Roth, 1993, p. 195). Evidence to support the conclusion that THC reduces the likelihood of criminal activity, particularly aggressive conduct includes Abel (1977); Salzman, Bessel, Van der Kolk, and Shader (1976), Taylor et al. (1976, cited in Burrowes et al., 1988); Blumer, Sutter, Ahmed, and Smith (1967, cited in Bartol and Bartol, 1986); Jones (1977); Tinklenberg, Roth, Kopell, and Murphy (1976); and Tinklenberg and Woodrow (1974, cited in McBride, 1981). Myserscough and Taylor (1985) studied the effects of THC on 30 male undergraduates receiving intense provocation, and found that "the subjects in the high-dose condition behaved in a relatively nonaggressive manner throughout the experimental session" (p. 1541), and appeared to be reluctant to retaliate, even following the threat of receiving the extremely high shock level. The subjects in the low dose condition tended to to respond in a more aggressive manner than those in the moderate and high-dose conditions. (An interesting discovery of this study was that the dose of marijuana did not appear to influence the subjects' shock thresholds or subjective evaluation of the painfulness of the shocks.) Myserscough and Taylor's study was an extension of a previous study by Taylor et al. (1976), who investigated the effect of marijuana on direct physical aggression, comparing it to the effect of alcohol. Subjects were given the opportunity to give electric shocks to increasingly provocative opponents while competing in a task. "The subjects in the high-dose alcohol condition set significantly higher levels of shock than the subjects in the low-dose condition. On the other hand, the high dose of THC did not facilitate aggressive responding. In fact, there

was a tendency for the high dose of THC to produce a suppression effect" (Myerscough & Taylor, 1985, p. 1541).

Myerscough and Taylor report that there is "considerable agreement among investigators that marijuana consumption produces feelings of well-being, relaxation, and peacefulness. Tart (1970) has characterised the effects of marijuana intoxication as being 'either emotionally pleasing or cognitively interesting' (p. 704)" (p. 1545). Pliner, Cappell, and Miles (1972) suggested that marijuana produces calmness, passivity, and social harmony (cited in Moss & Tarter, 1993). Myerscough and Taylor cite various similar descriptions, concluding that the closest explanation for the results of their study is that "the phenomenological state produced by THC is simply incompatible with the expression of physical aggression. This interpretation is certainly congruent with contemporary perspectives concerning the inhibition of aggressive behavior (Baron, 1983)" (p. 1546). (Investigators such as Donnerstein, Donnerstein and Evans (1975) and Baron (1978) (both cited in Mysersough & Taylor, 1985) have proposed that positive or pleasurable affective states such as mild sexual arousal and humour elicit reactions that are incompatible with aggression).

Tinklenberg (1973) concluded that "the available data on physiological and psychological effects of marijuana strongly suggests that marijuana does not usually induce violence, aggressive or sexually aggressive behavior". Ausubel, in 1958, stated "marihuana by virtue of its stupefying effects, may sometimes inhibit the expression of aggressive impulses" (cited in Myerscough & Taylor, 1985). Salzman, Bessel, Van Der Kolk, and Shader (1976) reported a series of studies on the effects of marijuana on verbal hostility in a small group setting: intoxicated subjects showed a reduction in irritability and hostile feelings as compared to sober controls.

The U.S. National Commission on Marijuana and Drug Use (1973a, cited in Jessor, 1979) concluded that marijuana neither instigated nor increased the level of crime and that the relation between marijuana use and crime or delinquency depended upon social, cultural, and psychological variables. Reports of marijuana-related violence appear most often in the older foreign literature, possibly as a result of the high doses consumed (McGlothlin, 1979). Thornicroft (1990) reviewed the evidence and stated that "there is no convincing support for a separate clinical diagnosis of 'cannabis psychosis'. Cannabis can, however, produce brief acute organic reactions and, in moderate to heavy doses, psychotic episodes in clear consciousness" (p. 25). In 1977, Abel's review of the available evidence concluded that "marijuana does not precipitate violence in the majority of those using it sporadically or chronically. However, there are certain individuals, such

as those suffering from temporal lobe dysrhythmia, and certain situations of *set* and *setting*, in which marijuana may result in violence" (p. 193). Evidence indicates that violent marijuana users were violent prior to using marijuana (Bartol & Bartol, 1986). In rare exceptions, users can have negative experiences such as feelings of hypersensitivity or panic, of being out of contact with surroundings, intrusive thoughts, or bizarre behaviour. Nahas (1973) proposed that a panic reaction could develop in users "who become agitated and feel threatened", and suggested that under such conditions, "a reaction to unpleasant stimuli may be violent" (cited in Myerscough & Taylor, 1985).

There is no supportive data that marijuana is habit forming to the point where the user must get a "fix" and will burgle or rob to obtain funds to purchase the drug. Some physical addiction can occur, but only at doses and continued use far above what is now used recreationally (Bartol & Bartol, 1986). In summary, to date no investigation has established a CAUSAL link between the use of marijuana and criminal activity (except, of course, the illegal acts of selling, possessing, or using it).

Barbiturates are used as sedatives, hypnotics, and anticonvulsants. They have quite low appeal, though with some popularity as an intoxicant, being cheap and available (though less so than tranquillisers) (Brown, Manderson et al., 1986). Barbiturates were used extensively as sedative-hypnotic drugs for many decades, but when benzodiazepines were introduced in 1961 (U.S.) and laws regulating barbiturates became more restrictive, their use declined significantly (Goodman, Mercy, & Rosenberg, 1986). The behavioural effects of barbiturates resemble alcohol intoxication (i.e. a reversible depression of the nervous system), including drowsiness, confusion, and inattentiveness. Specific effects include sluggishness, incoordination, poor memory, trouble in thinking, slowness of speech and comprehension, faulty judgement, disinhibition of sexual or aggressive impulses, emotional lability, narrowed range of attention, and exaggeration of basic personality traits. The sluggishness usually wears off after a few hours, but impaired judgement, distorted mood, and impaired motor skills may remain for as long as 10 to 22 hours. Other symptoms are hostility, irritability, quarrelsomeness, moroseness, and occasionally paranoid ideation and suicidal tendencies. Barbiturates can be taken orally either occasionally for a high or chronically for a constant calmness. Some users administer barbiturates intravenously, mainly young adults who are using these drugs because the habit is less expensive than a heroin habit. The rush is a pleasant, warm, drowsy feeling. Barbiturates are also used by heroin users to boost the effects of weak heroin, by alcoholics to enhance the intoxication or relieve the symptoms of alcohol withdrawal, and by habitual amphetamine users as a sedative to help avoid paranoia and agitation. Barbital and phenobarbital are long-acting drugs with half-lives of 12 to 24

hours. Amobarbital (Amytal) is an intermediate-acting barbiturate with a half-life of 6 to 12 hours. Pentobarbital (Nembutal) and secobarbital (Seconal) are short-acting barbiturates with half-lives of 3 to 6 hours.

A withdrawal reaction occurs when barbiturates are discontinued, although usually after use for several weeks at high doses. Withdrawal symptoms range from anxiety, weakness, and insomnia, to seizures and delirium.

In his review of the literature on drugs and violence Blum (1969, cited in Moyer, 1987) found that barbiturates and tranquillisers inhibit violent behaviour. However, he did say that some individuals may respond to barbiturates with agitation and aggression. Tinklenberg (1973) cited several studies since Blum's report linking barbiturates to assaultive behaviour. Brill (1969, cited in Moyer, 1987) reported that "in the subculture of drug-users, abuse of the barbiturates is considered likely to result in the sudden onset of aggressive incidents" (Moyer, 1987, p. 70).

Tinklenberg (1973) concluded that apart from alcohol, barbiturates seemed the most likely drug to potentiate criminal behaviour, and this was supported by his study of assaultiveness among adolescent offenders (Tinklenberg, Murphy, Murphy, Darley, Roth, & Kopell, 1974). He compared 50 male adolescent offenders with 80 non-assaultive offenders of similar background, incarcerated in California. The non-assaultive subjects generally reported that they used a greater variety of drugs more often than the assaultive subjects. However, the majority of the assaultive group described themselves as under the influence of a drug at the time of the offence. Alcohol and secobarbital were the most common drug related to the assaults. Varying levels of barbiturates and other drugs have been found in studies of suspects or perpetrators of violent crimes, such as delinquents, arrestees, or probationers (Budd, 1980; Kozel & DuPont, 1977; Simonds, 1980; all cited in Goodman et al., 1986). Tinklenberg and Woodrow (1974, cited in McGlothlin, 1979) reported that from their study of male adolescent offenders, a majority selected secobarbital from a list of nine categories as the drug most likely to enhance assaultiveness. These offenders also reported that among 36 drug-involved offences, secobarbital, alone or combined with other drugs, was associated with 13 (36%) of serious assaults. Malmquist has also found barbiturate use to be associated with adolescent homicides (1971; cited in McGlothlin, 1979).

An alternative explanation is that use of barbiturates or other drugs may be related to the same social or environmental factors that cause the individual to engage in violent behaviour (Goodman et al., 1986).

Benzodiazepines (which are **minor tranquillisers**) are used mainly to treat anxiety, and include diazepam (Valium), flurazepam, oxazepam (Serepax), and chlordiazepoxide (Librium). Valium is frequently taken by cocaine addicts to minimise the withdrawal reaction following cocaine intoxication, and is taken by opiate addicts to enhance euphoria. The effects of Valium manifest in 15-30 minutes (O'Brien et al., 1992), and can last up to 24 hours (Robinson, 1990). Some benzodiazapines have a disinhibiting effect, which may cause hostile or aggressive behaviour in people susceptible to frustration. It has been noted in some research literature that in some individuals an acute "rage" reaction can result from high doses (Lion, Azcarate, & Koepke, 1975; Rickles & Downing, 1974; Tobin, Bird, & Boyle, 1960; all cited in Moyer, 1987). Benzodiazepines cause less euphoria than other tranquillising drugs, so the risk of dependence and abuse is relatively low. However both tolerance and withdrawal symptoms can develop.

Other minor tranquillisers include flunitrazepam (Rohypnol), nitrazepam (Mogadon), and methaqualone (Mandrax). Minor tranquillisers reduce anxiety, relax muscles, and impair physical and mental abilities. Depression can also occur, especially with long-term use, also fear of withdrawal. Withdrawal effects include vomiting, sweating, nervousness, insomnia, and amnesia.

The immediate effects of **inhalants and solvents** (volatile substances) depend on the substance but may include hyperactivity, excitement, exhilaration, amnesia, impulsiveness, dizziness, disorientation, hallucinations, drowsiness, and stupor. Long-term effects may include fatigue, mental impairment, depression, irritability, hostility, or feelings of persecution. Inhalants such as nitrous oxide produce euphoria, drowsiness, ataxia, and confusion.

Volatile hydrocarbons and petrol derivatives (glue, benzene, petrol, varnish/paint thinner, lighter fluid, aerosols) produce behavioural effects including euphoria, clouded senses, slurred speech, ataxia, hallucinations in 50% of cases, psychoses, and may cause permanent brain damage if used daily over six months. These substances are popular because of their availability, cheapness and intoxicating effects.

Drug Use in New Zealand

According to a large 1990 survey of drug use in the general population aged 15 to 45 years (Black & Casswell, 1993), there is in this country a very low level of current use of drugs other than alcohol, tobacco and marijuana. Illicit drug use was generally less prevalent than in the United States, and similar to levels found in Australia. Because this survey had a large sample size (N = 5126), careful research design, and use of anonymous telephone interviews, it is considered to have provided reasonably accurate drug use figures (although some underreporting of the more socially unacceptable drugs is expected to have occurred).

Alcohol

Highest consumption of alcohol was by young males: 43% consumed six drinks or more, at least once a week.

Marijuana

Apart from alcohol and tobacco, marijuana was the most commonly used drug in New Zealand. Only 12% of the total sample were current users, although 43% had used marijuana on at least one occasion. About 3% reported having used marijuana ten or more times in the past 30 days. Current regular users tended to be male and young; about 40% of 18-24 year old males had used marijuana in the past 12 months, and about 30% were current users (used in past 12 months and not stopped using).

In 1990, the level of use of marijuana in New Zealand appeared to be similar to that in Australia and the U.S. Comparison of the N.Z, marijuana use levels with Australian national data (Department of Community Services and Health, 1990, cited in Black & Casswell, 1993) showed that lifetime prevalence rates were similar for both surveys, "although the New Zealand males under 20 years may have displayed more prevalent use than their Australian counterparts" (Black & Casswell, 1993, p12). Data from Perth, Western Australia (Blaze-Temple et al., 1988, cited in Black & Casswell, 1993) showed a similar lifetime prevalence of marijuana among 17-24 year olds, as in the New Zealand data.

Lifetime use of marijuana and use in the previous year were at similar levels for the New Zealand survey and a 1990 United States survey (U.S. Department of Health and Human Services, 1990, cited in Black & Casswell, 1993).

In Ontario, Canada, use of marijuana in the previous year by18-29 year olds (20%) (Smart & Adlaf, 1988, cited in Black & Casswell, 1993) was a little lower than the 27% for this age group in New Zealand.

For those in the New Zealand study who had used marijuana often (more than ten times in the last 30 days), the most commonly reported marijuana-related problems were trouble with the law (14%), memory loss (10%), and financial problems (10%) (Black & Casswell, 1993).

Multiple Drug Use

Most people who used marijuana used no other illegal drugs. Black and Casswell (1993) stated that "there is low overall incidence of multiple drug use in New Zealand". Only 2% reported the use of more than three illegal drugs over five times.

Marijuana was the most preferred illicit drug, and most people did not have a second choice. Black and Casswell (1993) reported that "The finding that many people preferred marijuana and had no other preference is consistent with the finding of a low rate of illegal multiple drug use in the survey. These different lines of evidence all indicate that most people who use marijuana, use no other illegal drugs and indicate a low overall incidence of multiple illegal drug use in New Zealand" (p. 24).

Multiple drug use was most likely to involve alcohol and marijuana. Fifteen percent of those who had used marijuana in the last 12 months, said they always combined it with alcohol use, while another 22% did so 'mostly', and 28% 'sometimes'. Only 18% never combined their marijuana use with alcohol, and 17% 'hardly'. These figures were consistent with overseas reports (Johnston, Bachman, & O'Malley, 1980, cited in Black & Casswell, 1993).

LSD

LSD was used at a low level, although it was the most commonly used hallucinogen: 2% of the sample had used it in the past year. Use was most common for men aged 18-29, of whom 8% had used it in the past year.

Hallucinogenic Mushrooms

Mushrooms had been used in the past year by 2% of the sample, although the figure was 7% for 20-24 year old males.

Comparison with U.S. data (U.S. Department of Health and Human Services, 1990, cited in Black & Casswell, 1993), showed similar levels of lifetime and annual usage of hallucinogens by 18-25 year olds, as in the New Zealand survey.

Ecstasy

Ecstasy had been used in the past year by 0.5% of the sample. The group with the highest level was 20-24 year old males (2%). Use was extremely low in people over 30 years.

Stimulants (amphetamine and amphetamine variants, cocaine, crack, etc)

Two percent of the sample had used stimulants in the past year. Men aged 20-24 were most likely to have done so (6%).

Very low levels of **cocaine** use were found in the sample, with only 0.4% having used in the past 12 months. Highest use was among those aged 30-34 years.

Use of cocaine in the past 12 months was lower than in the United States, but the level of amphetamine use in New Zealand was similar to the level of use in the U.S. (U.S. Department of Health and Human Services, 1990, cited in Black & Casswell, 1993).

Crack, being quite rare in this country, was used in the previous 12 months by only 0.2% of the sample, although 0.75% of 20-24 year old males had done so.

Opiates (including poppies, heroin, morphine or MST, homebake, Codeine, Pethidine, Temgesic, Doloxene, Methadone, Palfium) were used in the past 12 months by 0.7% of the sample, although just over 2% of 18-24 year old men did so.

Use of heroin in the past 12 months was also low in the U.S. (U.S. Department of Health and Human Services, 1990, cited in Black & Casswell, 1993).

Tranquillisers and Barbiturates

These drugs were used in the past 12 months by only 0.6% of the sample, with the greatest usage by 20-24 year old males (2%). Lifetime use was lower than in the U.S., but there was no clear difference for use in the last 12 months (U.S. Department of Health and Human Services, 1990, cited in Black & Casswell, 1993).

Solvents/Inhalants

Only 0.2% of the sample had used solvents in the past 12 months. There was no use for men over 19, or women over 17 years of age. Use was lower than in the U.S. (U.S. Department of Health and Human Services, 1990, cited in Black & Casswell, 1993).

In general, drug usage in New Zealand was similar to Australia but lower than in the United States, although usage levels of hallucinogens did appear similar to those in the United States (Black & Casswell, 1993).

Chapter 4

THE PRESENT STUDY

Justification

While virtually nothing is currently known about the contribution of drug use to the commission of crimes in New Zealand, there have also been gaps identified in the overseas literature. Pallone (1990) writes:

> "Though arrests for specific drug-offences account for a discernable proportion of all U.S. activity, is there evidence that the use of "controlled dangerous substances" contributes to the commission of other crimes, particularly of felonies? From Wolfgang's studies in the 1950's onward, a considerable body of research evidence, much of it summarised by Collins (1981) and Roizen (1981), appears to have established a consistent link between alcohol and violent crime. But, despite what is generally conceded to be an "epidemic" in the use of "controlled dangerous substances" within the past two decades and the consequent and widespread belief that drug use/abuse similarly represents a contributory factor in felony crime, reinforced by press accounts that focus only on the proportion of arrest activity related exclusively to drug offences without simultaneous explanation that these arrests are not related to felony offences (Graham, 1987), little systematic research effort has been undertaken to establish precise linkages. The determination of consistent linkages of stable magnitude is important at the theoretical level in the understanding of criminogenesis and, at the pragmatic level, both in the design of programs of rehabilitation or treatment in the jails and prisons and/or through pre-trial diversion programs and in the determination of criminal responsibility in individual cases by way of specification of aggravating or mitigating factors" (p. 86).

As Goldstein (1985) has stated,

> "the drugs/violence nexus is one of the most important criminological and health issues for which rigorously collected data is currently unavailable...Official statistics collected in the criminal justice and health care systems do not link acts of criminal violence and resultant injuries or death to antecedent drug activity of victims or perpetrators. Broad recording categories make it virtually impossible to determine whether the offender or victim was a drug user or distributor, or whether the pharmacological status of either victim or offender was related to the specific event" (p. 502).

Pallone's report on biochemical credibility in drug use and crime concludes;

> "Representative studies from the social sciences, relying on the self-reports of convicted felons, and from the "hard" sciences, utilizing "more" and "less" sensitive methods of laboratory assay, yield data that propose, at the extremes, that one of every six OR one of every two felonies is at the least "lubricated" by drug use or abuse. But there is insufficient evidence as yet to conclude to the *differential* effects of *specific* substances with known biochemical properties that produce particular biochemical effects on the acceleration of *particular* types of felony crime" (p. 85)

He concludes that "the relevant data suggests that something on the order of one in three felony crimes, whether of violence or against property, were at the least "lubricated" if not indeed engineered by drug use or abuse" (p. 108). Whether this may also the scenario in this country, is unknown.

Lightfoot and Hodgins (1988) say, "It is now widely recognised that this strong, reliable correlation between alcohol/drug use and crime is not a simple causal one (Collins, 1981). Rather, a complex relationship between alcohol and drug use, on the one hand, and criminal behavior, on the other, results from the probable effects of multiple interactive physiological, psychological, environmental, situational, social, and cultural factors" (p. 688).

Drug/alcohol use may have an indirect effect on crime; for example, it may contribute to the seriousness of the offence (rather than whether it occurs or not), which causes the prison population, which is made up of the more serious offenders, to contain disproportionately more drug users. Another indirect effect could be setting, for example, drug/alcohol use often occurs in groups, and individuals in the group may be 'talked into' participating in criminal activity. Finally, the relationship could be spurious - it may be that intoxicated offenders draw attention to themselves, so are more likely to be arrested (Ladouceur & Temple, 1985). As Ensor and Godfrey (1993) concluded from their study of time series data in England and Wales, "The argument that alcohol consumption may be one of the determinants of a wide range of crimes received some support; alcohol consumption may affect the probability of detection for some types of crime" (p. 477). Similarly, Blumstein et al. (1986) suggested that there is some evidence that alcohol abusers are more likely than nonabusers to be arrested.

Hall, Bell, and Carless (1993), after outlining three ways in which drug use can lead to or promote involvement in crime (intoxication, addiction, economic), points out that

> "Although these are all credible ways in which the use of drugs can lead to or promote involvement of crime, they have different policy implications. If the underlying cause is that social factors lead to both drug use and crime, then policy should be directed towards changing the social conditions that contribute to this (MacGregor, 1989). If it is the high cost of illicit drugs that forces addicts into crime, then making drugs more readily available - through substitution programmes or through decriminalisation- should reduce crime. If drug use promotes involvement in crime, either by reducing the fear of being caught or by producing changes in character and personality, then making drugs more readily available is likely to increase crime" (p. 124).

This clearly indicates the need for research in this area. A more close-to-home justification for the present study can be found in the recent discussion in New Zealand regarding drug decriminalisation, and the criminality of drug use. On June 9, 1994, the New Zealand police officer in charge of "Drug Education", stated on TV1, in a discussion on whether drugs were linked to crime, **"...whereas most people would think it was because of people getting money for drugs, I would say that more than fifty percent of it is related to the effect on people's minds."** There is as yet no research to support or disprove this opinion: we do not know how much of crime in this country is linked to the perpetrator's being 'under the influence' of drugs, or the perpetrator being motivated to obtain money for drugs.

As Nurco, Kinlock, and Balter (1993) have said, "Increased knowledge of precursors, correlates, and concommitants of the etiology and subsequent course of offending is likely to lead to improvements in the explanation, prevention, and reduction of crime" (pp. 293-4). It has been suggested that the identification of and treatment of alcohol and drug abuse may be a cost-effective means of reducing recidivism in some 'habitual criminals' (Evans, 1985).

The Present Study

The research literature described above, is mainly sourced in the United States, or secondly Great Britain; it should not be assumed that the extent of pre-offence drug use in these countries is identical to that of New Zealand. Previous research has tended to omit variables such as the timing of drug use, specific drug combinations used, causal attributions made by the offenders, and so on.

The present study aims to examine pre-offence drug use in a New Zealand context, and to extend previous overseas studies to include specific questions about drug use and the offence situations.

The main research questions are:

- What is the extent of pre-offence drug use among new Zealand male offenders?
- Which types of drugs are used?
- Which types of offenders engage in pre-offence drug use most frequently?
- Which types of drugs are most related to violent offending?
- How often is the acquisition of drugs a motivation for offending?

In addition, a number of hypotheses have emerged from a review of previous literature:

(1) Property, drug, and robbery offenders will be more likely than other offenders to have been under the influence of drugs at the time of the offence.

(2) Use of non-alcohol drugs at the time of offending will be related to less violent offences, while alcohol use at the time of offending will be related to violent crimes.

(3) Psychpharmacological violence will be related to the use of alcohol, barbiturates, stimulants, and PCP (Goldstein, 1985, 1989).

(4) The use of marijuana will not be related to violent offending.

(5) Property offenders will be mainly economically motivated.

(6) Economically compulsive violence will be most related to the use of heroin or cocaine.

(7) Drug use in the month before the offence will be reported most by robbers, burglars, and drug offenders.

(8) If drug use is related to offending, it will be as a 'lubricant', or in the case of opiate abusers, as a 'motive', rather than as an 'engine' (Pallone, 1990).

It is hoped that answers to these questions and hypotheses will provide information which will lead to a more accurate understanding of the role that specific drug types play in the commission of offences in New Zealand.

Chapter 5

METHOD

Subjects

Inmates at three lower North Island prisons (Manawatu Prison, Rimutaka Prison, and Wellington Prison) were invited to take part in this study. All three prisons hold male inmates only, and come under a low-medium security classification. (According to the 1993 Census of Prison Inmates (Southey, Spier, and Edgar, 1995), 88.6% of New Zealand prison inmates were classified as minimum or medium security status). Remand inmates were not surveyed, owing to anticipated problems with discussing offences for which they had not yet been convicted.

From the total prison population of approximately 600, 139 inmates completed a questionnaire. Participation was voluntary, and informed consent was obtained.

Reasons for inmates not filling out questionnaires include the absence of an incentive or material motivation for participating; the involvement of some inmates in employment that took them away from their unit; and the low-security environment in some units which meant that inmates were scattered and were at times difficult to assemble into groups.

A subject characteristic that may have excluded inmates from participating is literacy problems: however steps were taken to maximise participation from this subpopulation (see p. 69)

Participant Characteristics

Age range: The majority of respondents were under thirty years of age (72%). Only 9.4% were over 40, and only 7.8% were under twenty.

Ethnicity: There were slightly more European respondents (43.7% of the sample) than Maori (39.4%), with another 4.5% identifying as a mixture of European and Maori. Pacific Islanders comprised 9.1% of the sample.

Education: Just over half (54.4%) of the sample had not reached fifth form. Only 5.1% had received some tertiary education.

Employment: Less than one-third (30.2%) of the sample had been employed at the time of their offence.

Marital Status: More than half (56.7%) of the respondents stated that were single.

Year of Offence: Most respondents had committed their offence in the year of the survey, or the year before (58.4%), while just over one-quarter (26.4%) had been in prison for two or three years. Only 15.2% had committed their offence more than four years ago.

Number of Prison Sentences Served: For less than half of the sample (47.7%), this was their first time in prison, while over one-third had been in prison two to four times. Nearly one-fifth (18.8%) had served five or more prison sentences.

Recruitment of Participants

Data collection took place in the period of August 1994 - October 1994.

Notices describing the study and covering such points as anonymity, confidentiality, and right to withdraw were posted on the noticeboards of each prison unit, several days before the date set for data collection (Appendix A). [When the notices were mentioned by the researcher at the time of data collection, nearly all inmates indicated that they had seen them].

On the survey date, inmates were asked by the unit managers or other staff to go to a specific room (dining room/classroom/visiting room) if they were willing to take part. Group sizes ranged from three to twenty inmates. The researcher then described the study and what was involved, emphasising the confidential nature of the questionnaire and that it was entirely anonymous, and would take between ten and thirty minutes. It was made clear that non-drug users were equally important for the study, as those who had used drugs. It was also made clear that the questionnaire was not asking about drug use while in prison, and the study was being conducted by a university researcher, not the prison.

Inmates were informed that if they did not wish to fill out the questionnaire, they were welcome to go through it verbally with the researcher if they preferred.

The language used in both the notice and by the researcher on the date of the survey was made as simple and clear as possible, to avoid misunderstanding or confusion.

Inmates' questions were welcomed at any point before, during, or after the questionnaires were completed. Inmates were made aware that they were allowed to leave at any time they wished. They were also told that they could omit any question in the questionnaire that they did not wish to answer.

Design

This study involved survey research of an inmate population. In dealing with illicit behaviour such as drug use and other criminal acts, marginal segments of the population, such as the institutionalised, contain a significant proportion of the cases of interest. Another reason for not conducting a general population survey is the potential reluctance of respondents in the general population either to agree to participate, or to provide candid responses if they do agree. A number of factors may be involved; the illegality and stigmatisation of drug use in society, the degree to which apprehension and punishment are feared, and the attitude of the population toward the organisation conducting the survey (Johnston, 1980). Therefore the present research was conducted with an inmate population (a "special population survey"), using anonymous written questionnaires, group administered.

However, there are drawbacks with using a captive population - they may represent the most dysfunctional of all drug users and criminals, those most likely to be detected and arrested (Gandossy et al., 1980). Therefore a prison population may have limited generalisability (Blumstein et al., 1986). Also, most offenders do not receive prison time for their offences, so the survey findings are applicable to more serious offenders (particularly violent offenders) who receive some period of incarceration after sentencing (Miller & Welte, 1987).

It is likely that certain drug users will be overrepresented in the prison sample. Blumstein et al. (1986) have suggested that there is some evidence that alcohol abusers are more likely than nonabusers to be arrested, probably as a result of cognitive impairment arising from alcohol use: "Petersilia, Greenwood and Lavin (1978), for example, found that alcohol abusers were arrested for 12.1 percent of the offences they committed compared with 2 to 3 percent for drug abusers and offenders who were neither drug nor alcohol abusers... A drinking offender may be an incompetent offender" (Blumstein et al., 1986, p. 92).

This research was a single cross-sectional survey, with respondents providing retrospective information about their behaviours, motives, and circumstances in the past, regarding their involvement in the criminal justice system and drug/alcohol use. This survey technique made it possible to investigate how large was the number of past users, and also to examine the intensity of their drug/alcohol use and to measure the extent to which their use seemed to be associated with their criminal offence. Despite there being some limitations concerning this data (retrospective self-report, one-time, cross-sectional survey of prison population), a wide variety of data are available including demographic and socioeconomic characteristics, and details of inmates' drug/alcohol use prior to arrest. Looking at the characteristics of the sample: nearly three-quarters were under 30 years of age; 44% were European and 39% were Maori; less than one-third were employed at the time of their offence; two-thirds were in prison for committing a person (violent) offence; and over two-thirds had used drugs/alcohol in the 12 hours before their offence.

One drawback is that self-report information provided by inmates regarding drug/alcohol use at the time of the offence cannot be corroborated by other evidence. In the present research, the offence committed also could not be corroborated, owing to the anonymity of respondents. Concerns about possible distortion of information because of the self-report nature of that information, may be reduced by the following points:
-Confidentiallty was guaranteed to all participants (and the survey was conducted by an academic researcher).
-As sentencing had already occurred, there is less likelihood that inmates distorted information because they thought it could help their case.
-Overreporting and underreporting may both exist. "Since small groups of offenders committing specialised types of crimes are not the focus of this research, distortions that occur within the major categories of investigation are of less concern" (Miller & Welte, 1987, p. 373).

According to Johnston (1980), regarding honesty in self-reports of drug use, "Probably the most vital issue for respondents is the credibility of the assurances of confidentiality given by the researchers". Investigators from a number of countries felt that academic researchers, among others, would be trusted more than official representatives of regional or national government (Johnston, 1980, p. 45).

Setting

The study was conducted inside the three prisons. Each prison unit was surveyed separately, and the data collection took place in the most appropriate and available location of each unit (classroom/dining room/courtyard, etc).

Privacy for respondents was ensured by making sure they were seated at a reasonable distance from each other, and giving each respondent the opportunity to seal his completed questionnaire in a plain envelope. Pencils were also provided.

No prison staff were present for any part of the data collection, except for escorting the researcher to and from the units, and gathering the inmates ready for the survey. The researcher's personal safety was ensured by either wearing a wristwatch alarm, or conducting the survey in a room near prison staff so that proceedings were visible (but not audible) to them.

Independent Variables

Drug use was operationalised as the use of any psychoactive drug, including alcohol.

Use of many drugs was rare so drug categories were collapsed into:

-**Alcohol**

-**Marijuana**

-**Opiates** (heroin, morphine, methadone, opium, codeine, dihydrocodeine and all other opioids)

-**Pills** (major and minor tranquillisers, non-opioid analgesics, hypnotics and sedatives of any kind)

-**Miscellaneous** (hallucinogens, cocaine, amphetamine and other stimulants, volatile inhalants, and all other drugs).

Offence type, being the main offence for which the inmate is currently incarcerated, was categorised into 12 groups in the questionnaire:

-Burglary/Theft/Receiving stolen goods

-Drug dealing/Drug offences

-Assault/Aggravated assault

-Robbery/Aggravated robbery

-Sex offence (e.g. rape, indecent assault)

-Child abuse/Incest

-Manslaughter/Murder

-Drunk Driving

-Traffic Offences
-Fraud
-Arson
-Other

For analysis purposes, these were collapsed into:
-**Person** (violent) offences (including assault, robbery, sex offences, child abuse, manslaughter)
-**Property** offences (including burglary/theft, fraud, arson)
-**Drug** offences
-**Other** (traffic)

Drug history information provided information about how often the individual used the five categories of substances in the month before their offence was committed, summarized into a five-point scale, where 1= Hardly ever, 2= Less than once a week, 3=Once or twice a week, 4=Three to five times a week, and 5=Every day or nearly every day.

As well as the five substance categories, drug use in the month before the offence was categorised into eight drug combination categories, i.e. alcohol only, marijuana only, alcohol and marijuana only, alcohol, marijuana, and others, alcohol and others (no marijuana), marijuana and others (no alcohol), others only, and no drugs at all.

This was further categorised into five different drug combination categories, i.e. alcohol + at least one other drug, marijuana + at least one other drug, drugs but no alcohol, drugs but no marijuana, and no drugs at all.

A potential confound exists if respondents were to indicate more than one offence. To avoid this problem, the question asked for the main offence inmates were in prison for. This was emphasised verbally by the researcher. As mentioned above, in those instances where a respondent did tick more than one offence, the most serious offence was the one that was coded for. Offence seriousness was assessed by taking into account the average sentence length imposed for each offence by new Zealand courts.

According to Spier and Norris (1993), the average sentence lengths in 1992 for the offence categories used in the present study were:

OFFENCE TYPE	AVERAGE SENTENCE LENGTH (MONTHS)
Manslaughter	58.9
Incest	39.9
Rape/Unlawful Sexual Contact/ Attempted Sexual Violation/Indecent Assault	39.9
Robbery/Aggravated Robbery	27.1
Arson	16,7
Drug (possession/supply etc)	13.3
Assault/Injuring With Intent/Aggravated Assault	11.0
Fraud	8.7
Burglary/Theft/Receiving Stolen Goods	6.9
Traffic (excluding causing death)	5.4

For example, if a respondent reported that they were incarcerated for both rape and a drug offence, the offence coded for analysis would be rape.

Measures

A 25 question, retrospective self-report questionnaire was designed specifically for this study by the researcher, covering various aspects of the offence committed that led to the participant's current incarceration, and about drug use that they may have engaged in around the time of their offence. A range of demographic details were also covered, including age, ethnicity, occupation, marital status, etc (Appendix C).

Data was assigned nominal categories. One scorer was used for all data.

Psychometric Properties

RELIABILITY is the extent to which the survey procedure can yield comparable results on repeated occasions of measurement when the real phenomenon being measured has not changed. Reliability may be tested by checking for logical consistency among multiple measures of the same variable. This is often done by looking at the internal consistency of multiple items in the same questionnaire, but since drug use questions are seldom repeated in questionnaires, it is more likely to involve readministering questionnaires to a sample of respondents after enough time has elapsed that they would

be unlikely to remember the answers they gave on the first administration. However as the present study was constrained by a time limit, this was not possible.

Self-reports are generally accepted as a reliable indicator of alcohol and drug use (Radesovich, Lonza-Kaduce, Akers, & Krohn, 1980; Rouse, Kozel, & Richards, 1985; Single, Kandel, & Johnson, 1975; all cited in White, 1990, p. 218). A recent study by McElrath (1994), examined the reliability of prison inmates' self-reported drug use, using data collected from face-to-face interviews and self-administered questionnaires, and reported that "Results indicate that self-reported drug use is reliable although inmates were slightly more likely to admit to using drugs on a self-administered questionnaire than during face-to-face interviews" (p. 517).

Miller and Welte (1987, p. 389) note, "Previous studies suggest that offenders' reports of alcohol and drug use are reasonably reliable. In a study of active street criminals, Wish et al. (1983) reported that 94% of the times a person indicated recent use of heroin, methadone, or cocaine, a urine test found of those substances. In a study comparing prisoners' self-reports of alcohol consumption at the time of the offence with wives'/cohabitees' reports, Myers (1983) found no significant difference in the mean alcohol consumption reported at the time of the offence".

According to Blumstein et al. (1986, p. 11), "...the evidence shows that that self-report method is very reliable, and that if there is a problem with this type of measure it is more likely in the area of validity (Hindelang, Hirschi, & Weis, 1981, p. 84)". These authors state that internal consistency, test-retest reliability, and alternate forms reliability of self-report data are all good.

VALIDITY is the degree to which a procedure (e.g. a question in the survey) measures what it is purported to measure. Survey information may be invalid for a number of reasons, including poor understanding of the questions, poor recall by respondents, unintentional distortion caused by the way the questions are answered or presented, and intentional distortions.

According to Johnston (1980, p. 45), "Because of the legal status of drug use in many countries, the validity issue which has been of most concern to drug investigators has been the deliberate understatement or denial of drug use. Understatement, if it occurs, may also occur differentially for different drugs". However, because the present study was not conducted via interviews, but through anonymous questionnaires, this concern is minimised. Furthermore, as the respondents had already been sentenced by the criminal

justice system, there was probably less reluctance to report unlawful behaviour such as drug use. As Kosten et al. (1988, cited in McElrath, 1994) have suggested, self-reported drug use is likely to be more reliable and valid when the respondents have no fear of sanction for the admitted behaviour.

Empirical (criterion) validity may be checked by seeing whether other sources give information about the subjects which is consistent with what they said about themselves, for example drug use information from official sources (e.g. police and treatment programme records) or from informants likely to be knowledgable (e.g. friends, family). However, (as discussed on p. 71) because the present survey was anonymous, it is not possible to cross-check information in this manner. Also, as Johnston (1980, p. 46) has said, the other sources may not provide completely valid data either. As McElrath (1994) points out, "Criterion validity is difficult to establish with samples of prison inmates because of the lack of valid criteria with which to compare self-reports" (p. 519).

Construct validity is the correlation of self-reports with other variables known to be associated with drug use; for example comparisons of the proportion of self-reported drug use from one study with the proportion in other studies (Hubbard, Eckerman, & Rachal, 1976, cited in Gandossy et al., 1980). Construct validity asks: Do the drug use variables in the questionnaire relate in consistent and predicted ways with other variables which are known, or strongly hypothesised, to be related to them? If so, this is evidence of construct validity. For example, if it is believed that younger males smoke marijuana more than others, then a confirmation of this hypothesis by the present study would contribute some evidence of construct validity for the study.

A number of researchers have found the validity of self-reports of crime and drug use to be satisfactory. Nurco et al. (1988) stated, "Although self-reports should not be accepted uncritically, several studies (Ball, 1967; Bonito et al., 1976; Stephens, 1972) have confirmed the validity of such data obtained under nonthreatening circumstances" (Nurco et al., 1988, p. 410). Franklin, Allison, and Sutton (1992) found high validity of self-report measures of substance intoxication at time of crime, by comparing drug use claimed by admissions, with known bioassay results taken from probationers and parolees during the same period; these percentages were similar to drug use claimed by admissions. Osgood et al. (1989), discussing the self-report method, stated, "...virtually all studies assessing the method conclude that it has adequate reliability and validity for most research purposes (e.g., Elliot and Ageton, 1980; Hindelang et al., 1979, 1981)" (p. 391). Similarly, Blumstein et al. (1986) reported, "Self-reports of illegal activity have added an important dimension to the study of criminal careers. The reliability and validity

of such data have been examined, and the best general conclusion seems to be that offender reports of illegal involvement represent reasonable approximations of the behaviours in question (Marquis, 1981; Hubbard et al., 1982)" (p. 92).

Gandossy et al. (1980) also reported that self-reports have been found to be reliable and valid measures: "Several studies have found that addict responses concerning their drug use, criminal behaviour, and related information are generally accurate" (they cite a 1967 validity check study which compared self-reported data from addicts with multiple data sources; 92% of subjects responses regarding drug use were valid, and a 1974 study, using urinalysis as a check, produced 86% accuracy). However, "despite the findings, several studies...have discovered differential rates of validity depending on type or research method, type of behaviour described, and type of drug reported". (i.e., respondents being more willing to reveal past history of usage than present; those with a more serious arrest tending to deny drug use; perceived interviewer-police connection; etc). These issues were minimised in the present study, as (a) present use was not investigated; (b) as the respondents were held in low-medium security prisons, their crimes were generally of less seriousness; (c) the researcher clearly had no connection with police.

Despite the good overall picture, there exist possible limitations. Johnston (1980) has pointed out that "While reviews of the literature on the validity and reliability of self-reported drug use are encouraging (Smart, 1975; Whitehead & Smart, 1972), it is important to remember that most of the studies reviewed were on North American populations" (p. 45).

Every effort was made in advance to maximise the validity of the measures by (a) making it clear that the survey was being conducted by an academic, non-governmental researcher; (b) careful development of the survey procedure and questionnaire structure; (c) careful development of the specific questions on drug use; and (d) careful pretesting of the survey format and questions to be sure that the questions were clear and understandable for respondents.

Prior to the formal launch of the data collection, a small pilot study was conducted to ensure there were no problems in the questionnaire or field procedure. It was found that one question (Q12) would benefit from repeated explanation when participants reached that part of the questionnaire, and also that inmates tended to lose interest if the introduction was too lengthy. The introductory description of the research was streamlined accordingly.

Procedure

For initial procedure with subjects, refer to "Recruitment", p. 75.

After the inmates were recruited the study was described to them, including the following points:

-Non-drug users were just as necessary for the study as drug-users
-Alcohol was included in the term "drugs"
-The study was not about drug use in prison, and was not being conducted by the prison
-The confidential nature of the research, and that the questionnaires would be destroyed afterwards
-The anonymity of the questionnaire
-The availability of the verbal option for completing the questionnaire
-If respondents preferred not to answer specific questions, they could omit them
-A summary of the survey results would be posted on the unit noticeboards when the research was completed
-The results of the survey would be published in the researcher's MA thesis, and could also eventually be published in other formats.

Participants were instructed not to put their name on the questionnaire and were repeatedly assured of the complete confidentiality of all individual data especially with regard to prison authorities.

The researcher read through the information sheet and consent form (Appendix B), answering any questions and explaining that to retain anonymity, the consent forms would be collected before the questionnaires, and that the signatures on the consent forms did not have to be legible.

The researcher then read step by step through the questionnaire, answering individual's questions on the way. However in groups where it was evident that everyone had gone ahead in the questionnaire and was not listening to the spoken version, the researcher stopped reading and assisted more on an individual basis. Inmates were asked to stop and inform the researcher when they reached question twelve, at which point the researcher explained how the question was to be answered (in terms of the boxes and lines), and emphasising that it was only asking about drugs they may have used in the month before the offence, not drugs they may have used in their lifetime.

Informed Consent

The consent form was explained and read during the introduction, after the information sheet had been explained, and it was collected before the questionnaire was begun. Participant's questions were answered throughout.

Collection of Questionnaires

After inmates had completed their questionnaires, they sealed them in blank envelopes if they wished, and placed them in a collection bag. They were free to leave whenever they desired, unless they were from a more secure part of the prison, in which case they waited for a prison officer to escort them back.

Data Analysis

Cross-tabulation using chi square significance tests was used to examine relationships between the range of variables produced by the questionnaire.

Prior to analysis all variables were examined using the statistical package for the social sciences (SPSSPC) for accuracy of data entry, missing values. The data met all assumptions required for chi square (reported by Chase (1984)) in order for the analysis to produce dependable results.

Owing to the small size of some sub-groups in the sample (e.g., offences in the category "Other"), the possibility existed of chi square giving an overestimate of the true value, resulting in the rejection of associations which should in fact be accepted (Chase, 1984). Therefore, *Yates Correction for Continuity* was applied to those contingency tables where the least expected frequency in any cell was less than five. Where possible, cell categories were combined, to eliminate small cell expectancies. When frequencies are large the correction has little effect on the chi square value but when frequencies are small (less than 5) the correction makes a substantial difference (Chase, 1984). Nourisis (1988) states that although it has been recommended that all expectancies in cross tabulation must be at least five, this is probably too stringent and can be relaxed.

As chi-square is unstable for 2x2 matrices, where there is only one degree of freedom, the phi coefficient was used in addition to the chi-square statistic in these cases.

Chapter 6

RESULTS

The following results are presented according to the order of the items in the survey questionnaire.

Alcohol is included in the word "drugs", unless otherwise stated.

(1) Age

The majority of respondents were under 30 years of age (72%). [This is more than the 56% of male inmates reported in the 1993 Census of Prison Inmates (Southey, Spier, & Edgar, 1995), the 62% found in Braybrook and Southey's (1992) Census of Prison Inmates 1991, and the 63% reported by Whitney (1992)]. Only 9.4% were over 40, and only 7.8% were under 20 (Figure 1).

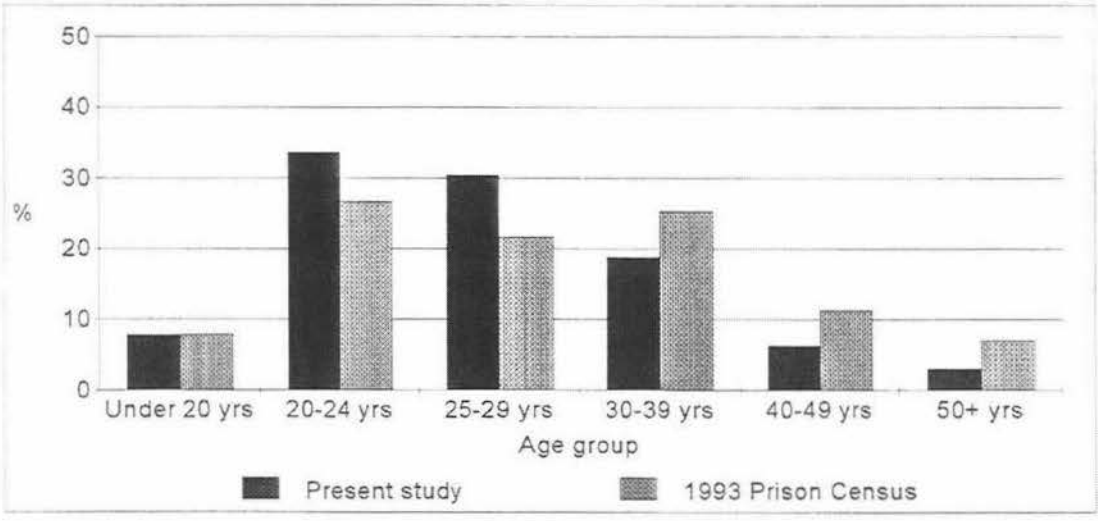

Figure 1: Age of respondent inmates (N = 128)
including comparison with national statistics (1993 Census of Prison Inmates)

Age group was significantly related to whether or not offenders used a drug in the 12 hours before the offence; those between the ages of 20 and 29, and to a lesser extent those between 30 and 39, used a drug in that time more than was statistically expected, and more than older offenders- nobody over the age of 40 reported such drug use (x^2 (4, N = 119) = 17.24, $p < .005$) (Table 1).

Seventy five percent of respondents aged 20-29, and 74% of those aged 30-39, reported using a drug prior to offending.

Seventy one percent of those respondents who used a drug prior to offending, were in their twenties (Figure 2; Table 1).

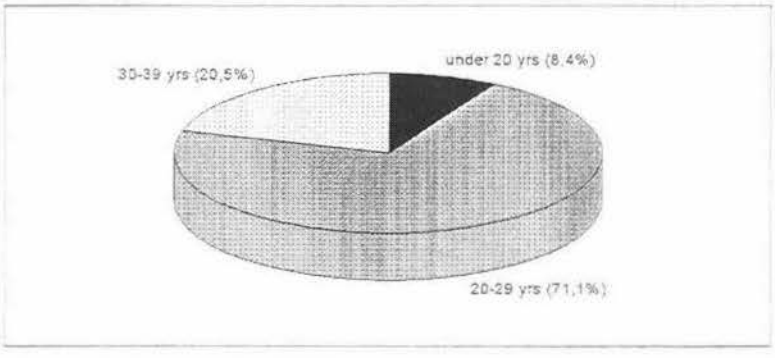

Figure 2: Age of respondents who used drugs before offending (n = 83)

Table 1: Age Groups of Respondents by Use of Drugs Before Offending

	Used Drugs Before Offence?		
Age Group	Yes	No	*Total*
<20 yrs	7	3	10
20-29 yrs	59	20	79
30-39 yrs	17	6	23
40-49 yrs	0	5	5
50+ yrs	0	2	2
Total	83	36	119

The age group of offenders was not significantly related to their offence type, or their reason for offending. Of those who had used a drug in the 12 hours before the offence, their age was not related to the type of drug used, or whether they believed that they were under the influence of the drug when they committed the offence.

Regarding drug use in the month before the offence, age group was significantly related to the level of use of alcohol, with the younger respondents using alcohol nore often than expected, and older respondents using it less often than expected (x^2 (20, N = 76) = 40.9, $p < .005$) (Table 2). There was no significant difference among the age groups in relation to whether alcohol was used in the month before the offence (Table 3).

Table 2: Age Group by Alcohol Use Levels (Month Before Offence)

Level of Alc Use	Age Group					
(month before off)	<20 yrs	20-29 yrs	30-39 yrs	40-49 yrs	50+ yrs	*Total*
Hardly ever	1	9	1	3	0	14
<1x/week	0	6	1	1	0	8
1-2x/week	2	9	3	0	0	14
3-5x/week	1	11	3	0	0	15
6-7x/week	1	14	7	0	0	22
No rate given	0	2	0	0	1	3
Total	5	51	15	4	1	76

Table 3: Age by Drugs Used in Month Before Offence

	Age Group					
Use (Month)	<20 yrs	20-29 yrs	30-39 yrs	40-49 yrs	50+ yrs	*Total*
Used Alcohol	5	51	15	4	1	76
Did not use Alc	5	31	9	4	3	52
Total	10	82	24	8	4	128
Used Marijuana	10	66	19	0	0	95
Did not use Mar	0	16	5	8	4	33
Total	10	82	24	8	4	128
Used Opiates	4	33	6	0	0	43
Did not use Op	6	49	18	8	4	85
Total	10	82	24	8	4	128
Used Pills	4	25	4	0	0	33
Did not use Pills	6	57	20	8	4	95
Total	10	82	24	8	4	128
Used Misc	7	41	9	0	0	57
Did not use Misc	3	41	15	8	4	71
Total	10	82	24	8	4	128

All relationships nonsignificant except: Marijuana (x^2 (4, N = 128) = 34.6, $p < .001$) and Misc Drugs (x^2 (4, N = 128) = 13.7, $p < .01$)

The younger respondents were significantly more likely than older respondents to report the use of marijuana in the month before offending (Table 3, Table 4). However the level of marijuana use in that month was not related to age group.

Table 4: Age Group (collapsed) by Drug Use in Month Before Offence

	Age Group		
Drugs (Month)	Under 30 yrs	Over 30 yrs	*Total*
Used Alcohol	56	20	76
Did not use Alc	36	16	52
Used marijuana	76	19	95
Did not use mar	16	17	33
Used Opiates	37	6	43
Did not use Op	55	30	85
Used Pills	29	4	33
Did not use Pills	63	32	95
Used Misc	48	9	57
Did not use Misc	44	27	71

Whether alcohol was used in the month before the offence, was unrelated to age group.

Marijuana was more likely to have been used by respondents under 30 years of age (x^2 (1, N = 128) = 11.97, $p < .001$, phi = .031).

Those under 30 years of age were more likely to have used opiates in the month before the offence than those over 30 (x^2 = (1, N = 128) = 6.43, $p < .05$, phi = .224) (Table 4).

They were also more likely to have used pills (minor and major tranquilisers) than those over 30 (x^2 (1, N = 128) =5.6, $p < .05$, phi = .210) (Table 4).

Those under 30 were more likely to have used miscellaneous drugs than those over 30 (x^2 (1, N = 128) =7.74, $p < .01$, phi = .246) (Table 4). The only specific drug type in this category with a significant relationship to age group, was Hallucinogens (x^2 (1, N = 128) =11.4, $p < .05$, phi = .242).

(2) Ethnic Group

Of those who answered this question, 43.9% were European and 39.4% were Maori. This is slightly different from the 1993 Census of Prison Inmates (Southey, Spier, & Edgar, 1995), in which 31.4% of inmates were classed as European, and 37.8% Maori (although 18.1% were "unknown"). The present figures also differ slightly to the percentages reported by Braybrook and Southey (1992), where 40% of inmates were European and 43% were Maori. However the present study also includes a number of respondents who stated that they were a mixture of European and Maori (4.3%), which may explain the discrepancy. Another possible explanation may be the existence of different ethnic ratios in the prisons included in each study.

Pacific Islanders comprised 9.1% of the sample (as in Braybrook and Southey's data; while Southey, Spier & Edgar (1995) reported 8.2%). 'Other' ethnic groups made up only 3.1% (Figure 3).

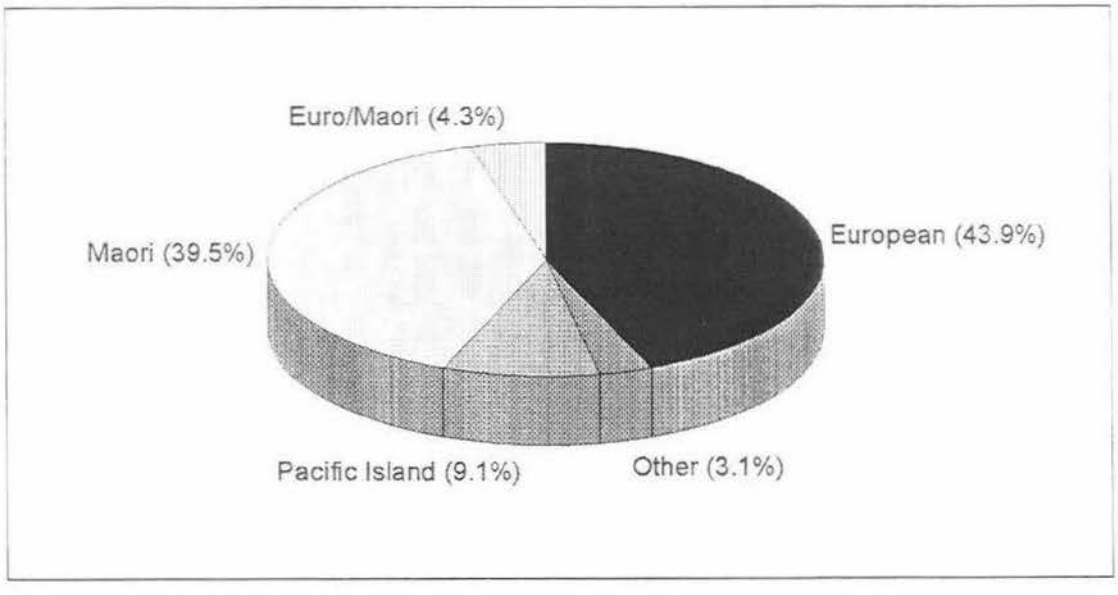

Figure 3: Ethnicity of Inmate Sample (N = 132)

The ethnic group of respondents was significantly related to the type of offence they were incarcerated for. Europeans committed more drug and property offences than statistically expected, while Maori and Pacific Island respondents committed more person offences (x^2 (9, N = 130) = 17.59, p < .05) (Table 5).

Table 5: Ethnicity by Offence Type

	Offence Type				
Ethnic Group	Person	Property	Drug	Other	*Total*
European	29	14	13	2	58
Maori	40	7	4	0	51
Pacific Island	11	0	0	0	11
Other	7	2	1	0	10
Total	87	23	18	2	130

Ethnicity was not related to number of times in prison, reason for offending, whether drugs were used in the 12 hours before the offence, or whether respondents believed that they were under the influence of drugs at the time of offence.

Ethnicity was not related to whether alcohol was used in the month before the offence. About 60% of both European and Maori had used alcohol (Table 6). However there are differences in the level of alcohol use; 58.3% of Europeans used alcohol three or more times per week, and only 32.3% of Maori did so (x^2 (10, N = 79) =21.16, $p < .05$) (Figure 4).

Table 6: Drugs Used in Month Before Offence by Main Ethnic Groups

	Ethnic Group					
Drugs (month)	European		Maori		Pacific Is / Other	
	(n = 58)		(n = 52)		(n = 22)	
Alcohol	36	(62%)	31	(60%)	12	(55%)
Marijuana	41	(71%)	40	(77%)	14	(64%)
Opiates	28	(48%)	13	(25%)	4	(18%)
Pills	17	(29%)	14	(27%)	3	(14%)
Misc	29	(50%)	18	(35%)	10	(45%)

Ethnicity was not related to the use of marijuana (71% of Europeans and 77% of Maori had used marijuana), or the level of use between the three main ethnic categories. Europeans reported all levels of use less than expected, except for the highest level ('every day'). Maori respondents, by contrast, used marijuana at the highest level less than expected, but more at the other levels (Figure 5).

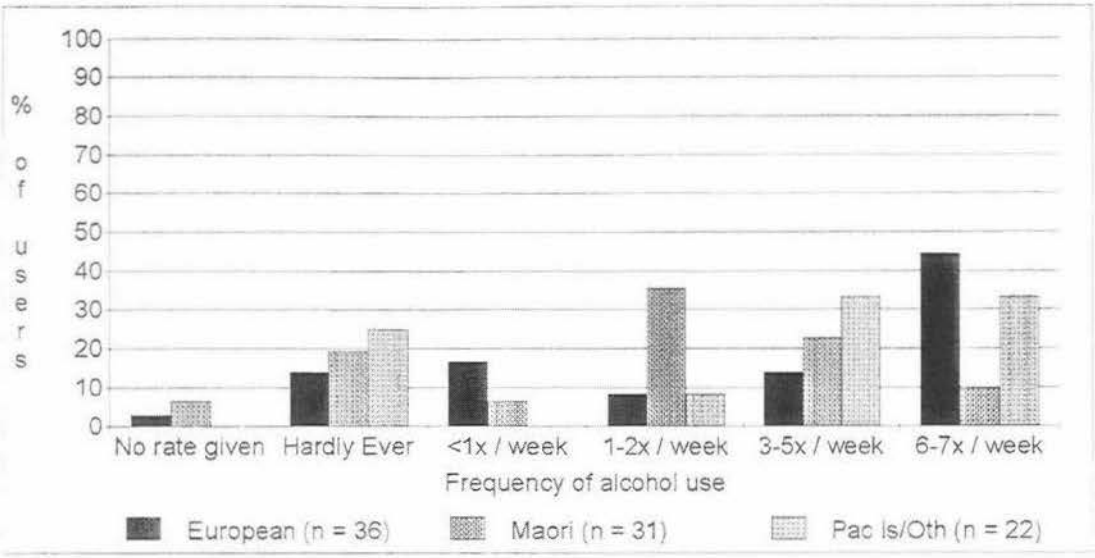

Figure 4: Alcohol Use Levels of Main Ethnic Groups

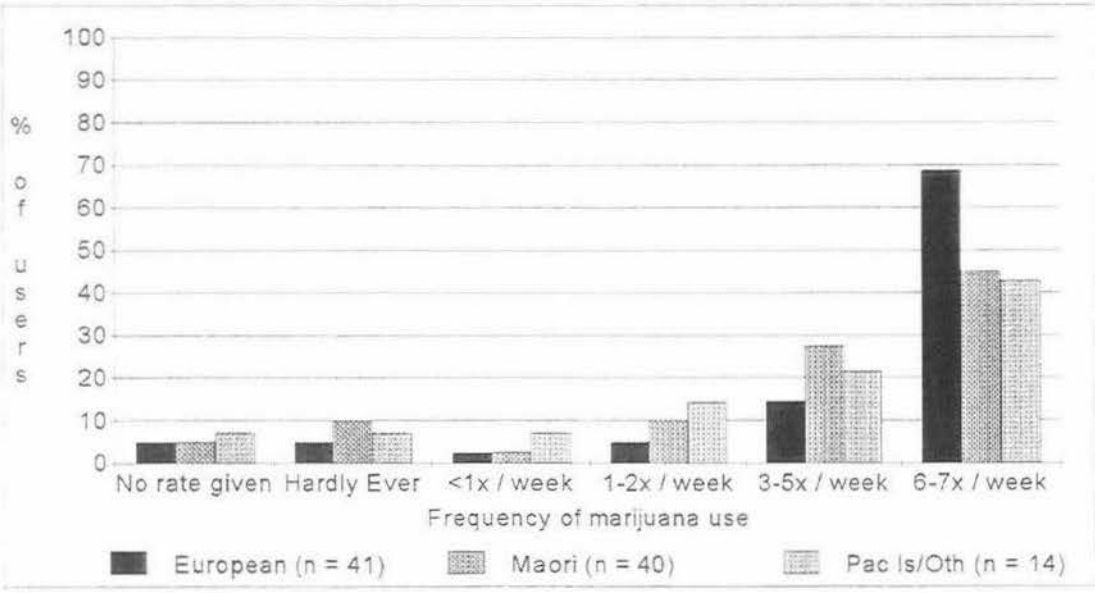

Figure 5: Marijuana Use Levels of Main Ethnic Groups

Ethnicity was not related to the use of Pills in the month before the offence; just under 30% of European and Maori had used pills, while only 12.5% of the 'Pacific Island/Other' group had done so.

Ethnicity was related to opiate use in the month before the offence: Europeans were more likely to have used opiates in the month before the offence (x^2 (2, N = 132) = 9.40, p < .01). Just under 50% of Europeans had used opiates, while only 25% of Maori had done so, and only 18% of the Pacific Island /'Other' group.

Miscellaneous drug use was not related to ethnicity; however one specific drug in this group was: amphetamines were more likely to be used by Europeans (26% of whom used amphetamines in the month before the offence, while only 6% of Maori respondents did so) (x^2 (2, N = 132) =10.66, p <.01), The relationship between hallucinogen use and ehtnicity was non-significant, although Europeans were once again more likely to have used (45% did so). The relationship between cocaine use and ethnicity followed a similar pattern. Overall, 50% of Europeans used miscellaneous drugs, while only 35% of Maori did.

(3) Employment

50.4% of those who responded to this question were unemployed at the time of the offence that led to their present imprisonment. Only 32.1% were employed (the remaining 17.6% were either on benefits other than the Unemployment Benefit, or were students). According to the 1993 Census of Prison Inmates (Southey, Spier, & Edgar, 1995), 42.4% of male inmates were unemployed, 21.7% were employed full-time, and 9.2% were employed part-time (although the occupation of 25.7% was "unknown").

In terms of employment type, none of the respondents reported a professional occupation. Most (59.6% of those in employment) belonged to the 'unskilled' category (e.g., labourer, factory worker). The remaining 40.5% came under the 'skilled' label (e.g., mechanic, farmer, carpenter, chef) (Figure 6).

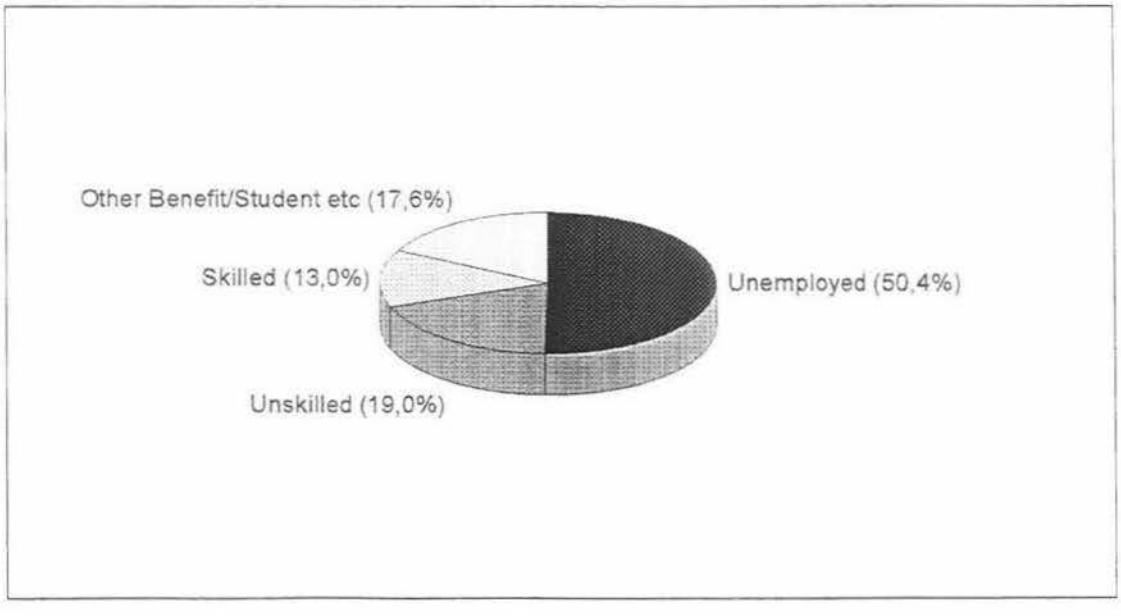

Figure 6: Employment Status of Respondents (N = 131)

Offenders' employment was not related to their offence type, whether they used drugs in the 12 hours prior to offending or, if they did use a drug in that time, whether they believed they were 'under the influence' at the time of offending.

Employment was related to the number of times offenders had been to prison, with unemployed respondents having been imprisoned more often than those who had been employed (x^2 (4, N = 121) =10.55, p <.05). Of the unemployed respondents, over 63% were in prison for at least their second time. By contrast, 66% of the employed respondents were experiencing their first prison sentence (Table 7).

Table 7: Employment Status by Number of Times in Prison

	Number of Times in Prison			
Employment	1 time	2-4 times	5+ times	*Total*
Employed	27	10	4	41
Unemployed	23	26	12	61
Other	8	5	6	19
Total	58	41	22	121

(4) Marital Status

Just over half (56.7%) of respondents stated that they were single.

Marital status was not significantly related to who was with the offender when he took drugs prior to offending or when he committed the offence. It was also unrelated to whether anybody tried to talk the offender out of committing the offence (although married /de facto respondents were more likely to report that somebody had tried to talk them out of offending, while single respondents were more likely to say that this had not occurred).

Marital status was unrelated to offence type, reason for offending, drug use prior to offending, reason for drug use, or number of times in prison.

(5) Household

At the time of their offence, 21.2% of respondents were living alone. The same proportion (21.2%) were flatting (living with other adults) with no partner or children. Twenty seven percent were living with their children, mostly with their partner also (5.1% were living with children but no partner). Nearly 20% were living with their partner only.

According to the 1993 Census of Prison Inmates (Southey, Spier, & Edgar, 1995), only 9.1% of inmates were living alone, and only 8% were living with their partner only. Twenty four percent were living with their children and partner (21% were "unknown").

The living arrangements of respondents were not significantly related to whether drugs were used prior to the offence, who was with them if they used drugs prior to offending, or the type of offence committed.

(6) Education

54.4% of inmates did not reach fifth form. The highest year of schooling reported by most inmates was Form five (27.9%), followed by Form four (25.7%), and 18.4% only reached Form three. Approximately 10% never attended secondary school. Sixth form was reached by 10.3%, seventh form by only 2.2%. University or polytechnic was attended by 5.2% of the inmates (Figure 7).

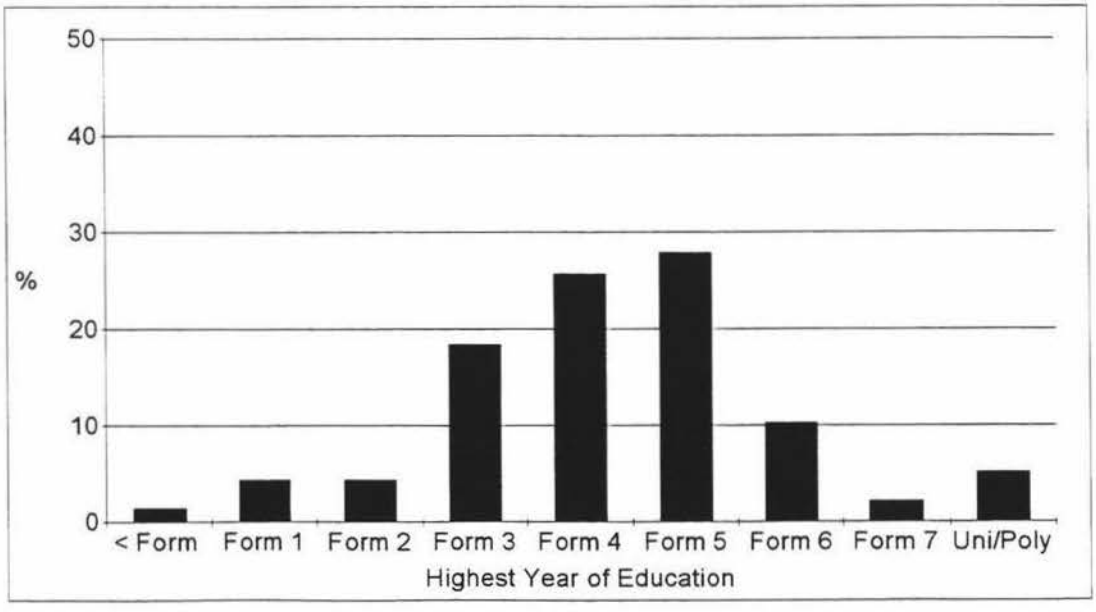

Figure 7: Highest Year of Education of Respondents (N = 136)

The 1993 Census of Prison Inmates (Southey, Spier & Edgar, 1995) found that 40.9% of male inmates had left school before fifth form, and 15.6% left school in fifth form with no qualifications. Only 10.7% obtained School Certificate (although 24.5% were "unknown").

Education was related to offence type (x^2 (6, N = 134) = 15.23, < .05), with those respondents who reached Form 5 to Form 7, more likely to have committed property or person offences, and those who attended a tertiary institution, more likely to have committed drug offences (57% of these respondents were in prison for a drug offence). Education was unrelated to number of times in prison.

Education was not related to whether drugs were used prior to offending, or whether respondents believed they were influenced by drugs at the time of offence, but when drugs were used, it was related to the main type of drug used (x^2 (10, N = 64) = 19.37, < .05). Those respondents whose highest year of education was Form 4 or below, were slightly more likely to have used marijuana as the pre-offence drugs, and less likely to have used alcohol or opiates, while those who reached Form 5 to Form 7 were slightly more likely to have used alcohol or opiates prior to the offence. Education was unrelated to the reason for drug use.

Education was related to the main reason given for offending (x^2 (20, N = 111) = 35.46, < .05). Those whose highest year of education was Form 4 or below, were more likely to indicate "money for drugs", while those who reached Form 5 to Form 7 were more likely to indicatet "money for other things", "anger/revenge", or "impulse". They were less likely than expected to indicate peer pressure, or "money for drugs".

(7) Main Offence

The majority of respondents (67.6%) were in prison for committing an offence against a person (violent offending). Of these offences, 26% were assault offences, 29.3% were robbery offences, 30.4% were sex offences or child abuse, and 14.1% were manslaughter or murder.

Property offences were committed by 17.6% of respondents. Of these, 70.8% had been convicted for burglary/theft/receiving stolen goods; 12.5% for fraud, and 16.7% for arson.

Drug offences (supply, cultivation, possession, etc) were committed by 13.2% of respondents.

Other offences (traffic, drink driving, and all other offences) accounted for only 1.5% of respondents (Figures 8, 9).

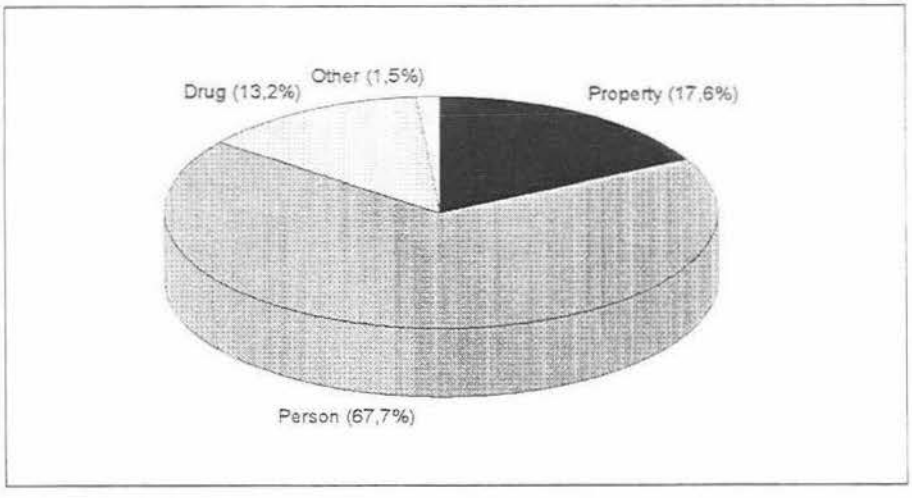

Figure 8: Main Offence Type of Respondents (N = 136)

These percentages differ slightly from those of the 1993 Census of Prison Inmates (Southey, Spier & Edgar, 1995), of which 63.9% of male inmates had committed a person offence, 18.9% a property offence, 6% a drug offence, and 11.1% a traffic or other offence. The differences may reflect the increasing trend of imprisoning violent offenders over other offenders, arising from the Criminal Justice Act 1985 (which "emphasised that imprisonment should not be considered for property offenders unless there were special circumstances which made imprisonment appropriate, while offenders who had been convicted for offences involving serious violence should be imprisoned unless there were special circumstances...Over the years, this provision has had quite an impact. With each census, the proportion of the prison population sentenced for property offending has fallen,

while the opposite has occurred for those sentenced for violent offending" (Minister of Justice, in Southey et al., 1995)).

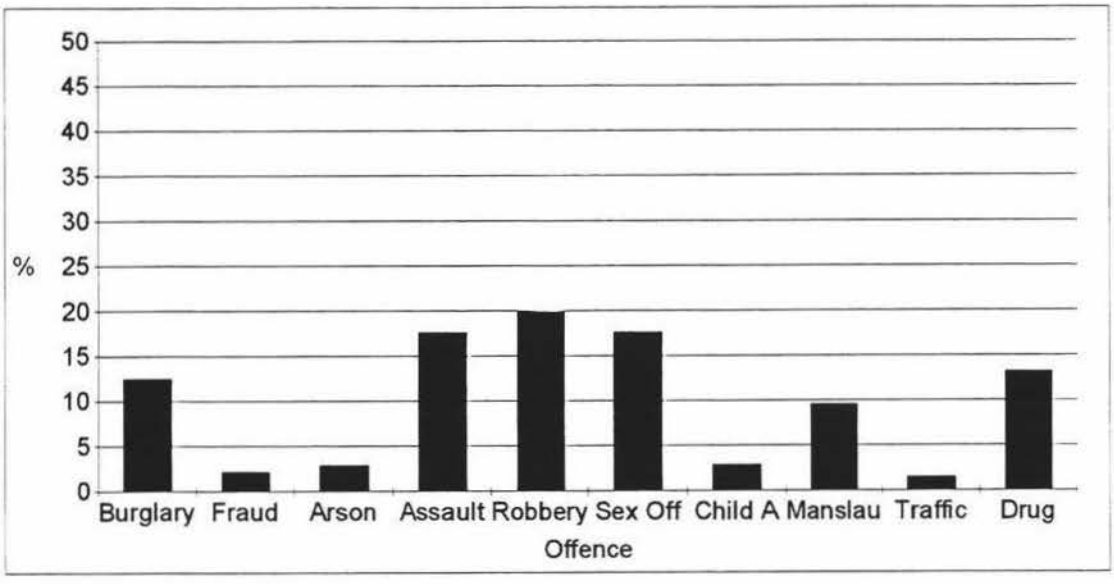

Figure 9: Specific Offence Type of Respondents (N = 136)

There was a significant relationship between offence type and the reason for the inmates' last imprisonment (for those who had been imprisoned more than once): offenders tended to continue with the same type of offence (x^2 (27, N = 80) =82.02, $p < .00001$).

Offence type was not related to ethnicity, employment, or age group, who was with the offender when he committed the offence, or whether anybody tried to talk the offender out of committing the offence or using a drug. There was no significant relationship between whether drugs were used in the 12 hours before the offence and the type of offence, or which drug was used before the offence. Seventy three percent of property offenders had used a drug, 64% of person offenders, 94% of drug offenders, and 100% of other offenders. Neither was there a relationship between the type of offence and whether those respondents who had used a drug believed they were 'under the influence' at the time of the offence, or whether they decided to commit the offence before or after the drug use.

There was, however, a significant relationship between offence type and whether those respondents who reported being 'under the influence' felt they would still have committed the offence if they had not been influenced by a drug. 'Person' offenders were more likely to believe that they would not have committed the offence had they not been under the influence of a drug, while Property and Drug offenders were less likely. Drug offenders were more likely to believe that they would still have committed the offence had they not been under the influence of a drug, while Person and Property offenders were less likely. A

small number of all offenders said 'Possibly' or 'Probably', with property offenders choosing 'Possibly' more than expected (x^2 (9, N = 71) =19.88, p <.05) (Table 8).

Table 8: Whether Drug-Using Respondents Would Still Have Offended Without Drug Use, by Offence Type

	Offence Type				
Still Offended?	Person	Property	Drug	Other	*Total*
No	16	2	1	0	19
Possibly	7	6	3	0	16
Probably	2	1	0	1	4
Yes	16	5	10	1	32
Total	41	14	14	2	71

Offence type was not related to whether alcohol, marijuana, narcotics, or pills were used in the month before the offence. It was, however, related to whether miscellaneous drugs (hallucinogens/cocaine/amphetamines) were used, with property offenders more likely to have used these drugs than expected, while person offenders were less likely (x^2 (3, N = 136) =11.90, p < .01). Fifty percent of property offenders used miscellaneous drugs in the month before offending; 78% of drug offenders did so, and only 35% of person offenders did so. Looking at the specific drug types in this group, it emerges that Amphetamines were used more by property and drug offenders than person offenders (x^2 (3, N = 136) = 8.22, p < .05); as were Hallucinogens (x^2 (3, N = 136) = 13.45, p < .005). Cocaine was more likely to be used by drug offenders (x^2 (3, N = 136) = 9.06, p < .05).

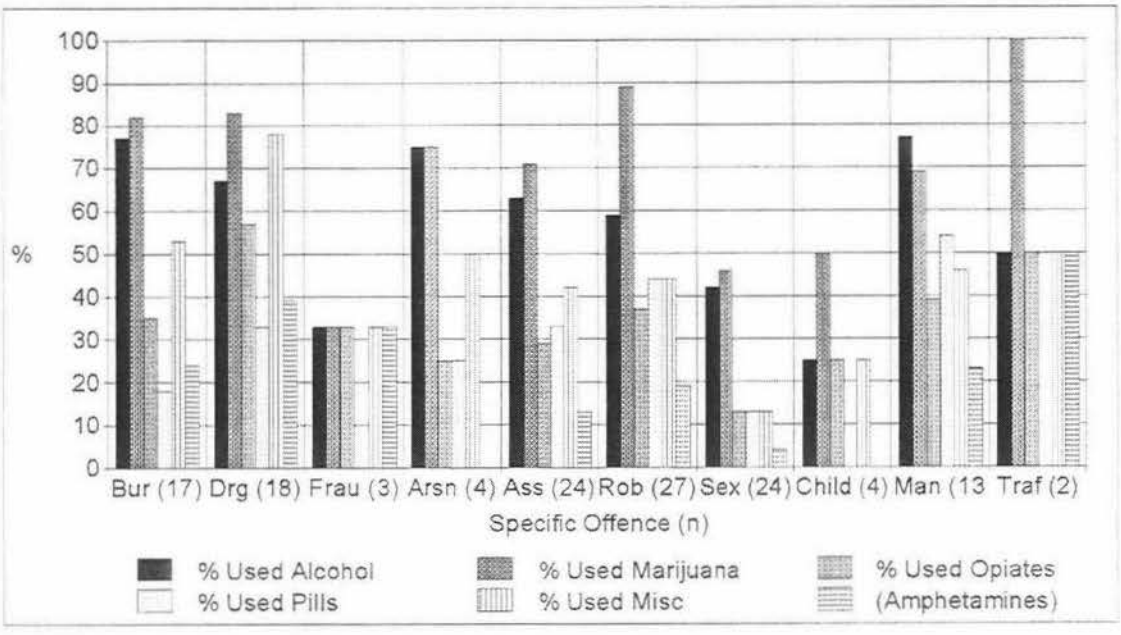

Figure 10: Percentages of Offenders Using Drugs in Month Before Offence

Fewer of the person offenders had used alcohol, marijuana, opiates, or miscellaneous drugs in the month before the offence, than had property of drug offenders (Figure 11).

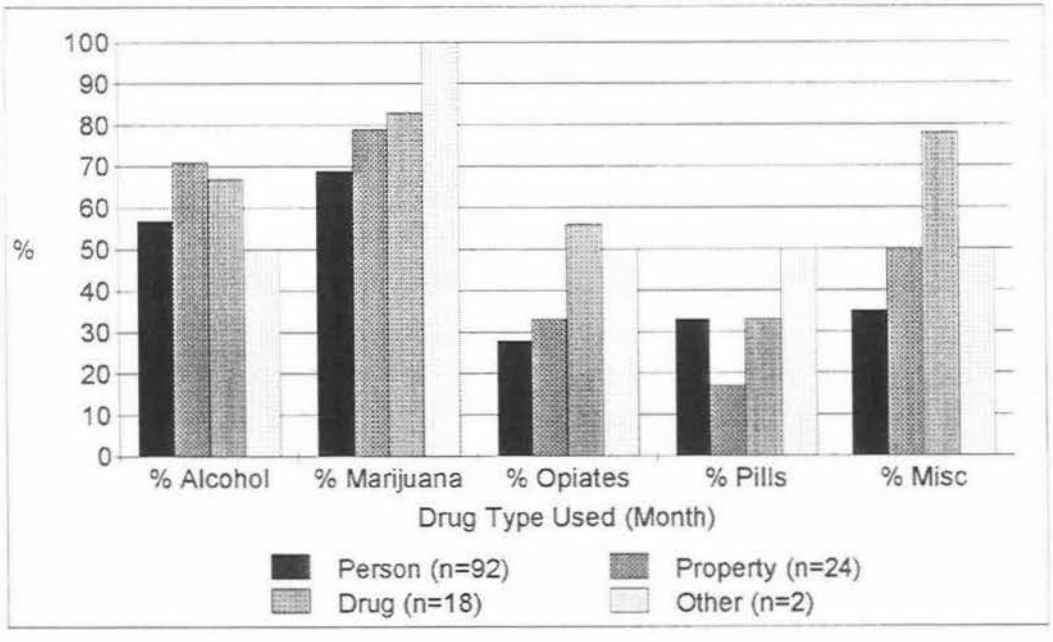

Figure 11: Percentages of Main Offender Types Using Drugs in Month Before Offence

Of the 15 respondents (11% of the total sample) who did not report using any drug (including alcohol) in the month before their offence, most (eight) were in prison for sex offences, and another two (13%) for child abuse/incest (N.B. some offenders convicted of

child sex offences will probably have indicated "sex offences", as this seems less shameful to many inmates). One respondent in this non-using group was in prison for robbery, one for a drug offence (!), two for fraud, and one did not state his offence.

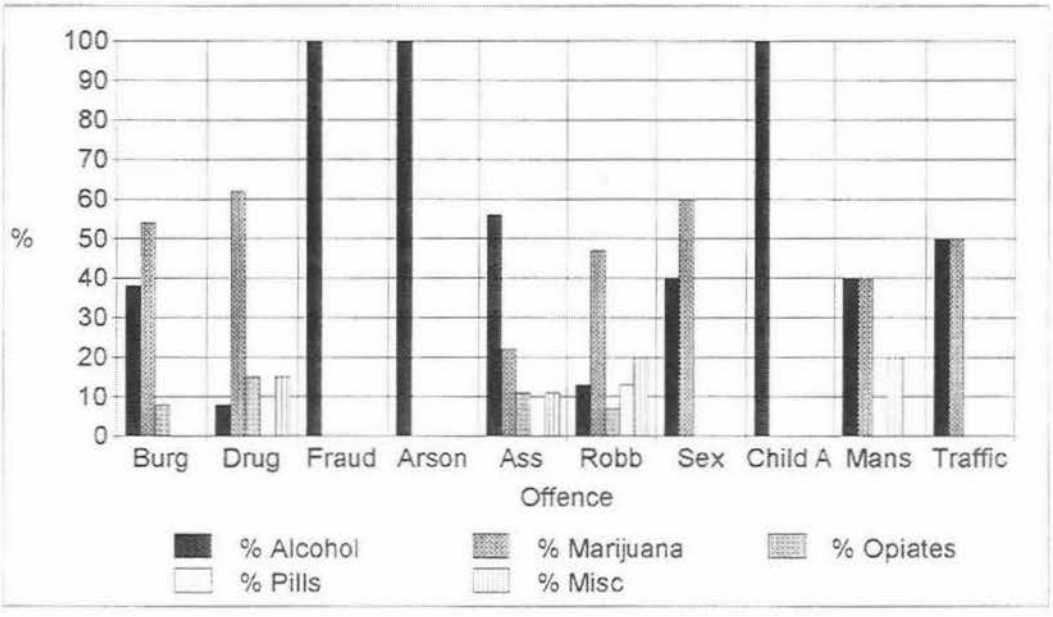

Figure 12: Main Drug Used by those Offenders Who Used Drugs Prior to Offence (Specific Offence Type)

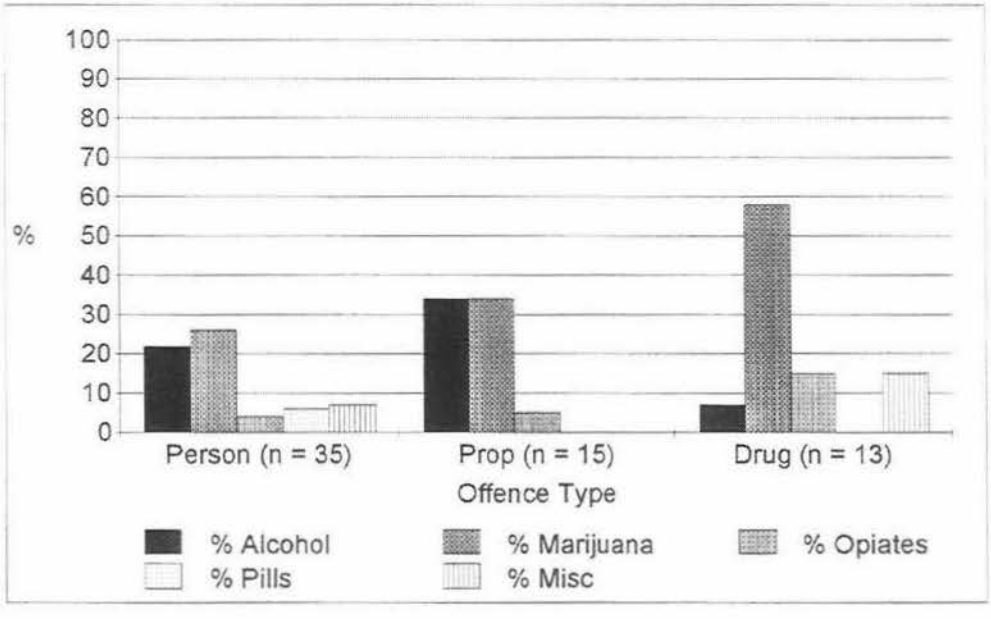

Figure 13: Main Drug Used by those Offenders Who Used Drugs Before Offence (General Offence Type)

The relationship between offence type and main drug used before offending, was nonsignificant.

Of the person offenders, only 28% had used alcohol before the offence (as one of up to three drugs reported), while 44% of property offenders had done so. There were less differences between the two offence types for use of marijuana and opiates, but a larger percentage of person offenders used pills than did the property offenders (Table 9).

Table 9: Offence Type by Drugs Used (up to 3 reported) Prior to Offence

	Drug Types Used (<12 hours before offence)									
Offence	% Alc		% Mar		% Opiates		% Pills		% Misc	
	Users	All	Users	All	Users	All	Users	All	Users	All
Person	42.9	27.6	57.1	36.7	11.4	7.8	28.6	18.4	17.1	11.0
Property	52.9	43.6	52.9	43.6	5.9	5.0	5.9	5.0	35.3	29.1
Drug	23.1	21.7	85.6	79.6	1.5	14.5	0.0	0.0	38.5	36.2
Other	50.0	50.0	50.0	50.0	0.0	0.0	0.0	0.0	50.0	100.0

(8) Weapon

Use of a weapon during the offence was reported by 40.9% of the inmates. Of these, 42.6% had used a gun, 37% had used a knife, and 20.3% had used something else as a weapon (e.g., a block of wood) (Figure 14).

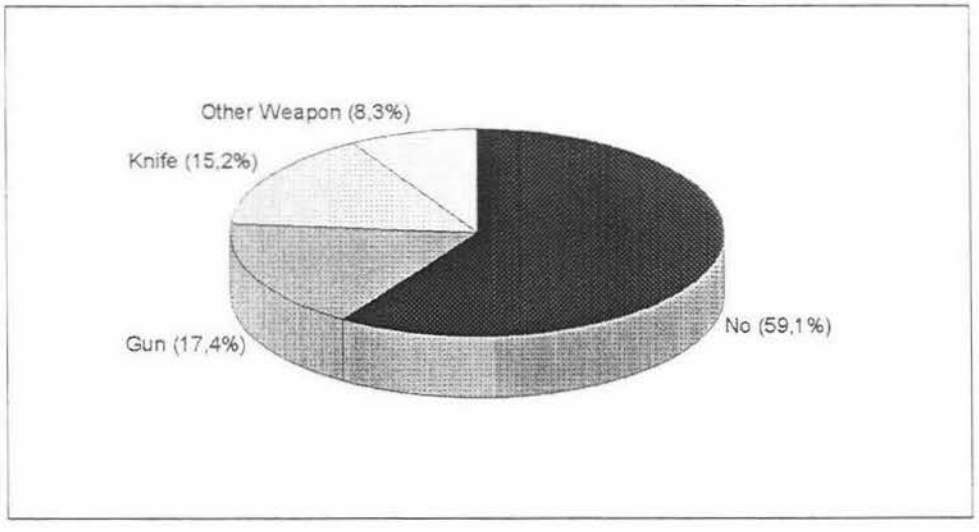

Figure 14: Use of Weapon (N = 132)

The type of offence was significantly related to whether a weapon was used, and the type of weapon that was used (x^2 (27, N = 132) = 95.94, p < .00001). Sex offenders and

burglars (as well as drug, fraud, traffic offenders etc) were less likely to have used a weapon.

Of assault offences, 25% involved the use of a knife, while 8.3% involved a gun, and 25% involved another type of weapon.

Of robberies, 11.5% involved the use of a knife, 69.2% involved a gun, and 7.7% involved another type of weapon.

Of manslaughters, 33.3% involved the use of a knife, 25% involved a gun, and 8.3% involved another type of weapon.

The use of a weapon was not related to the reason for offending, whether drugs were used in the 12 hours before the offence, or which type of drug was used (if any).

(9) Year of Offence

The majority (58.4%) of respondents had committed their offence in 1993 or 1994 (the year in which the present survey was conducted). Another 26.4% had offended in 1991 or 1992, while only 15.2% had offended in 1990 or earlier.

According to the 1993 Census of Prison Inmates, 42.3% of male inmates received sentences of less than two years (and very few inmates are required to serve the entire sentence).

(10) Accomplices

Over half (56.5%) of respondents reported that nobody else was with them when they committed the offence.

Of the 43.5% who did report that they were not alone, most (44%) reported one accomplice, 38.2% reported two to four, and 18.2% reported five or more.

(11) Number of Times in Prison

The largest number of respondents were in prison for the first time (47.7%), although 33.6% had been in prison between two and four times, and nearly 19% had accrued five or more prison stays (Figure 15).

According to the 1993 Census of Prison Inmates, 57.3% of male inmates had previously served a prison term, and 39.3% had been in prison at least twice previously. Just over 15% had served five or more previous terms.

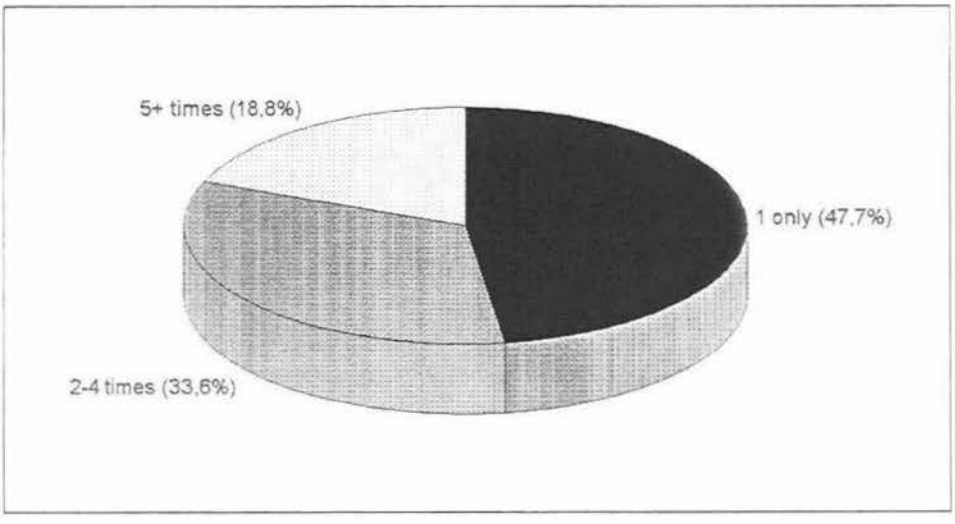

Figure 15: Number of Prison Terms Served (N = 128)

The number of prison terms served was not related to whether respondents used drugs in the 12 hours before offending, or if they did, whether they felt they were 'under the influence' of drugs when offending. It was also unrelated to whether those respondents who did believe they were affected by drugs, felt they would still have committed the offence otherwise. Neither was it related to whether respondents felt that being affected by drugs influenced their capture, or whether they decided to offend before or after taking drugs.

Number of prison terms served was related to whether or not the offender was employed, with unemployed offenders having been in prison on more occasions than employed offenders (x^2 (4, N = 121) = 10.55, $p < .05$) (see "Employment" p. 89).

Unsurprisingly, it was also related to the age of respondents (x^2 (10, N = 128) = 21.71, < .05).

Number of prison terms served was not related to whether alcohol was used or not in the month prior to the offence, but it was related to the level of use for those respondents who did use it (x^2 (10, N = 76) =18.43, $p < .05$). Those who were in prison for their first time tended to report less frequent use of alcohol than repeat offenders: only 14.7% of first-timers used alcohol every day, compared to 35.7% of those who had been imprisoned 2-4 times, and 50% of those imprisoned 5 or more times.

Whether marijuana was used or not in the month before the offence was related to number of prison terms served (x^2 (2, N = 129) =13.81, $p < .05$). Interestingly, in contrast to alcohol, more of the first-timers used marijuana in the month before their offence, but fewer of the repeat offenders used this drug (probably due to the younger mean age of the first-timers; younger respondents reported more marijuana use). When level of use was investigated in relation to number of times in prison, there was no significant relationship.

Whether opiates were used in the month before the offence was not related to number of times in prison; neither was miscellaneous drugs.

The use of pills in the month before the offence was related, with those who had been in prison more than once being more likely to have used pills in the month before their offence (x^2 (2, N = 128) = 8.69, $p < .05$). Of those who reported using pills in that time, 73.5% had been in prison more than once. The type of pills that were related, with first-timers being less likely to use them than repeat offenders, were minor tranquilisers; specifically Serepax (x^2 (2, N = 128) = 7.27, $p < .05$), Valium (x^2 (2, N = 128) = 6.51, $p < .05$), Rohypnol (x^2 (2, N = 128) = 7.08, $p < .05$), and Halcion (x^2 (2, N = 128) = 12.36, $p < .005$).

(12) Drugs Used in Month Prior To Offence

Only 15% of respondents reported no drug use in the month before the offence. The actual percentage is probably even lower, as some respondents may have used drugs but omitted this part of the survey questionnaire.

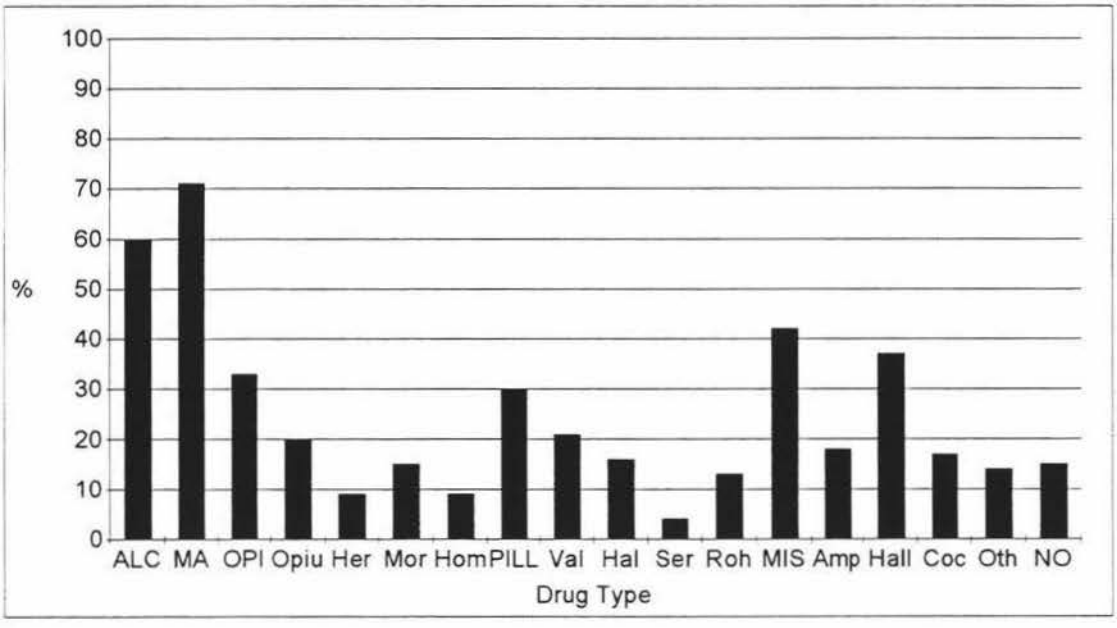

Figure 16: Drugs Used in Month Before Offence (N = 139)

The use of alcohol in the month before their offence was reported by 60% of respondents (Figure 16). Of those who did use alcohol, 30% used it every day; 22% used it 3-5 times per week; 21% used it once or twice per week; and 28% used it less than once per week) (Figure 17; Table 10).

Marijuana use was reported by 71.2% of respondents (55.6% of whom used it every day; 20.2% used it 3-5 times per week; and only 19.2% used it once or twice a week or fewer times). Of the total sample, 40% were using marijuana every day or nearly every day.

Opiate use was reported by 33.1% of respondents, with the most commonly used being opium (poppies) (20.1%). Morphine was used by 15.1% of respondents, and Temgesic was used by 11.5%.

Pills (minor and major tranquilisers) were used by 30.2% (25.2% minor; 5% major). The most popular minor tranquiliser was Valium (20.9% of all respondents), followed by Halcion (15.8%).

Miscellaneous drugs (Cocaine, Hallucinogens, Amphetamine, and various other drug types) were used by 42.4% of all respondents. Hallucinogens were used by 36.7% of respondents; most commonly LSD (28.8%) and magic mushrooms (18.7%). Amphetamine was used by 18%; the most popular type being Methamphetamine (crystal meth). Cocaine use was reported by 16.5% of respondents. Other miscellaneous drugs used included Ecstasy (9.4%), solvents (1.4%), and morning glory seeds (2.2%).

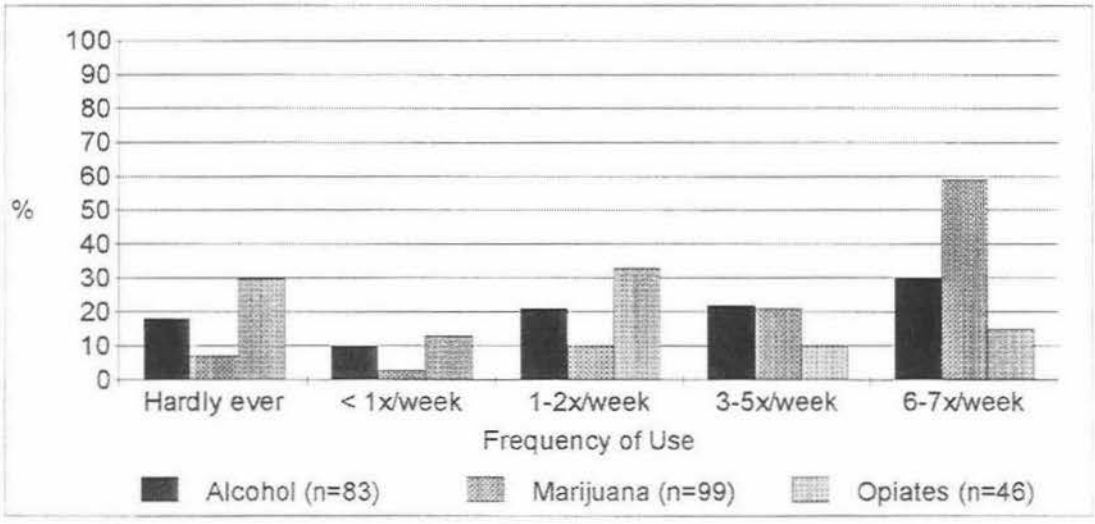

Figure 17: Frequency of Use of Alcohol, Marijuana, Opiates in Month Before Offence

Table 10: Frequency of Drug Use in Month Before Offence

	Frequency of Use (month before offence)				
Drug	Hardly ever	<1x/week	1-2x/week	3-5x/week	6-7x/week
Alcohol (n=83)	18%	10%	21%	22%	30%
Marijuana (n=99)	7%	3%	10%	21%	59%
Opiates (n=46)	30%	13%	33%	10%	15%
Pills (n=35)					
-minor Ts (n=35)	21%	17%	31%	10%	21%
-barbs (n=7)	0%	17%	50%	17%	17%
Misc (n=59)					
-amphet (n=25)	24%	29%	29%	10%	10%
-halluc (n=51)	30%	30%	27%	9%	5%
-cocaine (n=23)	42%	21%	16%	5%	16%

Of all respondents who used drugs in the month before the offence, 68% committed person offences, 16% committed property offences, and 14% commited drug offences, which are very similar percentages to those of the total respondent population. Non-users committed mainly sex offences (see Main Offence section).

Only 15 respondents (11% of the total sample) had used alcohol only in the month before the offence, 14 (93%) of whom had committed a violent offence. The alcohol-only group had the highest proportion of violent offences.

Twenty-two respondents (16%) had used marijuana only; 17 (77%) of whom had committed a violent offence. Seventeen (12%) had used alcohol and marijuana only, 11 (65%) of whom had committed a violent offence.

The largest number of respondents had used alcohol, marijuana and other drugs in the month prior to the offence (32%); over half (58%) of these offenders had committed a violent offence, but one-fifth (20%) had committed a property offence, and another fifth a drug offence.

In total, 45% of all respondents reported using alcohol plus at least one other drug in the month before their offence. Although the majority of these offenders had committed violent crimes (59%), 22% had committed property crimes, and 17% drug crimes. Fifty-two percent of all respondents reported using marijuana plus at least one other drug. Most of these offenders had committed violent crimes (62.5%), with 18% committing property crimes, and 18% drug crimes (Table 11).

Twenty-seven percent of all respondents had used drugs but no alcohol (including those who used marijuana only). Most of these offenders (74%) had committed violent offences. Sixteen percent of all respondents had used drugs but no marijuana (including those who used alcohol only): most of whom had committed violent offences (77%). Only a small number had used only drugs other than alcohol or marijuana (4%) (Table 11).

Table 11: Drug Combinations Used in Month Before Offence

			Offence Type							
Drug Combination	**% of Total**	**N**	**Person**		**Property**		**Drug**		**Other**	
Alcohol only	11	15	14	(93%)	1	(7%)	0	(0%)	0	(0%)
Marijuana only	16	22	17	(77%)	3	(14%)	1	(4.5%)	1	(4.5%)
Alc & Mar only	12	17	11	(65%)	4	(23.5%)	2	(12%)	0	(0%)
Alc, Mar, Others	32	45	26	(58%)	9	(20%)	9	(20%)	1	(2%)
Alc & Others (no Mar)	1	1	0	(0%)	1	(100%)	0	(0%)	0	(0%)
Mar & Others (no Alc)	7	10	8	(80%)	0	(0%)	2	(20%)	0	(0%)
Others only	4	6	3	(50%)	1	(17%)	2	(33%)	0	(0%)

(x^2 (9, $\underline{N}$ = 116) = 12.3, n.s. - with last 4 drug groups combined)

Table 12: Drug Combinations (collapsed) Used in Month Before Offence

			Offence Type							
Drug Combination	**% of Total**	**N**	**Person**		**Property**		**Drug**		**Other**	
Nothing	15	20	13	(65%)	5	(25%)	2	(10%)	0	(0%)
Alc, 1 or more others	45	63	37	(59%)	14	(22%)	11	(17.5%)	1	(1.5%)
Mar, 1 or more others	52	72	45	(62.5%)	13	(18%)	13	(18%)	1	(1.4%)
Non-alc drugs only	27	38	28	(74%)	4	(10.5%)	5	(13%)	1	(2.5%)
Non-mar drugs only	16	22	17	(77%)	3	(14%)	2	(9%)	0	(0%)
TOTAL USERS	85	116	79	(68%)	19	(16%)	16	(14%)	2	(2%)

Table 12 shows that those respondents who used drugs in the month before the offence, but not marijuana, committed the highest proportion of person offences. Those who used alcohol and other drugs, or marijuana and other drugs, committed the lowest proportion of person offences.

Table 13: Specific Drugs Used in Month Before Offence

DRUG	% of total	N	PERSON		PROP		DRUG		OTHER	
Alcohol	60	83	63%	52	21%	17	15%	12	1%	1
Marijuana	71	99	64%	63	19%	19	15%	15	2%	2
Opiates	33	46	58%	26	18%	8	22%	10	2%	1
Pills	30	42	71%	30	10%	4	14%	6	2%	1
-Minor Tranqs	25	34	71%	24	12%	4	15%	5	3%	1
-Barbiturates	5	7	86%	6	0%	0	14%	1	0%	0
Misc	42	59	54%	32	20%	12	24%	14	2%	1
-Amphetamines	18	25	48%	12	20%	5	28%	7	4%	1
-Hallucinogens	37	51	51%	26	22%	11	26%	13	2%	1
-Cocaine	17	23	52%	12	13%	3	30%	7	4%	1

Alcohol, marijuana, narcotics, and pills were not related to offence type, but Miscellaneous drugs were (see Main Offence section).

Alcohol use in the month before the offence was not related to whether a drug was used in the 12 hours before the offence, but the level of alcohol use was significant (x^2 (5, $N = 80$) $= 15.87$, $p < .01$). More of the frequent alcohol users reported using a drug prior to offending, than was statistically expected. 91.3% of every day users, and only 50% of those who used alcohol less than once a week, reported using a drug before the offence.

Marijuana use in the month before the offence was related to drug use before the offence: more marijuana users reported using a drug prior to offending than non-marijuana users (x^2 (1, $N = 127$) $= 32.07$, $p < .05$, phi $= .503$). However the level of marijuana use in that month was not significantly related to use of a drug prior to offending.

The use of opiates was significantly related to drug use before the offence, with a higher than expected proportion of those who used opiates in the month before the offence reporting using a drug prior to offending (x^2 (1, N = 127) = 13.34, p < .0005, phi = .324). However the level of opiate use was not related to whether drugs were used prior to offending.

The use of pills was related to use of drugs prior to offending, with pill users more likely to use drugs before the offence than were non-pill users (x^2 (1, N = 127) = 5.59, p < .05, phi = .210).

Similarly, those respondents who used miscellaneous drugs in the month before the offence were more likely to use a drug prior to offending (x^2 (1, N = 127) = 11.58, p < .001, phi=.302). Of the miscellaneous drugs, those that were related were amphetamines (x^2 (1, N = 127) = 6.96, p < .01, phi = .234); hallucinogens (x^2 (1, N = 127) = 10.82, p < .001, phi=.292); and cocaine (x^2 (1, N = 127) = 4.12, p < .05, phi = .180).

Alcohol use in the month before the offence was not related to whether respondents thought that they had been dependent on a drug.

Whether marijuana was used or not in the month was significantly related to belief in dependency, with more of those who had been using marijuana reporting a drug dependency than was statistically expected; however the largest number of respondents were those who used marijuana but did not believe themselves to have been dependent on a drug (53 respondents) (x^2 (1, N = 124) = 3.92, p < .05, phi=.178). The level of marijuana use was not related to reported dependency.

Opiate use in the month was related to respondents reporting dependency on a drug, with substantially more opiate users reporting dependency (x^2 (1, N = 124) = 25.36, p < .00001, phi = .452).

Similarly, pill users reported dependency more (x^2 (1, N = 124) = 18.33, p < .00001, phi = .384); as did users of miscellaneous drugs (x^2 (1, N = 124) = 8.62, p < .005, phi = .264). The specific drugs in the miscellaneous group which were related to dependency on a drug were amphetamines (x^2 (1, N = 124) = 14.63, p < .0001, phi = .343) and hallucinogens (x^2 (1, N = 124) = 7.03, p < .01, phi = .238).

The use of alcohol or marijuana, and the level of use of these drugs, in the month before the offence was not related to the type of drug used in the 12 hours before offending (for those respondents who did use a drug in that time). Neither was the use of opiates related; however the use of pills in the month before the offence was significantly related to which drug (if one was used) was used before the offence: pill users were more likely to use pills, opiates, or miscellaneous drugs, and less likely to use marijuana or alcohol. Conversely, non-pill users used marijuana and alcohol more (x^2 (4, N = 65) = 9.83, $p < .05$). Similarly, miscellaneous drug users, specifically amphetamine users (in the month before the offence) used miscellaneous drugs, narcotics and pills prior to offending. Those who did not use miscellaneous drugs used alcohol and marijuana more than expected (x^2 (4, N = 65) = 13.60, $p < .01$).

The use of alcohol, marijuana, or pills in the month before the offence was unrelated to whether the offender reported deciding to commit the offence before or after taking drugs (for those respondents who did report using a drug before the offence). However those who reported using opiates in that month were more likely to report deciding to offend before taking a drug, while those who did not use opiates were more likely to decide to offend after taking drugs (x^2 (1, N = 75) = 4.84, $p < .05$, phi = .254). Those respondents who reported using miscellaneous drugs in the month before the offence were also more likely than expected to decide to offend before using drugs (x^2 (1, N = 75) = 6.27, $p < .05$, phi = .289). Hallucinogens were the main type of drug involved (x^2 (1, N = 75) = 5.87, $p < .05$, phi = .280).

There was a significant relationship between whether or not alcohol was used in the month before the offence and whether the offender believed that being affected by drugs influenced his capture: those who did use alcohol were more likely to believe this (x^2 (1, N = 116) = 8.64, $p < .05$, phi =.270). The level of alcohol use was not related.

There was no relationship between use of marijuana and this belief. However those who used opiates were more likely to believe that their drug use affected whether they were caught for their offence (x^2 (1, N = 116) = 7.02, $p < .01$, phi = .246). Pill users held a similar belief (x^2 (1, N = 116) = 4.71, $p < .05$, phi = .202), as did miscellaneous drugs users (x^2 (1, N = 116) =7.57, $p < .01$, phi = .256), particularly Hallucinogens (x^2 (1, N = 116) = 7.31, $p < .01$, phi = .251).

(13) Dependency

The majority (61.3%) of respondents believed that they had not been dependent on drugs. (N.B. The question asked respondents whether they had been dependent on any drug, not whether they were dependent at the time of their offence, or at the present time).

Of those who believed that they had been dependent, the most commonly named drug of dependency was marijuana (35.6% of those reporting dependency), followed by alcohol (28.9%); narcotics (13.3%) [opium 2.2%, morphine 4.4%, homebake 4.4%, pethidine 2.2%], miscellaneous drugs (13.3%)[amphetamines 2.2%, LSD 2.2%, cocaine 6.7%]; and pills (minor tranquilisers: Valium and Rohypnol) (8.9%) (Figure 18).

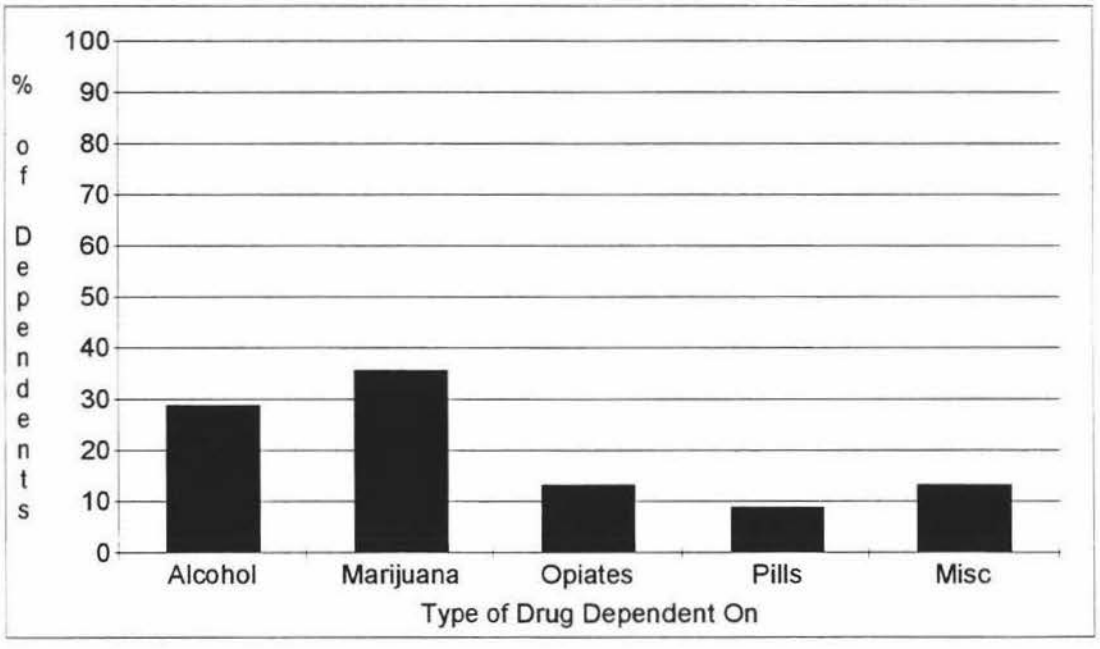

Figure 18: Reported Drugs of Dependency (n = 48)

There was a significant relationship between whether respondents reported having been dependent on a drug, and whether they reported using a drug in the 12 hours prior to their offence (with those who were dependent being more likely to have used a drug) (x^2 (1, N = 118) =13.71, $p < .0005$, phi = .341). Of those who reported dependency, 89% used a drug prior to offending. Fifty percent of those who used a drug prior to offending reported dependency.

For those respondents who had used a drug before their offence, there was a significant relationship between whether they believed they would have offended if they had not been affected by drugs: those who had not been dependent were more likely than expected to

say they would "possibly" or "probably" still have offended without having taken drugs; those who had been dependent were more likely to say "yes" or "no" (x^2 (3, N = 71) = 9.42, $p < .05$) (Table 14).

Table 14: Offence Decision by Drug Dependence

Would still have offended if not affected by drugs	Dependent? Yes	No	*Total*
No	13	5	18
Possibly	6	11	17
Probably	0	4	4
Yes	18	14	32
Total	37	34	71

Dependency was unrelated to whether those respondents who had used a drug in the 12 hours prior to offending, believed they were under the influence of that drug at the time of the offence. Dependency was also unrelated to the type of drug used prior to offending, or the type of offence committed.

The drug which respondents reported having been dependent on, was related to the type of drug they used before offending (x^2 (16, N = 32) = 51.45, $p < .00001$). Alcohol-dependent offenders used alcohol before their offence; marijuana-dependent offenders used marijuana before their offence (90%); similar but less dramatic patterns existed for opiates, pills, and miscellaneous drugs (Table 15).

Table 15: Drug of Dependence by Main Drug Used Before Offence

Main Drug (used before off)	Drug of Dependence: Alcohol	Marijuana	Opiates	Pills	Misc	*Total*
Alcohol	10	0	0	1	0	11
Marijuana	1	9	3	0	0	13
Opiates	0	1	2	0	0	3
Pills	0	0	1	1	1	3
Misc	0	0	0	1	1	2
Total	11	10	6	3	2	32

When the use of alcohol before the offence is compared to all other drugs as a group, there is a relationship between the use of these two groups and the type of drug the respondent reported a dependency on (x^2 (4, N = 32) = 25.02, $p < .00001$). Those who reported using alcohol before the offence, were much more likely than expected to report having had an alcohol dependency, and very unlikely to report a dependency on the other drug types.

Those who reported using a drug other than alcohol before the offence, were less likely to report a dependency on alcohol, and more likely to report a dependency on marijuana or opiates (48% of those who used drugs reported marijuana dependency; 29% reported opiate dependency).

The drug of addiction was related to the age of respondents, with 20 to 24 year-olds being more likely to cite marijuana, 25 to 29 year-olds citing alcohol and secondly opiates, and 30 to 39 year-olds more likely to cite alcohol and secondly pills (x^2 (12, N = 45) = 21.58, p < .05) (Table 16).

Table 16: Drug of Dependence by Age

	Drug of Dependence					
Age Group	Alcohol	Marijuana	Opiates	Pills	Misc	*Total*
16-19 yrs	0	0	1	0	1	2
20-24 yrs	2	10	1	2	2	17
25-29 yrs	6	4	4	0	3	17
30-39 yrs	5	2	0	2	0	9
Total	13	16	6	4	6	45

Reported drug of dependency was not related to the ethnic group of respondents; nor to their employment, the number of times they had been in prison, whether they had received drug abuse treatment, whether they used a drug in the 12 hours before offending, whether they decided to offend before or after taking drugs, their reason for taking the pre-crime drugs, or their offence type.

Reported drug of dependency was not related to the level of use of alcohol in the month before the offence, the level of use of marijuana in the month before the offence, before the offence, the use/non-use, and level of use of, narcotics in the month before the offence, or the use/non-use of miscellaneous drugs in the month before the offence. However it was related to the use/non-use of pills: those who did not use pills in the month before the offence were more likely to use alcohol or marijuana, and less likely to use the other drugs in the 12 hours before offending, and those who did use pills in that month were less likely than expected to use alcohol and marijuana, and more likely to use pills, opiates, and miscellaneous drugs (x^2 (4, N = 45) = 9.87 p < .05).

(14) Drug Abuse Treatment

The majority (74.8%) of those who answered this question (n = 131) reported that they had never been in a drug abuse treatment programme. of those who had been in a programme, only 16.7% had been in one in the month before their offence (4.2% of all respondents).

Drug treatment was unrelated to the type of drug used prior to offending (if a drug was used).

(15) Use Of a Drug in the 12 Hours Before the Offence

The majority (69.3%) of respondents reported having used a drug before their offence. Nearly all (94%) of drug offenders used, nearly three-quarters (72.7%) of property offenders, and nearly two-thirds (64.3%) of person offenders reported this.

(Although 88 respondents reported drug use, only 65 respondents specified which drug was used; this explains the drop in sample size for the following data.)

The most commonly used main pre-offence drug was marijuana (46.2% of those who specified a drug; 31.9% of the total sample) followed by alcohol (32.3% of those who specified a drug; 22.3% of the total sample), miscellaneous drugs (9.2%; 6.4%) [amphetamines, LSD, magic mushrooms, cocaine, and ecstasy], opiates (7.7%; 5.3%) [morphine, homebake, opium], and lastly pills (4.6%; 3.2%) [Valium and Rohypnol] (Figure 19).

Main pre-offence drug was not related to offence type; neither was pre-offence drug use which included up to 3 drugs.

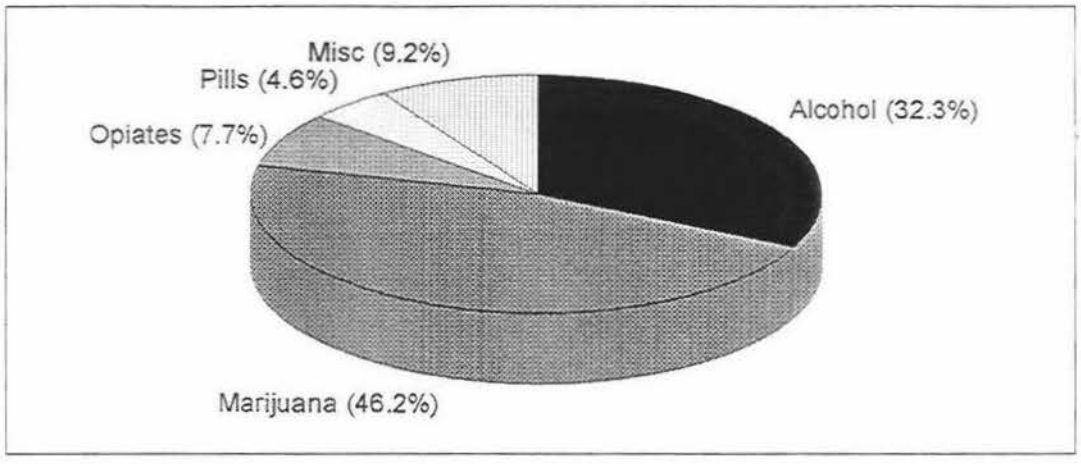

Figure 19: Main Drug Used Prior to Offence (n = 65)

If more than one drug was used, the most popular second drugs were marijuana (32.1% of those who used two or more drugs), miscellaneous drugs (28.6%), and pills (25%). The most popular third drugs were alcohol and miscellaneous drugs (33.3% each).

Overall, marijuana was used the most (41 respondents), followed by alcohol (28), miscellaneous drugs (18; mainly amphetamines, 8)), pills (11; mainly Valium, 5), and lastly opiates (7) (Figure 20).

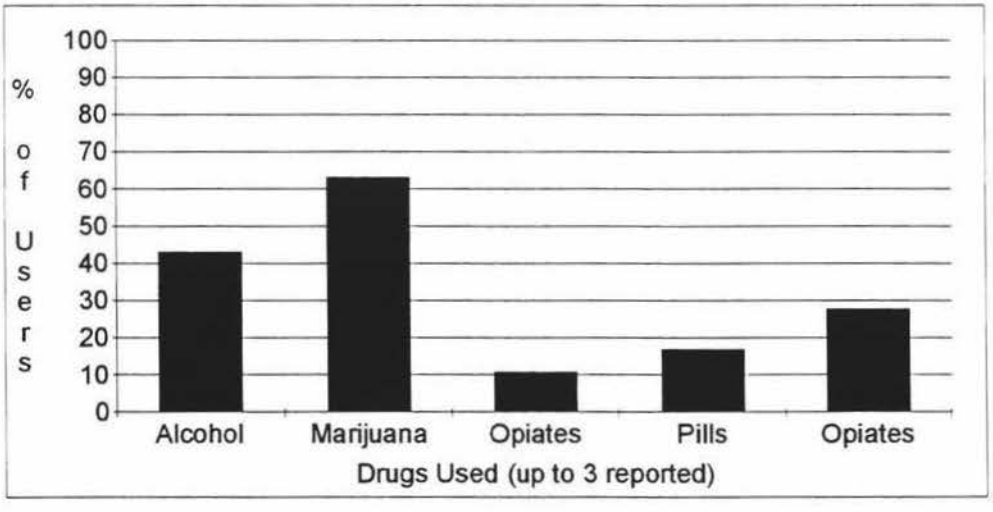

Figure 20: Drugs Used (up to 3 reported) Prior to Offence (n = 65)

Of the respondents who identified the drug(s) they used in the twelve hours before the offence, 13.4% (10.7% of the overall sample) had used **alcohol only**; 60% had committed a violent offence and 40% a property offence (Table 17).

Of those who had used **marijuana only** (19% of the overall sample; 28% of users), or **marijuana and alcohol** (10% of the overall sample; 14% of users), just over half had committed a violent offence (56%).

Of those who had used **alcohol, marijuana and other drugs** (7.5% of the overall sample), less than half had committed a violent offence (43%).

In total, 24% of the overall sample had used **alcohol plus at least one other drug** (34% of users). Of these offenders 46% had committed a violent crime; one-third had committed a property crime, and one-sixth a drug crime.

Marijuana plus at least one other drug (including alcohol) was used before the offence by 27% of the overall sample (38.5% of users). The proportions of these offenders who committed violent, property, and drug crimes were similar to those who had used alcohol plus at least one other drug. This is probably because alcohol and marijuana were used together for the majority of these cases (67% of those who had used marijuana plus at least one other drug, had used marijuana plus alcohol; 75% of those who had used alcohol plus at least one other drug, had used alcohol plus marijuana).

Over half (51.4%) of those who had used drugs in the 12 hours before offending (35.6% of the overall sample), had used **drugs but no alcohol** (including those who used marijuana only). A large proportion of these offenders (61%) had committed violent crimes, but 16% had committed property crimes, and 19% drug crimes. Thirty-six percent had used drugs but no marijuana (including alcohol only): of these, 64% had committed violent crimes.

Only 12.3% of users (8.5% of the overall sample) had used **drugs other than alcohol or marijuana**. Seventy-five percent of these offenders committed a violent crime (the highest proportion of any drug-using group), with the rest committing a drug crime (Table 17).

The relationship between the above drug-use groups and offence type, was non-significant.

Interestingly, for six of the seven drug-use groups, the proportions of violent offences were lower than the proportion of violent offences for the overall respondent sample.

Table 17: Drug Combinations Used Prior to Offence
(including up to 3 drugs listed by respondents)

	n	% Pop	% Users	Offence			
				Person	Prop	Drug	Other
Alcohol only	10	10.7	15.4	6	4	0	0
Marijuana only	18	19.2	27.7	10	2	5	1
Alc & Mar only	9	9.6	13.8	5	2	2	0
Alc, Mar, Others	7	7.5	10.8	3	3	1	0
Alc & Others (no Mar)	6	6.4	9.2	2	3	0	1
Mar & Others (no Alc)	7	7.5	10.8	3	3	1	0
Others only	8	8.5	12.3	6	0	2	0
TOTAL	65	69.3	100	35	17	11	2
Alc, Other(s)	24	23.8	34.3	11	8	4	1
Mar, Other(s)	27	26.7	38.6	13	8	5	1
Non-alc only	36	35.6	51.4	21	5	8	1
Non-mar only	25	24.7	35.7	15	7	2	1
Total Alcohol	34	33.7	48.6	17	12	4	1
Total Marijuana	45	44.6	64.3	23	10	10	2
Total Others	33	32.6	47	17	9	5	2
Total Non-alc	60	59.6	85.7	32	13	12	3

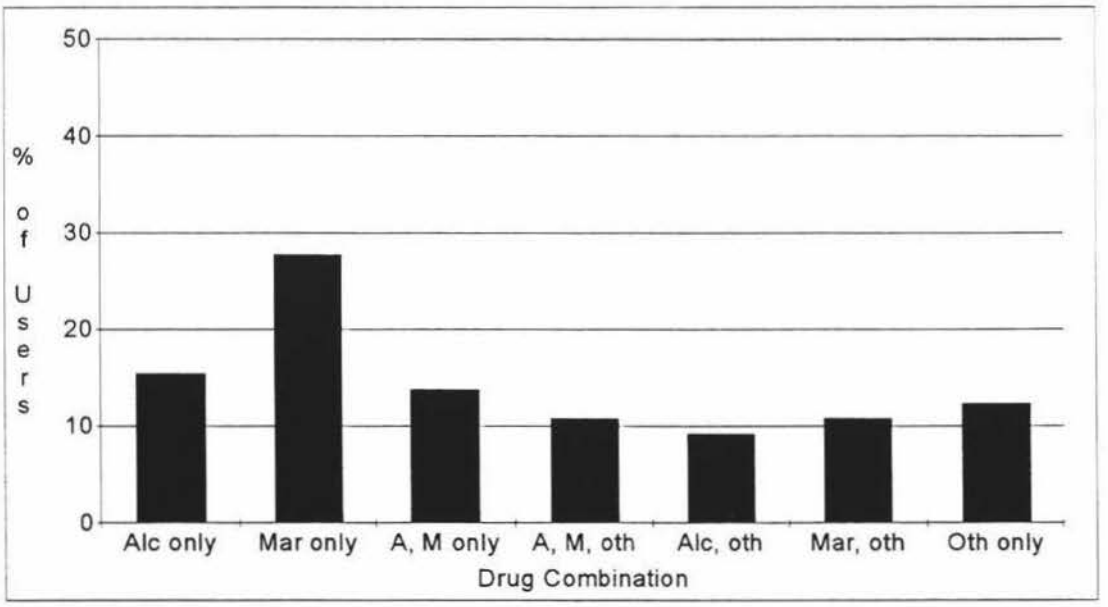

Figure 21: Drug Combinations Used Prior to Offence (n = 65)

Whether a drug was used prior to offending was unrelated to the type of offence committed.(for General Offence Type: x^2 (3, N = 125) = 6.99, n.s.; for Specific Offence: x^2 (9, N = 125) = 16.54, n.s.) However, when robbery was classed as a Property Offence, the relationship was significant, with fewer Person Offenders reporting having used drugs before offending, than expected (x^2 (3, N = 125) = 8.74, $p < .05$) (Table 18).

Table 18: Offence Type by Use of Drugs Prior to Offence
(Robbery classed as Property Offence)

	Used Drugs		
Offence Type	Yes	No	*Total*
Person	34	23	57
Property	36	13	49
Drug	16	1	17
Other	2	0	2
Total	88	37	125

Table 19: Offence Type by Used Drugs / Under Influence of Drugs at Time of Offence

	Used Drugs Before Off?				Under Influence?		Non-Alcohol Drugs	
Offence	Yes		No		% of Users	% of Pop	Used	Influence
PERSON	54	(64%)	30	(36%)	66	43	54	36
PROPERTY	16	(73%)	6	(27%)	84	61	56	47
DRUG	16	(94%)	1	(6%)	82	76	94	77
OTHER	2	(100%)	0	(0%)	50	50	100	50
PERS (excl. Rob)	34	(60%)	23	(40%)	39	23	30	12
Assault	14	(64%)	8	(36%)	56	35	28	16
Robbery	20	(74%)	7	(26%)	68	51	64	44
Sex Offence	12	(60%)	8	(40%)	69	42	44	30
Child Abuse	1	(33%)	2	(67%)	100	33	0	0
Manslaughter	7	(58%)	5	(42%)	75	44	35	26
Burglary	14	(88%)	2	(13%)	93	81	54	50
Fraud	1	(50%)	1	(50%)	100	50	0	0
Arson	1	(25%)	3	(75%)	33	8	0	0
Traffic	2	(100%)	0	(0%)	50	50	50	25

Whether a drug was used prior to offending was unrelated to the number of times respondents had been in prison.

It was, however, related to the reason given for offending: those who did use a drug before the offence tended to report slightly more "impulse" or "impulse because I was wasted/high" reasons, and also money-related reasons, than expected. Those who did not

use a drug reported "anger or revenge" slightly more than was statistically expected (x^2 (10, N = 98) =19.67, $p < .05$) (Table 20).

Table 20: Use of Drugs Prior to Offence by Reason for Offending

Reason for Offending	Used Drugs? Yes	No	Total
Money - drugs	8	2	10
Money - alc	1	1	2
Money - other	16	5	21
Money - mixed	7	0	7
Anger	19	9	28
Impulse	5	1	6
Impulse (high)	6	0	6
Peer	5	1	6
Other	5	7	12
Total	72	26	98

Robbery is an interesting offence; it appears to be the person offence be most associated with non-alcohol drugs. Table 19 indicates that when robbery is not classed as a person offence (i.e, it is classed as a property offence), the proportion of person offenders who used non-alcohol drugs before the offence, is reduced from 54% to 36%, although the proportion of person offenders who used drugs including alcohol stays almost the same. Table 21 shows that when robbery is classed as a property offence, rather than as a person offence, the proportion of person offences committed by non-alcohol drug users is reduced dramatically, while for alcohol users it is reduced less dramatically.

Table 21: Drugs Used (up to 3 reported) by Specific Offence Type

	% of Users Committing Offence Types									
	Alcohol		Marijuana		Opiates		Pills		Misc	
Offence	No.	%	No.	%	No.	%	No.	%	No.	%
Burglary	7	25.0	9	22.0	1	14.3	1	9.1	5	27.8
Drug	3	10.7	11	26.8	2	28.6	0	0.0	5	27.8
Assault	5	17.8	3	7.3	1	14.3	2	18.2	1	5.6
Robbery	3	10.7	11	26.8	2	28.6	4	36.4	4	22.2
Sex Offence	3	10.7	3	7.3	0	0.0	0	0.0	0	0.0
Child Abuse	1	3.6	1	2.4	1	14.3	0	0.0	0	0.0
Manslaughter	3	10.7	2	4.9	0	0.0	4	36.4	1	5.6
Fraud	1	3.6	0	0.0	0	0.0	0	0.0	1	5.6
Arson	1	3.6	0	0.0	0	0.0	0	0.0	0	0.0
Traffic	1	3.6	1	2.4	0	0.0	0	0.0	1	5.6
Total	28	100.0	41	100.0	7	100.0	11	100.0	18	100.0
PROPERTY	9	32.1	9	22.0	1	14.3	1	9.0	6	33.3
PERSON	15	53.6	20	48.7	4	57.1	10	90.9	6	33.3
PERSON*	12	42.9	9	22.0	2	28.6	6	54.5	2	11.1

*Excluding Robbery

The type of drug used prior to offending was unrelated to the offence type, although some patterns can be seen regarding the proportion of some drug users committing violent offences (Table 21).

Table 19 shows that the group of offenders who used neither drugs or alcohol before offending, had the highest proportion of **person (violent) offences** (81%). Table 22 shows that of those who used alcohol only, and those who used non-alcohol drugs only, 60% of each group committed violent offences, which was for both groups slightly more than statistically expected. The group with the lowest proportion of violent offences was those who used both alcohol and drugs.

Property offences were most frequent in the alcohol-only group. They were least frequent in the drugs-only group (Table 22), and the group who used neither drugs or alcohol (Table 19). One-third of those who used both alcohol and drugs had committed a property offence; more than statistically expected.

The drugs-only group had the highest proportion of **drug offences**, followed by those who had used both drugs and alcohol (Table 22).

Table 22: Drug Combination Used Prior to Offence by Offence Type

	Offence Type			
Drugs	Person	Property	Drug	*Total*
Alcohol only	6	4	0	10
Alcohol & Drugs	11	8	4	23
Drugs only	21	5	8	34
Total	38	17	12	67

(x^2 (4, N = 67) = 6.12, n.s.)

(N.B. The figures in Table 22 are not identical to those in Table 19, as not all offenders responded to both questions, i.e., (a) whether drugs were used before the offence, and (b) which drugs were used.

The type of drug used was unrelated to the ethnic group or age group of offender, reason for offending, reason for taking the drug(s), how long before the offence drugs were taken, whether they believed they were influenced by drugs at the time of the offence, whether they had companions while offending, whether they believed they had been drug dependent

or whether they had been in a drug treatment programme, whether a weapon was used, or whether they believed that drug use influenced their getting caught.

Type of drug use prior to offending was related to whether respondents reported deciding to offend before or after taking the drug(s): those who used alcohol were more likely to decide after (79% of alcohol users); all other drug users (marijuana, narcotic, pill, and miscellaneous drug users) decided before taking the drug(s) (between 60 and 100% of these drug users) (x^2 (4, N = 57) =14.92, $p < .005$) (Table 23).

Table 23: Time of Offence Decision by Main Drug Used Before Offence

Decided to	**Main Drug Used Before Offence**					
Offend	Alcohol	Marijuana	Opiates	Pills	Misc	*Total*
Before	4	15	5	2	4	30
After	15	10	0	0	2	27
Total	19	25	5	2	6	57*

(* The number of respondents is lower in the table above, owing to missing data in the 'Before/After' question).

The type of drug used prior to offending was not related to whether respondents believed they would still have offended if not under the influence of drugs; however when alcohol is compared to all other drugs as a group, there is a relationship. Those who used alcohol before the offence were more likely than expected to deny that they would still have offended if they had not used drugs, while those who used (other) drugs were more likely to concede that they would still have offended (x^2 (3, N = 57) = 8.31, $p < .05$) Table 24).

Table 24: Offence Decision by Main Drug Type Used Prior to Offence

	Still offended if not influenced by drugs?				
Drugs used	No	Possibly	Probably	Yes	*Total*
Alcohol	9	5	2	5	21
Non-Alc Drugs	5	8	2	21	36
Total	14	13	4	26	57

(15c) How Long Before The Offence Were The Drugs Taken?

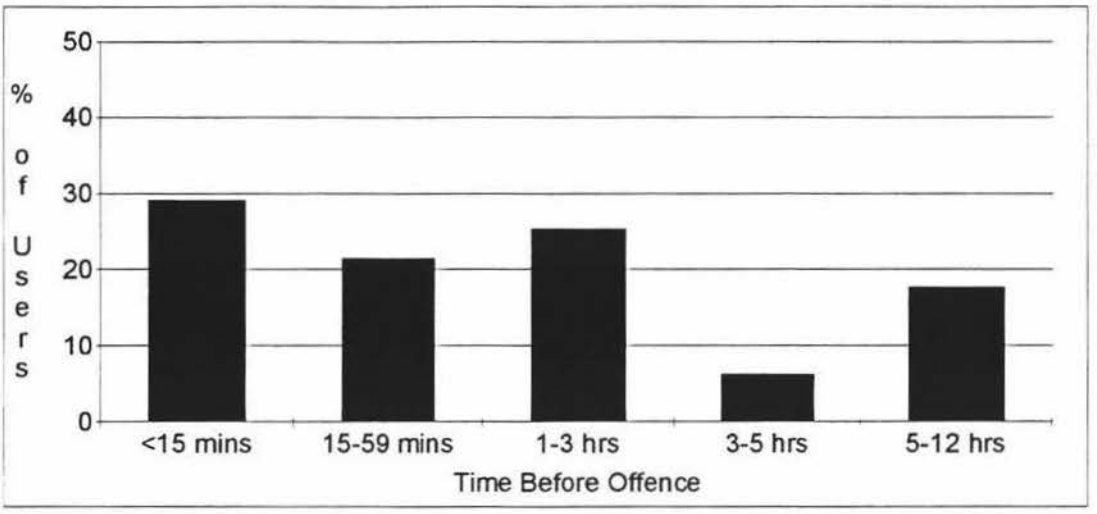

Figure 22: How Long Before Offence Were Drugs Taken? (n = 82)

A large proportion (29.1%) of those respondents who had used a drug before their offence used it fewer than fifteen minutes before their offence. A further 21.5% used the drug(s) between 15 minutes and one hour beforehand, and 25.3% used them between one and three hours beforehand. This means that 75.9% of inmates who had used a drug did so within three hours of the offence. The remaining 24% had used between 3 and 12 hours before (Figure 22).

Not surprisingly, there was a significant relationship between the length of time before the offence drugs were taken, and whether respondents believed they were under the influence of the drugs when they committed the offence. The greater the time between drug use and offending, the less likely respondents were to report being influenced by them at the time of the offence (x^2 (5, N = 79) = 19.39, p < .005) (Table 25).

Table 25: How Long Before Offence Drugs Were Taken, by Under Influence of Drugs at Time of Offence

Under	**How Long before Off Were Drugs Taken?**					
Influence?	<15 mins	15-60 mins	1-3 hrs	3-5 hrs	5-12 hrs	*Total*
Yes	21	17	14	2	7	61
No	2	0	6	3	7	18
Total	23	17	20	5	14	79

Of those who reported being influenced by drugs while offending, nearly 60% had used the drugs less than an hour beforehand. Of those who used drugs more than three hours before offending, only 14% believed they were influenced when they committed the offence.

The time the drugs were taken before the offence was unrelated to whether respondents believed they would still have committed the offence if they had not been influenced by drugs; whether they believed that being affected by drugs influenced getting caught; or whether they decided to commit the offence before or after taking the drugs. It was also unrelated to the type of drug used at that time, the reason given for drug use, or the type of offence committed.

(16) Under The Influence Of Drugs At Time Of Offence

Of those who reported using drugs in the 12 hours before the offence, **72.2%** (50% of the overall sample) believed they were under their influence during the offence. Of this 72.2%, a large proportion (43.8%) reported that they would definitely still have committed the offence if they had not been under the influence of drugs. A substantial proportion (27.4%) said they would not have offended if they had not been influenced by drugs (Figure 23). For the relation to offence types, see p. 93 (and Table 8).

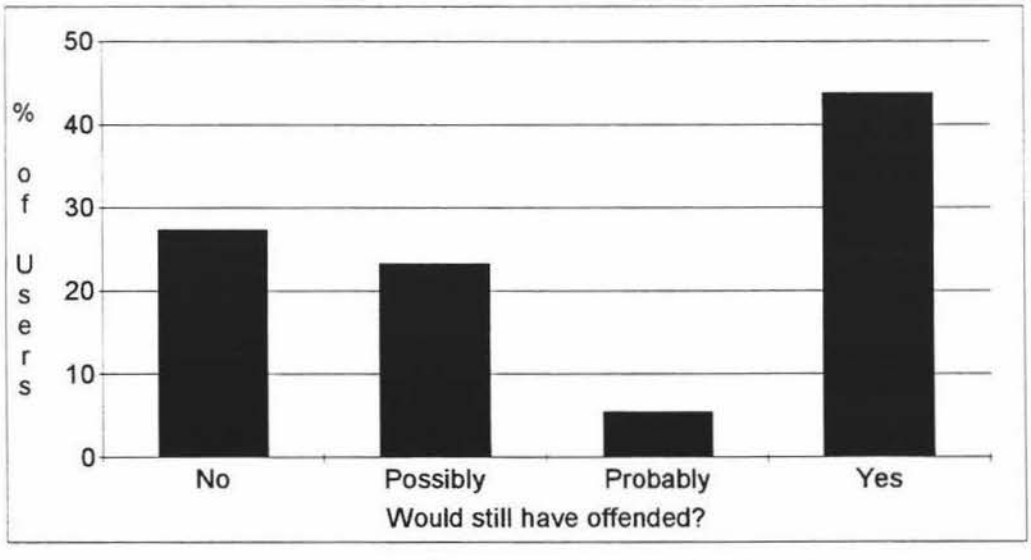

Figure 23: "Would You Still Have Offended if Not Under the Influence of Drugs?"
($n = 73$)

Those who reported being under the influence of drugs when offending were more likely than expected to report having decided to offend after taking the drugs. However a substantial proportion of those who were influenced by drugs still reported deciding beforehand (x^2 (1, $N = 75$) = 4.82, $p < .05$, phi = .253) (Table 26).

Table 26: Offence Decision by Under Influence of Drugs

	Under Influence at time of Off?		
Decided to Offend	Yes	No	*Total*
Before using drugs	25	11	36
After using drugs	35	4	39
Total	60	15	75

There was no relationship between whether respondents reported being influenced by drugs when offending, and the type of drug they had used (or the offence type - see "Main Offence" section, p. 92).

(17) Companions When Taking Drugs Before Offence

Most respondents reported being in the company of others when they took the drugs (86.2% of those who had taken a drug). Only 13.8% were alone (Figure 24).

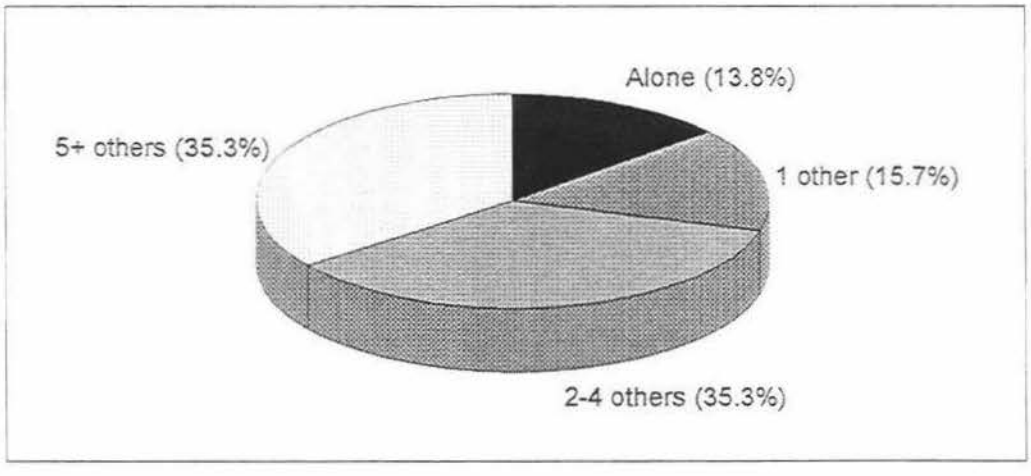

Figure 24: Companions When Taking Drugs Prior to Offence (n = 87)

Of those who were others at the time, 18.2% were with one person only; 41% were with 2 to 4 people, and 41% were with 5 or more people.

There was no relationship between who was with the offender, and whether anybody had tried to talk him out of taking the drugs, or whether anybody tried to talk him out of committing the offence.

There was no relationship between who was with the offender when taking the drugs before the offence, and the type of offence he committed, or the type of drug used.

(18) Whether Anybody Tried To Talk Offender Out of Taking The Drugs

Of those respondents who used a drug before their offence, most reported that nobody tried to discourage them from doing so (85%).

There was no relationship between this variable and who was with the offender when he took the drugs.

When alcohol (used before offence) is compared to the other drugs as a group, there is a relationship with whether anybody tried to talk offenders out of using the drugs: alcohol users were more likely to report no attempted discouragement, while users of other drugs were more likely than expected to report that somebody tried to discourage them (although the greater number of this group also reported no attempted discouragement) (x^2 (1, N = 65) = 4.35, $p < .05$, phi = .258).

(19) Whether Anybody Tried To Talk Offender Out Of Committing Offence

Of those respondents who used a drug before their offence, most reported that nobody tried to discourage them from committing the offence (85.4%).

This variable was not related to the type of offence committed.

(20) DecisionTo Offend Before/After Taking Drugs

Of the 69.3% of respondents who had used a drug in the 12 hours prior to offending, 52% reported that they decided to commit the offence after taking the drugs; 48% decided to offend before.

For those who reported taking a drug before offending, there was a non- significant relationship between whether the offender reported deciding to offend before or after taking the drugs, and the type of offence he committed (x^2 (4, N = 74) = 7.53, n.s.) (Table 27) or how long before the offence he took the drugs.

Table 27: Offence Decision by Offence Type

	Offence Type				
Decided to Offend	Person	Property	Drug	Other	*Total*
Before using drugs	15	2	1	1	36
After using drugs	26	8	3	1	38
Total	41	17	14	2	74

Whether he decided to offend before or after using the drugs was related to whether he believed he was influenced by drugs at the time of the offence (see "Under the influence...", p. 119).

Whether respondents reported deciding to offend before or after using drugs was not related to whether they believed that drugs influenced their capture; neither was it related to the number of times they had been in prison.

For those who reported having been dependent on a drug, there was a significant relationship between which drug, and whether they decided to offend before or after using drugs. All of those who reported a **dependence on opiates** decided to offend before using pre-offence drugs, while just over half of those reporting a **dependence on marijuana** did so. All of the **pill-dependents**, and almost all of **the alcohol-dependents** decided afterwards, while **'miscellaneous drug'-dependents** were equally divided (x^2 (4, N = 20) =12.77, $p < .05$) (Table 28).

Table 28: Offence Decision by Drug of Dependence

	Drug of Dependence					
Decided to Offend	Alcohol	Marijuana	Opiates	Pills	Misc	*Total*
Before using drugs	2	7	0	0	2	11
After using drugs	0	5	0	2	2	9
Total	2	12	0	2	4	20

(21) Main Reason For Using Drug(s) Before Offence

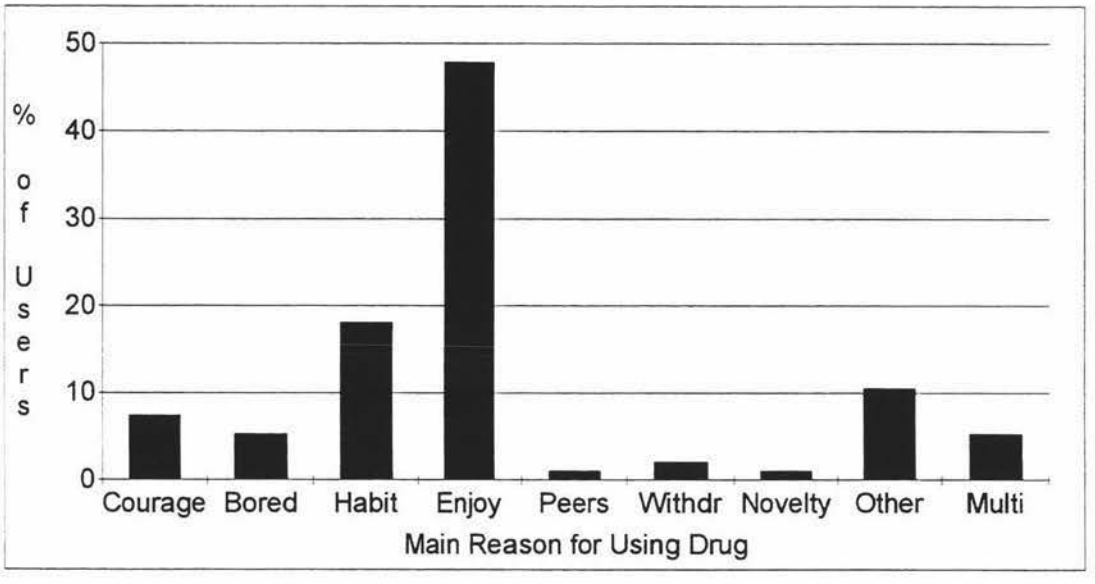

Figure 25: Main Reason for Taking Drugs Prior to Offence (n = 94)

The most common reason was Enjoyment (47.9% of those who had used a drug before offending), followed by Habit (18.1%). Other main reasons were "To give me courage or to calm my nervousness" (7.4%) and Boredom (5.3%). Very few respondents chose options such as peer pressure, drug withdrawal, or novelty (Figure 25).

The reason for taking drugs before offending was not related to the type of drug used.

The reason for taking drugs before offending was not related to the offence type; all offender types gave 'Enjoyment' more than any other reason for their drug-taking prior to offending (x^2 (27, N = 87) = 24.45, n.s.) (Figure 26).

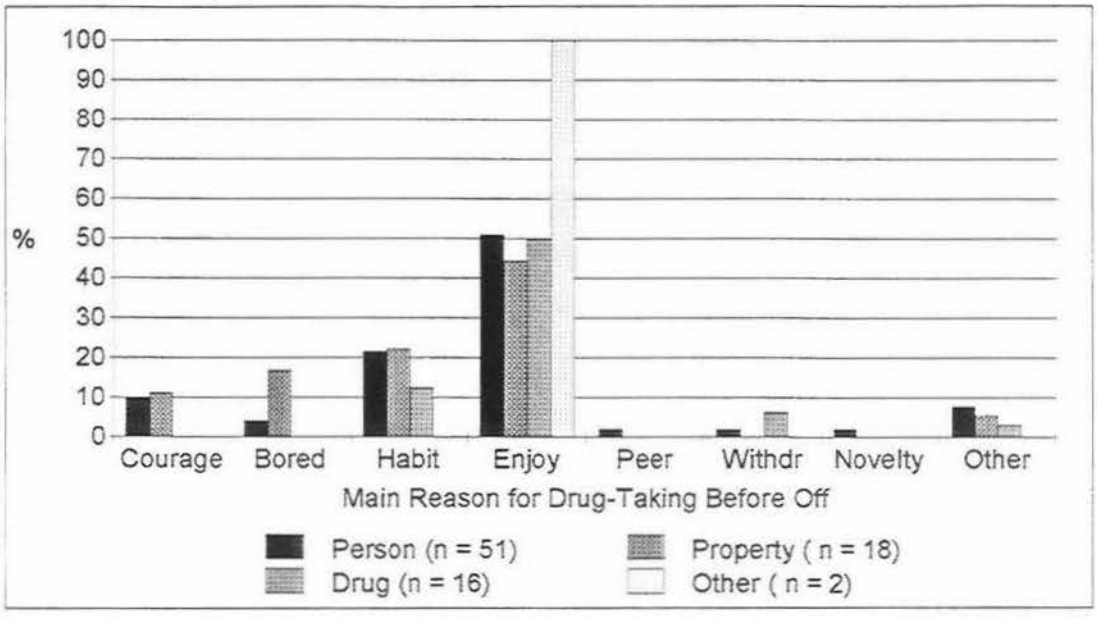

Figure 26: Main Reason for Using Drugs Prior to Offence, by Offence Type

The reason for taking drugs before offending was not significantly related to the use of any drug in the previous month, although opiate users said 'Habit' more than other users; and cocaine users said 'Enjoyment' more than other users (Figure 27).

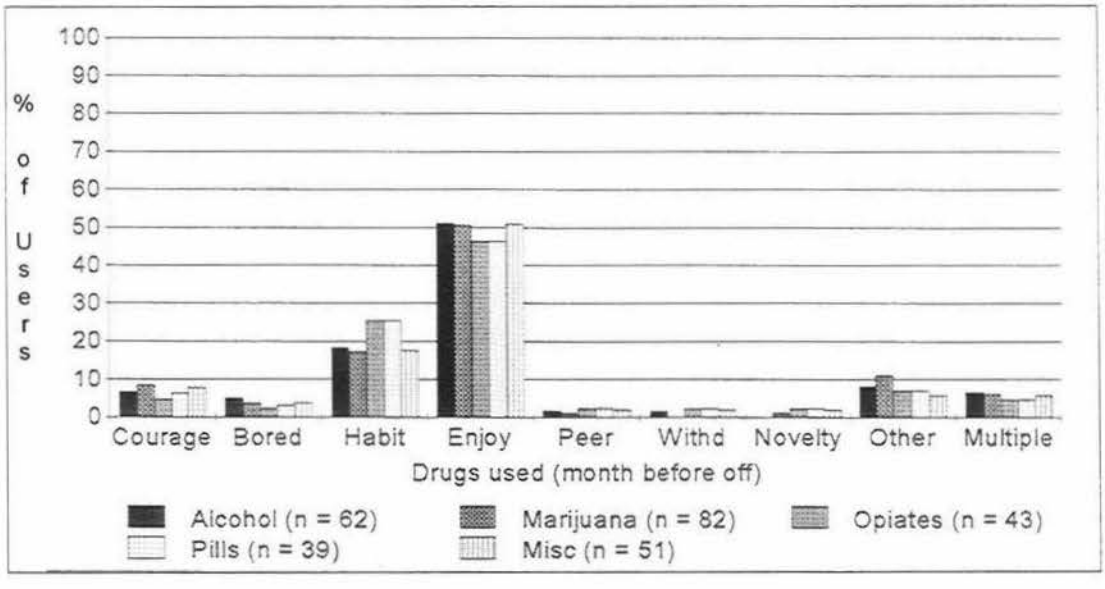

Figure 27: Main Reason for Taking Drugs Prior to Offence, by Drugs Used in Month Before Offence

(22) Drug(s) Used During Offence

While they were committing their offence, only 39.3% of all respondents reported using a drug.

The most common drugs used were marijuana (50% of those who had used drugs during the offence) and alcohol (25%). If more than one drug was used, the second drugs used were marijuana and miscellaneous drugs. No opiate use was reported.

(22c) Companions While Committing Offence

Of the respondents who answered this question, 56.5% said they had no accomplices. It is possible that the number of offenders who reported being accompanied while committing their offences might have been higher had they not experienced paranoia/concern about disclosing any evidence that may be potentially incriminating to others.

Of those who had an accomplice during the offence, 45% were with only one person; 40% were with 2 to 4 people, and only 7.5% were with 5 or more people.

(23) Drug(s) Used After Offence

Nearly half of the respondents (48%) reported having used a drug after their offence.

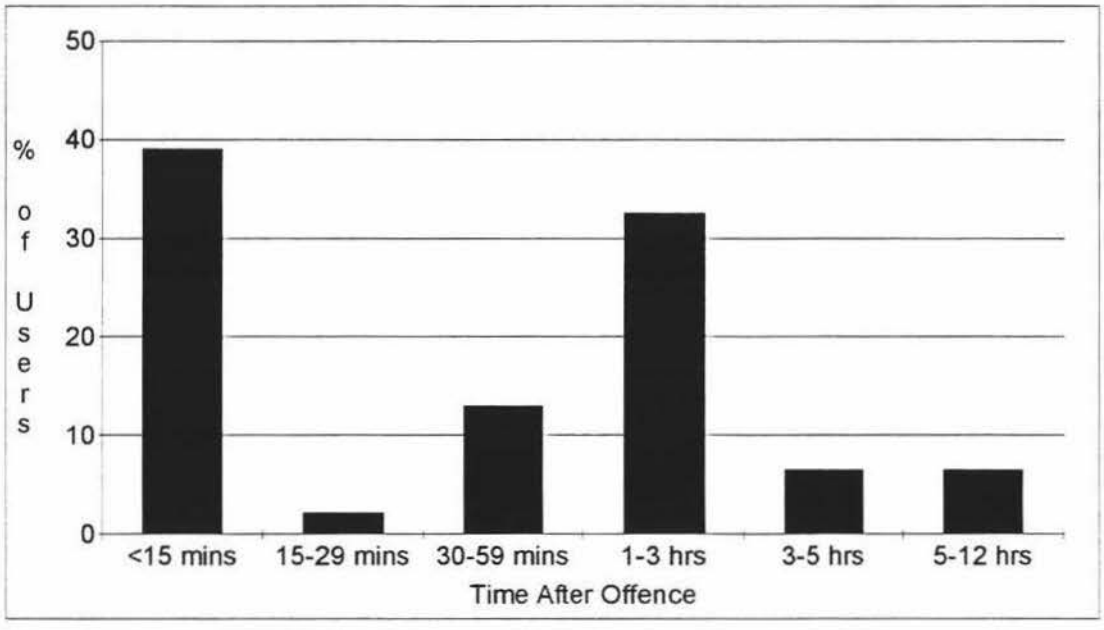

Figure 28: How Long After Offence Were Drugs Taken? (n = 46)

A substantial proportion (31%) of those respondents who had used drugs after offending, had done so within 15 minutes, and a further 38% did so within 3 hours.

Those who used alcohol before the offence were less likely than those who used other drugs before the offence, to use a drug after the offence (x^2 (1, N = 63) = 4.23, p <.05, phi = .259).

(23c) Companions When Using Drug(s) After Offence

One-fifth (21%) of respondents were alone when they used drugs after the offence; most were with friends (43.2%) or others/mixed (35.8%).

The number of companions was commonly one (28.1%), two (28.1%) or three (25%).

(24) Main Reason For Committing Offence

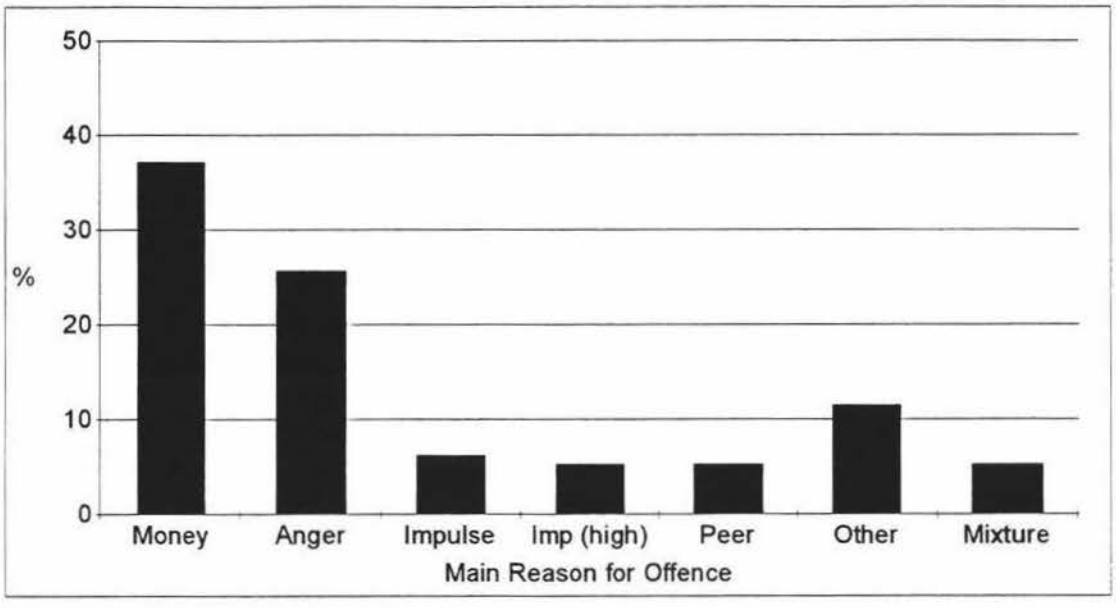

Figure 29: Main Reason for Offending (n = 113)

Apart from money, **anger** was the most common main reason for offending (25.7%). **Money** was a motive for a total of 37.2% of respondents: this was comprised of a desire for money for drugs (9.7%); money for alcohol (1.8%) money for other things (19.5%); and money for a mixture of these three (6.2%). "**Impulse**" was given as a reason by only 6.2% of respondents, and only a further 5.3% gave as their reason for offending "**Impulse because I was wasted or high**". **Peer pressure** was reported to be the main reason for offending by only 5.3% of respondents (Figure 29).

Table 29: Offence Type by Main Reason for Offending

	Main Reason for Offending										
Offence Type	$ drugs	$ alc	$ other	$ mixed	Ang/Rev	Impulse	Imp(high)	Peer	Other	Multiple	*Total*
Person	2	1	7	4	26	5	5	4	9	7	70
Property	5	1	7	2	3	2	0	0	1	1	22
Drug	3	0	8	1	0	0	1	2	1	1	17
Other	0	0	0	0	0	0	0	0	2	0	2
Total	10	2	22	7	29	7	6	6	13	9	111

The main reason for committing the offence was significantly related to the type of offence (x^2 (30, N = 111) = 55.58, $p < .005$; Table 29), and also specific offence; (x^2 (81, N = 108) =136.6, $p < .005$; Table 30). Person offenders gave the reason 'Anger or revenge' substantially more than was statistically expected (89.7% of anger/revenge

motivated offences were Person offences, and 37.1% of Person offenders did so because of anger/revenge). Impulse, and impulse because of being affected by drugs, were both given as reasons by person offenders slightly more than expected, and money-oriented motives less than was expected. When robbery was not classed as a Person offence, the proportion of person offenders who offended for money-related reasons, drops to almost nothing.

Not surprisingly, money was a motive for more Property offenders than was statistically expected: 68.2% of property offenders reported a Money reason (22.7% money for drugs; 4.5% money for alcohol, 32% money for other things; 9% mixed). Money was also the main reason given by Drug offenders for their offending.

Table 30: Specific Offence Type by Main Reason for Offending

	Main Reason for Offending										
Offence	$ drugs	$ alc	$ other	$ mixed	Ang/Rev	Impulse	Imp(high)	Peer	Other	Mixed	*Total*
Assault	0	0	0	0	16	0	1	0	2	2	21
Robbery	2	1	6	3	5	0	1	2	2	3	25
Sex Off	0	0	0	1	3	4	0	1	2	0	11
Child Ab	0	0	0	0	0	0	1	0	1	0	2
Mansl	0	0	1	0	2	1	2	1	2	0	9
Burglary	4	1	5	1	2	1	0	0	0	1	15
Fraud	0	0	1	1	0	1	0	0	0	0	3
Arson	1	0	1	0	1	0	0	0	1	0	4
Drug	3	0	8	1	0	0	1	2	1	0	16
Traffic	0	0	0	0	0	0	0	0	2	0	2
Total	10	2	22	7	29	7	6	6	13	6	108

There was a significant relationship between the reason for offending and whether drugs were used in the 12 hours before the offence (see p. 119). However, reason for offending was not related to the type of drug(s) used before the offence.

Apart from users of opiates (x^2 (10, N = 42) = 19.67, p < .05), reason for offending was not significantly related to the use of any drug type in the month before the offence. Users of opiates cited 'money for drugs' more than expected, and 'Anger/revenge' less than expected (Figure 30).

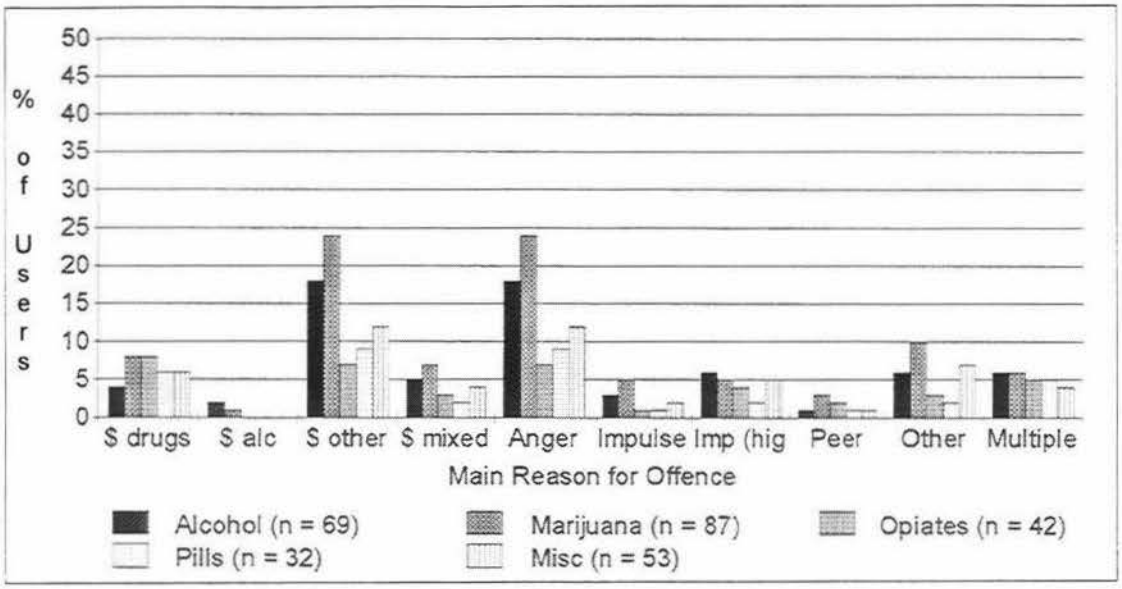

Figure 30: Main Reason for Offending by Drugs Used in Month Before Offence

Reason for offending was not related to whether respondents believed they would still have offended if not influenced by drugs. This corresponds with the relatively low proportion of respondents who gave "impulse" or "impulse because I was wasted/high" as their main reason for offending (p. 132).

Reason for committing offence was not related to age, or whether a weapon was used.

(25) Did Influence of Drugs Affect Getting Caught?

Most respondents (65.5%) felt that the influence of drugs had no impact on their capture.

This variable was not related to which drugs were taken before the offence or how long before the offence the drugs were taken. It was also unrelated to the number of times respondents had been in prison.

Influence of drugs on capture x drugs used in month prior to offence: see p. 109.

Chapter 7

DISCUSSION

Because alcohol was included as a drug on the survey questionnaire, the term "drug" as used in this discussion will include alcohol, unless "non-alcohol drugs" or "illegal drugs" is used. "Illegal drugs" encompasses all psychoactive drugs, the use of which are prohibited in New Zealand. Some drugs, for example, minor tranquillisers, are legal but only if used by the individual for whom they were prescribed; use by individuals for whom they were not prescribed, is illegal.

Harlow's (1991) U.S. figure for the proportion of inmates who reported being under the influence of illegal drugs was 27%; Innes (1988) reported 35%, and the U.S. National Institute of Justice (1991) reported 50%...There is clearly room for confusion here, with some researchers using the term "under the influence" of drugs, while others simply report the number who used drugs in the day before the offence. The present study included both of these variables, but will mainly address the "used" variable, as different respondents are likely to have different definitions of "influence", and subjective assessments of their state/condition at the time of their offence. Furthermore, while most of the above studies did not include alcohol in their data, many drug users probably used alcohol in conjunction with other drugs. The present study has included alcohol as a drug, but it is possible to separate this from non-alcohol drugs for a number of analyses.

Whether the "used" variable or the "under the influence" variable is used, the present New Zealand figures are in the range of, or slightly higher than, the figures reported by U.S. researchers[1]. Half of the inmates who participated in this survey reported being under the influence of drugs (including alcohol) when committing the offence for which they were incarcerated. Nearly 70% of respondents reported having used drugs in the twelve hours before their offence, and of these, 72% felt that they were influenced by the drugs at the time of the offence.

Illegal drugs made up the substantial part of this use. Most of those who used drugs before offending, used illegal drugs (and, or instead of, alcohol). Although many had used a combination of alcohol and other drugs, over half had used drugs but no alcohol.

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[1]This is interesting, because the present study excluded unsentenced inmates, while the U.S. studies tended to include all inmates. Miller and Welte (1987) suggest that the exclusion of nonsentenced inmates may lead to a smaller percentage of offenders reporting drug use.

It is important to note that different types of offender are imprisoned at different rates. Violent (person) offenders have the highest rate of imprisonment in New Zealand, with 20.1% of all violence cases appearing before the courts in 1994 resulting in a custodial sentence, compared to 11.7% of property offences, and 7.5% of drug offences (Spier, 1995). In addition, the sentence lengths differ: the average sentence length for violent offenders in 1994 was 23.9 months, compared to 8.8 months for property offenders, and 13.3 months for drug offenders (Spier, 1995).

Those drug offenders who receive a custodial sentence, are mainly dealers, of drugs other than marijuana, or to a smaller extent, of marijuana (Spier, 1995). Very few drug offenders are imprisoned for simply use of drugs, and the few who are, receive very short sentences. Dealers of drugs other than marijuana receive the longest sentences (average 30.7 months) (Spier, 1995).

Some of the hypotheses of this study were supported by the results; others were not. The hypothesis that property, drug, and robbery offenders would be most likely to have been under the influence of drugs when offending, was supported. The hypothesis that alcohol use at the time of offending would be related to violent offences, while illegal drug use would be related to non-violent offending, was not supported. There was little difference between the proportions of violent offences committed by those whose main drug of use before the offence was alcohol, and those whose main drug was an illegal one. (It appears that robbery, which is classed as a violent offence, plays a large role in the proportion of violent offences committed by illegal drug users.) Similarly, those who had used only alcohol, and those who had used only illegal drugs, committed the same proportions of violent offences. Interestingly, those who had used both alcohol and illegal drugs before the offence, were least likely to have committed a violent offence, and those who had used no drugs at all, were most likely to have done so. The hypothesis, derived from Goldstein's (1989) theory, that violent offending would be related to the use before the offence of barbiturates, stimulants, PCP, and alcohol, was not supported. Only the use of minor tranquillisers was significantly related to violent offending. The hypothesis that the use of marijuana would not be related to violent offending was not clearly supported. Marijuana use was very common, and was involved in all offence types, most significantly drug and property offences. The hypothesis that property offenders would be mainly economically motivated was supported, while the hypothesis, derived from Goldstein, that economically compulsive violence would be related to the use of heroin or cocaine was not supported: these users were not especially violent, although they did offend for money-related reasons more than others did. The

hypothesis that use of drugs in the month before the offence would be reported more by robbers, burglars, and drug offenders, was partially supported: compared to other offenders, robbers were high users of marijuana, opiates, and pills; burglars were high users of alcohol, and drug offenders were high users of all drug types. Finally, the hypothesis, derived from Pallone (1990), that if drug use was related to offending, it would be as a 'lubricant' (facilitating a predispostion to offending), or 'motive' (functioning as the goal to which offending is directed), rather than as an 'engine' (inducing the individual 'under the influence' to commit an offence of which he/she might otherwise seem incapable), was supported: those who used illegal drugs before offending were more likely to report deciding to offend before using the drugs, and also to report that they would still have committed the offence if they had not been under the influence of drugs.

Drug Use in the Month Before the Offence

Incidence

Of the New Zealand inmates, nearly three-quarters used illegal drugs in the month before the offence, which is substantially higher than those in Harlow's (1991) study, which found that 44% of U.S. inmates used drugs in the month before their offence.

The present study found a substantial difference (from Harlow's overall figure) in the proportion of inmates who used marijuana: nearly three-quarters used this drug in the month before their offence; over half of these were using it daily. However, it is well known that a high proportion of the general population of New Zealand, in particular young males, also use marijuana. As Black and Casswell's (1993) survey of the general population found, marijuana is the most commonly used drug, apart from alcohol and tobacco, in New Zealand, with about 40% of 18-24 year old males having used marijuana in the last 12 months, and 30% using it currently. Figures released by the U.S. National Institute on Drug Abuse for 1988 (cited in O'Brien et al., 1992) show that marijuana use has been decreasing in the United States since 1978, with only 16% of adults aged 24 to 40 reporting having used marijuana in the last month, compared to 27.4% of adults aged 18 to 25 in 1982, and 35.4% in 1977.

Clearly, marijuana use is much more common among the (apprehended) offender population, than among the general population. Possible reasons for this difference may include the "general deviance syndrome", where individuals engage in more than one form of illegal behaviour; a possible influence of marijuana use on criminal behaviour

(e.g., offending in order to obtain the drug); or the existence of a third variable, such as unemployment, may increase both marijuana use and criminal behaviour.

The level of use of specific drug types other than marijuana, however, was lower than the overall U.S. figure found by Harlow (1991): with about one-third having used opiates, pills (mainly minor tranquillisers), or miscellaneous drugs in the month before their offence. Black and Casswell (1993) also found low levels of drugs other than marijuana (and alcohol) in the general population of New Zealand.

Previous New Zealand data from Whitney's (1992) study, indicates that the drug most frequently used by inmates (apart from alcohol) is marijuana, followed by tranquillisers and opiates. The present study found that marijuana was followed by hallucinogens and opiates, although pills (tranquillisers) were a very close fourth. Alcohol was used by fewer of the respondents than was marijuana.

Frequency

The present study shows that 40% of total respondents were using marijuana on a daily or near daily basis, while very few were using opiates, minor tranquillisers, or miscellaneous drugs (amphetamines, hallucinogens, cocaine, other) as frequently as this. Innes' (1988) study of U.S. prison inmates found that in the month before the offence, a similar percentage were using illegal drugs on a daily or near daily basis. However, the New Zealand figure is represented almost totally by the daily use of marijuana, while almost half of Innes' figure represented a 'major' drug (heroin, methadone, cocaine, PCP, or LSD).

Substantially more of the Pakeha users reported every day/ nearly every day use of marijuana, than did Maori users (although Maori users still used marijuana at least three times per week). Pakeha respondents also reported higher use of the other illegal drugs in the month before their offence.

As noted, the New Zealand inmates in the present study appear to have used major drugs considerably less frequently than their U.S. counterparts. Of the inmates in Innes' study, 19% were using a major drug (heroin, methadone, cocaine, PCP, LSD) on a daily or near daily basis, in the month before the offence, whereas almost none of the New Zealand inmates were using these drugs (on a daily or near daily basis). The general population of New Zealand uses these drugs at a very low level (Black and Casswell, 1993). A possible reason for this may be that drugs such as cocaine and LSD are substantially more

expensive in this country than they are in the U.S. The availability of some of the 'major' drugs (e.g. PCP, cocaine) is also more restricted in New Zealand.

Drug Use in the12 Hours Before the Offence

Frequency

This study found that over two-thirds of respondents reported having used a drug in the 12 hours before their offence. (Of these, nearly three-quarters believed they were under the influence of drugs at the time of offending; i.e. half of all respondents). A drug use figure of nearly 70% seems to be consistent with U.S. data: the National Institute of Justice (1991) urinalysis study found "50% or more" of arrestees showed evidence of recent illegal drug use, Harlow (1991) found that 57% of inmates had been under the influence of drugs (including alcohol) at the time of offending, Miller and Welte (1987) reported that about 60% of all convicted offenders had used drugs (including alcohol) prior to offending. It also fits in with the range of figures reported by Wish and O'Neil (1989, cited in Brochu et al., 1989), in which 50%-80% of male arrestees in large U.S. cities tested positive for at least one illicit drug. It is also consistent with Lightfoot et al's (1985, cited in Brochu et al., 1992) Canadian figure: 79% of inmates had used alcohol or illegal drugs on the day of the crime. The New Zealand figure of half the respondents believing they were affected by drugs at the time of offending is, however, substantially higher than Harlow's (1991) 27% of inmates who believed they were under the influence of an illegal drug when offending.

If one omits those who had used alcohol only from the present results, there remains a majority who had used illegal drugs before the offence, either in combination with, or without alcohol. Three-quarters of the inmates who had used illegal drugs before the offence believed they were under the influence of drugs at the time of offending, so approximately 43% of all respondents in this sample reported being influenced by illegal drugs. This is still higher than Harlow's 27%, Innes' (1988) 35%, and is nearly twice as high as the U.S. Bureau of Justice Statistics' (1980, cited in Pallone, 1990) figure of 22% being "under the influence of drugs". Miller and Welte (1987) reported that 46% of offenders had been under the influence of alcohol (and 38% under the influence of another drug) at the time of offending. According to the U.S. Department of Justice (1983a, 1983b, cited in Miller and Welte, 1987), half of inmates were influenced by alcohol (and one third were influenced by drugs) at the time of their offence. In contrast to the pattern for illegal drugs, for alcohol, the New Zealand proportion is lower than the U.S.: less than one-quarter reported being influenced by alcohol (when the first, second,

and third drugs listed as used by respondents were combined). The proportion of respondents who used only alcohol before the offence was not large: most users had used illegal drugs instead/as well. Other studies have reported that offenders who use alcohol prior to their offence make up a large proportion of offenders who use drugs; for example, Harlow (1991) found that a higher percentage of inmates reported being under the influence of alcohol than drugs. Harlow (1991) reported that 29% of inmates had used alcohol only, and Miller and Welte (1987) reported 30%, while the present study found only 10%. Of Harlow's inmates, 15%, and of Miller and Welte's, 13%, had used illegal drugs only, while 36% of the present respondents had done so; and while 12% and 16% respectively of respondents in the previous studies had used both alcohol and illegal drugs, 24% of the present respondents had done so.

A possible reason for the higher proportion of offenders reporting that they were influenced by drugs in the present New Zealand sample, compared to the U.S. samples, may be that the New Zealand respondents were more inclined to 'pass the blame' onto the drug use, rather than accept responsibility themselves. New Zealand is more of a welfare state than the U.S.; perhaps it is more common in this country to avoid individual responsibility. Differing attitudes by the State regarding the use of drugs as a mitigating or aggravating factor in an offence, may also play a part in the lower U.S. figures: respondents may have reported what they believed the 'system' would want to hear. Another possible reason for the discrepancy may be that the U.S. data is older than the present data: attitudes to, and beliefs about, drug use may have changed over the last few years.

Types of drugs

The **drug used most commonly** before the offence was marijuana, followed by alcohol[2], and thirdly, miscellaneous drugs (mainly amphetamines) [for both the main drug used and up to three drugs used]. This is slightly different from the U.S. National Institute of Justice's (1991) urine testing study, which found highest frequencies of cocaine, followed by marijuana and opiates (alcohol was not part of the study). Innes (1988) reported that the drugs most likely to be named by prisoners who reported being under the influence were alcohol, marijuana and hashish. Wish (1987, cited in Brochu et al., 1992) reported a high percentage of cocaine presence in arrestees, as well as opiates,

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[2] It is surprising that alcohol use is not the highest. Inmates may not have not have responded to alcohol as a drug *per se;* this may be due simply to ignorance of the substance, or greater social acceptance of alcohol, or both.

PCP, and methadone. By contrast the New Zealand study found cocaine was reported by only two respondents, PCP by no respondents, and opiates (mainly morphine and homebake, with one report of methadone) by only seven respondents. The availability of these drugs may be lower in New Zealand than in the United States; marijuana, on the other hand, is not scarce here.

Unsurprisingly, the use of drugs in the month before the offence was related to the use of drugs in the 12 hours before the offence: those who used marijuana, opiates, pills, and miscellaneous drugs (amphetamines, hallucinogens, cocaine), and those who used alcohol frequently in that month, were more likely to have used a drug prior to offending. However monthly use did not predict the type of drug used prior to offending, except for those who used pills or miscellaneous drugs in that month, who were more likely to have used pills, opiates, or miscellaneous drugs prior to offending. This would indicate that the more 'specialised' drugs tend to be used before the offence by those who are already accustomed to them, but other drug users may vary their drug use prior to offending.

No particular drug type appears to be more 'influential' on offenders: the type of drug used before the offence was not related to whether respondents believed they were influenced by drugs when committing their offence.

Time of Drug Consumption

Nearly a third of those inmates who reported using a drug in the 12 hours before the offence, reported that they did so less than fifteen minutes beforehand. Over three-quarters did so within three hours of the offence. As one would expect, the larger the time gap between drug consumption and the offence, the less likely inmates were to believe they were influenced by drugs. Over half of those who believed they were influenced by drugs when offending, had used the drugs less than one hour before the offence. No previous literature was found regarding the time of taking drugs before offending.

A possible limitation of this result is that respondents may have been more likely to remember drug use that took place immediately before the offence, than whether they had used any drugs up to twelve hours before. To clarify this point, any future survey should be conducted as soon as possible after offenders' convictions.

Hypotheses

Hypothesis 1

The hypothesis that ***property, drug, and robbery offenders would be more likely than other offenders to have been under the influence of drugs at the time of the offence,*** was supported by the results; the offences with the highest proportion of respondents reporting having used drugs (including alcohol) prior to offending were (1) **drug offences**; (2) **burglary**; and (3) **robbery**.

Wish (1982, cited in Wish and Johnson, 1986) reported that offenders with positive urinalysis tests at time of arrest, had two to three times higher rates of arrest for theft, robbery, burglary, and drug offences than non-positive arrestees (other offences were committed by users at similar rates to non-users). Innes (1988) reported similar results. Although the present results found a non-significant relationship between offence type and whether drugs were used prior to offending, burglars, drug offenders, and robbers did report having used drugs prior to offending more than was expected. Other offenders reported use less than, or the same as, was statistically expected.

As would be expected, the larger proportion of respondents in the present study had committed a violent offence (in accordance with the higher incidence of imprisonment for violent offenders). Nearly three-quarters of property offenders and nearly two-thirds of person offenders consumed drugs prior to offending. Almost all drug offenders reported using (although it is inherently difficult for most drug offenders to respond to this type of question - most applied it to the occasion of their arrest). It is interesting that violent offenders had the lowest proportion of pre-offence drug users. Specifically, child abusers were the offenders with the lowest pre-offence drug use.

These results do not support research that has reported strong links between drug use directly beforehand, and violent offences (e.g. Gottlieb and Gabrielson, 1992; Senay and Wettstein, 1983; Holcomb and Anderson, 1983; Langevin et al., 1982, cited in Lindquist, 1991; Sorrells, 1977, cited in Ojesjo, 1983). There was no significant relationship between whether drugs were used in the 12 hours prior to offending, and the offence type (although, as stated above, <u>property</u> and <u>drug</u> offenders were slightly more likely to have used, and person offenders were slightly less likely), and when robbery was classed as a property offence, person offenders were significantly less likely to have used drugs before offending. Neither was there a relationship between whether offenders reported being <u>under the influence</u> of drugs at the time of the offence, and offence type (although

again, property and drug offenders were slightly more likely to report being under the influence, and person offenders were slightly less likely).

However, much of the literature, for example Ladouceur and Temple (1985), has indicated that pre-offence drug use is most likely to be found among non-violent property offences, and least likely to be found among violent sex-related offences.

Of the offenders in the present study, drug use was highest among drug offenders, followed by property offenders, and lowest among violent offenders. The present study found, as did Ladouceur and Temple, that burglars had the highest drug use at time of offence (apart from drug offenders). Ladouceur and Temple reported that sex offenders had the lowest use apart from the use of barbiturates: None of the New Zealand sex offenders had used barbiturates, and only 60% of them had used drugs, which was lower than all offences apart from child abuse, fraud, and arson (N.B. the last two offence categories comprised only a few respondents).

As stated, the present New Zealand results exhibit the same general pattern as that found by Ladouceur and Temple, with violent offenders using drugs less frequently than property offenders. Of the New Zealand rapists and assaulters, fewer reported being under the influence of drugs when offending, than did those in Ladouceur & Temple's study. However of the New Zealand burglars, a higher percentage reported being under the influence than did Ladouceur and Temple's burglars.

Clearly, differences in figures are inevitable, as every study uses a different measurement instrument, different definitions of terms, and different sample populations. However, once again the overall New Zealand pattern is similar, with property offenders using drugs more than violent offenders.

Similarly, of Harlow's (1991) burglars, a somewhat lower proportion reported being under the influence of drugs when offending, than the proportion of New Zealand property offenders, while about the same proportion of Harlow's robbers did so, as the proportion of New Zealand person offenders.

Harlow reported that of drug offenders, a considerably lower proportion reported being under the influence of drugs, than did the New Zealand drug offenders. However drug offenders are a particularly difficult group, as most of the New Zealand group would have been dealers (as explained at the beginning of this discussion), so it would have been difficult to answer whether they had been under the influence of drugs at the time of

offending, and related questions. Once again, the question of definition arises: how was 'influence' interpreted (and was this by the respondents, or the researcher)?

All of the 43% of Simonds and Kashani's (1980) subjects (delinquent boys) who had used drugs before offending, reported that they would not have committed the offence if they had not taken the drugs. Nearly half of those New Zealand inmates who believed that they were under the influence of drugs when offending, reported that they would still have committed the offence if they had not been so affected. Just over one quarter said they would not have. The rest said "Possibly", or in a few cases, "Probably". Person offenders were more likely than expected to deny that they would have committed the offence if it were not for the influence of drugs, and they were more likely than other offenders to say this. However the same proportion of person offenders also said they still would have committed the offence, as the proportion who said they would not have done so.

It is interesting that of the person offenders who had used a drug in the twelve hours before offending, more than expected reported that they would not have committed the offence if they had not been affected by drugs: over one-third of the person offenders who had used drugs said this, while only one-seventh of the property offenders who had used drugs said it. This could be speculatively attributed to feelings of guilt/shame/remorse on the part of the person offenders - a desire to shift the blame onto the 'bad influence' of drugs.

However, drugs were not blamed disproportionately by person offenders in other questions where similar causal attributions could have been made: when asked if they believed they were "under the influence" of drugs at the time of the offence, there was no real difference between the responses of all offender types. When asked if they decided to commit the offence before or after taking the drugs, there was also not a significant difference between the responses of each offender type. It is possible that, compared to the question mentioned above, these questions were not as 'inviting' about the option of attributing blame for violent behaviour to drugs.

The age range of Simonds and Kashani's sample may be a factor in the high proportion (compared to the present sample) who blamed drug use: perhaps delinquent boys being admitted to a training school were, for some reason (e.g., fear of punishment) more willing to make causal attributions like this.

Not surprisingly, those New Zealand inmates who believed they were influenced by drugs, were more likely to report having decided to commit the offence after taking the drugs. The fact that nearly half reported deciding to offend before the drug use, indicates that there were still many offenders who believed they were influenced by drugs, but who were happy to state that the drug use did not cause or influence their decision to offend. To improve reliability, future research might include additional, differently worded questions regarding this issue.

Hypothesis 2

The hypothesis that ***the use of illegal drugs at the time of offending would be related to less violent crime, and that alcohol use would be related to less violent crimes,*** was not supported by the results.

Franklin et al (1992) reported that those who were influenced by illegal drugs committed fewer violent crimes than sober, alcohol, or poly users (probably because marijuana, the illegal drug of choice, reduces aggression, while alcohol has been identified as a causal agent of aggression). Similarly, Miller and Welte (1987) found that exclusively non-alcohol substance users committed fewer assaults. Ladouceur and Temple (1985) found that illegal drug use tended to be most often correlated with nonviolent property crime, although little was known about its relationship to rape and other violent offences. The present results, as discussed below, are not so clear.

Franklin et al. (1992) posited that the differences between results of previous studies could be because violence is unequally distributed across classes of drug abuse, i.e. that it is alcohol intoxication, rather than illicit drug use, that is associated with violent crime. In this study, the type of drug used before the crime was not significantly related to the type of offence committed, in contrast to Franklin et al's suggestion, and Ladouceur and Temple's (1985) report that the literature as a whole seems to indicate that alcohol use is more frequently associated with violent crime, whereas drug use is more often correlated with property crime. Murdoch et al. (1990) reported that alcohol is associated with violent crime at a greater than chance level, and at a significantly higher level than it is associated with non-violent crime, while Myers (1982) concluded that violent inmates were more likely to have used alcohol before offending than non-violent inmates. The present results did not produce sufficient evidence to support these claims: There was little difference between the proportions of violent offences committed by those whose main drug of use before the offence was alcohol, and those for whom it was an illegal drug.

Similarly, no difference was found between the proportions of violent offences committed by those who used illegal drugs but no alcohol, and those who used alcohol but no illegal drugs, in contrast to Miller and Welte's (1987) report that offenders who used alcohol only before the offence, disproportionately reported public order offences and violent offences, while those who reported use of illegal drugs only were least likely to have committed violent offences. Interestingly, those who had used both alcohol and illegal drugs, committed the lowest proportion of violent offences, in contrast to Miller and Welte's finding that offenders who reported use of both alcohol and illegal drugs prior to the offence were more likely to report violent offences compared to other offenders.

In fact, sober offenders in the present study committed the highest proportion of violent offences (and person offenders were the most likely to have been sober at the time of the offence), in support of Franklin et al's (1992) report that intoxicated offenders committed no more violent offences than sober offenders.

As Welte and Miller (1987) have said, "The reasoning underlying much of the discussion of the alcohol-crime link is that while crimes against property are utilitarian and 'rational', crimes of violence are the result of loss of self-control. Alcohol should, therefore, play a much more important role in the genesis of crimes of violence because of its disinhibiting qualities" (p. 314). If alcohol plays a larger role in person offences than in property offences, the percentage of inmates who used alcohol before the offence should be greater than that for property offenders - however, while 44% of property offenders had used alcohol, only 28% of person offenders had done so (there was virtually no difference between person and property offences for use of illegal drugs before the offence). Not only do these results not support the previous research findings cited above, they also do not agree with those of Welte and Miller (1987), and Miller and Welte (1987), in which there was only a slight difference between the alcohol use before the offence of violent and property offenders, and those of Ladouceur and Temple (1985), who found that although there was a slight difference between offence types for illegal drug use, there was no difference for alcohol use.

Some researchers, in particular Elliot et al. (1976), have reported that all illicit drugs, especially marijuana, are disproportionately associated with property crime. Although in the present study the type of drug used before offending was not significantly related to the type of offence committed, users of most drugs (before the offence) tended to commit more property and drug crimes than did the overall offender population. The

exceptions were pill (minor tranquilliser) users, who committed mainly violent (person) offences, and opiate users, who committed disproportionately more drug offences, thus reducing the proportion of other offences.

An important point must be kept in mind when interpreting these results. The New Zealand Justice System puts priority on imprisoning violent offenders more than any other type of offender. Therefore the prison populations are weighted towards being mainly violent offenders: of the inmate sample used in this study, the majority (two-thirds) were in prison because of violent (person) offences. However, the proportion of each drug user group (12 hours before offence) who committed person offences was lower than two-thirds (except for pill users, nearly all of whom committed a person offence).

The results show that offenders who used illegal drugs only had the highest proportion of drug offences, and low proportions of property and person offences, while those who used alcohol only, or alcohol and illegal drugs, were substantially more likely to have committed property offences. Those who used neither illegal drugs or alcohol were substantially less likely than expected to have committed property crimes - as noted above, they committed a high proportion of person offences.

This is somewhat similar to the report by Miller and Welte (1987), that the use of illegal drugs only before the offence tended to be associated more with drug offences and property offences, and less with violent offences, compared to those who used alcohol and illegal drugs, alcohol only, or neither alcohol or illegal drugs. Similarly, Franklin et al. (1992) showed that "inmates inebriated with illegal drugs committed fewer violent crimes than either sober offenders, poly-abusers, or alcohol abusers. Results suggest that intoxication with alcohol free mood altering drugs contribute to a reduction of violent crime among incarcerated criminal offenders" (p. 101).

However, when all is said and done, the highest proportion of all offenders, regardless of whether they used alcohol, illegal drugs, or neither before offending, had committed violent offences, consistent with the policy of the New Zealand Justice System to use imprisonment mainly as a means of punishment for violent offenders.

Specific Drug Types and Offence Types

Voss (1976, cited in Wish and Johnson, 1986) and others have reported relationships between offence types and the types of drugs used: this was not found in the present results. Goldstein (1985, 1989) listed barbiturates, stimulants, PCP, and alcohol as related to psychopharmacological violence, which will be addressed later in this discussion. McBride (1981) reported that narcotics, cocaine, PCP, and inhalant users were overrepresented in person offences, more than other users and non-users. In the present study, only those who had used pills (i.e., minor tranquillisers) in the 12 hours prior to offending were overrepresented in person offences, and no type of drug use in the month before the offence was overrepresented in person offences. PCP and inhalants were not drugs of use, and narcotics (opiate) users (in the month before the offence) were overrepresented only in drug offences. This may be because involvement with, such as selling, opiates (which are Class 'A' drugs in New Zealand), is regarded as more serious than involvement with other illegal drugs, such as marijuana (which is a Class 'C' drug), so these offenders are more likely to be imprisoned.

The main drugs reported by Simonds and Kashani's (1980) subjects were alcohol and marijuana; similarly the main drugs reported by the present NZ subjects were marijuana and alcohol.

The drugs most significantly correlated with the number of person offences committed by Simonds and Kashani's subjects were barbiturates, PCP, cocaine, and Valium and amphetamines. By contrast, of the present subjects, none had used barbiturates or PCP before the offence, and very few had used cocaine or amphetamines (no doubt owing to the low availability of these drugs in New Zealand); these users were not overrepresented in person offences. A moderate number had used pills (including Valium); more of whom had committed person offences than was expected, but the overall relationship was insignificant.

Tinklenberg et al. (1974) reported that non-violent offenders actually used a greater variety of drugs more frequently. This is tentatively supported by the present results: Of the present subjects, 40% of person offenders used drugs other than alcohol and marijuana in the month before the offence; 46% of property offenders, and 72% of drug offenders. Tinklenberg and colleagues concluded that extensive drug use does not unavoidably lead to violent crime, (which the present results would agree with) but when serious assaults were committed, the offenders tended to be under the influence (New Zealand assaulters did use drugs before the offence, but did not tend to believe they were

influenced). Once again there arises the question of how 'influence' is defined by the researcher, and by the respondent.

Collins and Schlenger's (1988) study of U.S. inmates concluded that the acute effects of alcohol use prior to the offence was associated with violent offending, but chronic use or dependence was not associated with violent offending. As stated above, the present results indicate that users of alcohol in the 12 hours before offending, were not more likely to commit person offences. However, in support of Collins and Schlenger's second finding, those who reported having had a dependency on alcohol were not more likely than others t have committed a violent offence.

Offences of special interest: robbery and sex offences

Robbery

An important point to remember is that the present study included robbery as a violent offence, as most researchers have tended to do. However, many of the studies which have found a wide difference between users and non-users of drugs, have classified robbery as a property crime.

Robbery, according to Collins and Messerchmist (1993), "is a violent crime in which the offender purposely uses force or the threat of force to steal money or property from a victim" (p. 97). However, "the premeditated violence of robbery is usually though to be qualitatively different from the violence that typically occurs as a result of interpersonal conflict" (p. 97). Also, as Cordilia (1985) states, the direction of the alcohol-robbery relationship may differ between casual and professional robbers.

There was no observed relationship between drug use and violent offending, unless robbery was classed as a property offence, in which case violent (person) offenders used drugs less than was expected. Robbers tended to use illegal drugs rather than alcohol before offending; nearly two-thirds of robbers had used illegal drugs, which is a substantially higher proportion than for all other offenders. However robbers did not use drugs including alcohol more than most other offenders did.

Ladouceur and Temple (1985) reported that alcohol was associated with violent and sex-related crimes, more than other types of crime. The present study found that alcohol use before the offence (as first, second, or third drug listed) led to just over half of violent crimes, a similar proportion as for use of most of the other drug types. However, when robbery is classified as a property offence rather than a person offence, the data change so that alcohol use leads to more violent offences than does use of any other drug

type, apart from pills. It therefore appears that robbery raises the violence incidence of illegal drug users quite significantly, i.e., when robbery is not included as a violent offence, the proportion of violent offences committed by illegal drug users falls significantly below that of alcohol users.

Sex Offences

Vinogradov et al. (1988) reported that in two-thirds of the 67 U.S. rapes they studied, the offender reported being under the influence of one or more drugs (alcohol/marijuana/ others). Correspondingly, 60% of the sex offenders in the present study said that they had used drugs in the 12 hours before the offence, and two-thirds of these felt that they were influenced by drugs when offending. This proportion is less than all other offence types except for child abuse, fraud, and arson.

However Rabkin (1979) had stated that few rapists are drug abusers, and that one- to two-thirds of rapists drink beforehand. By contrast, of the New Zealand sex offenders surveyed, one-third used alcohol, one-third used marijuana, and no other drugs were used before the offence. In the month before the offence, less than half of sex offenders had used alcohol: this is a smaller proportion than all other offences except for child abuse and fraud.

The U.S. Bureau of Justice Statistics (1983a) had found that almost one-third of inmates reported drinking very heavily just prior to their offence: this is consistent with use by the present New Zealand inmates, but it is not known whether this was heavy use or not. The BJS results also showed that assaulters, burglars, and rapists were more likely to be very heavy drinkers. Of those offenders in the present study who reported using alcohol three times per week or more in the month before their offence, most were assaulters or robbers, although a moderate proportion were either burglars or drug offenders. Very few sex offenders reported this level of alcohol use.

Ladouceur and Temple (1985) reported that there was little difference between rape, other sex offences, assault, and burglary, regarding the use of alcohol before the offence. The present results did support this: although there were differences in the level of alcohol use in the month before the offence, there were no substantial differences in terms of whether alcohol was used in the 12 hours before the offence. However, Ladouceur and Temple reported that more rapists and burglars reported feeling drunk: this was also found in the present study (although there was a non-significant relationship when using the four main offence types), with nearly all of the burglars who used alcohol or drugs reporting that they were influenced at the time of the offence, over two-thirds

of the sex offenders and robbers, and just over half of the assaulters. The present results tend to support Ladouceur and Temple's conclusion that there was no clear division between violent and non-violent, or sexual and non-sexual offences, regarding the perceived effects of alcohol.

They also reported that sex offenders were more likely to be drinking alone before offending, and that burglars were most likely to be drinking with friends before offending. Cordilia (1985) also reported that property crimes were facilitated by group-drinking, and that drug use was characterised by less cameraderie. However the present results found no significant relationship between offence type and number of/type of companions before offending. A possible confounding factor may be participants' reluctance to disclose information about their offending companions, owing to fear/paranoia that they may incriminate their associates.

Regarding sex offenders, it is probable that some respondents who were convicted of child abuse would have ticked the 'sex offence' box in the questionnaire; either as a mistake, or on purpose, as child abusers are generally considered by prison inmates to be the 'lowest' and most disliked type of offenders.

Hypothesis 3

The hypothesis, based on Goldstein's (1985, 1989) work (also Tinkenberg, 1973), that ***psychopharmacological violence would be related to the use of barbiturates, stimulants, PCP, and alcohol***, was not supported. The present results show that there although there was not an overall significant relationship between offence type and the type of drug used before the offence, person offenders were slightly more likely than was statistically expected, to report having used alcohol, pills (minor tranquillisers), or miscellaneous drugs (i.e. amphetamines, hallucinogens, cocaine) as the main drug they used before offending. However when the first, second, and third drugs listed as used by respondents are included in the analysis, the same proportion of person offenders used alcohol as was expected. The drugs of interest appear to be pills (minor tranquillisers; no barbiturates were used), with nearly twice as many person offenders using as was expected, while miscellaneous drugs (mainly amphetamines and hallucinogens, with cocaine and ecstasy) were used less than expected by person offenders. So although PCP and barbiturates were not involved as Goldstein suggested, amphetamines (a type of stimulant) were slightly, but when only the first drugs used were counted, and minor tranquillisers were. However the most commonly used drug was once more marijuana,

although this frequency was actually lower than statistically expected for violent offenders.

These differences are probably due to the difference between available drugs in the U.S., compared to those easily available to the New Zealand respondents. For example, in New Zealand, PCP and barbiturates are scarce, while marijuana is widely available.

Individual minor drugs

The hypothesis that ***barbiturates*** would be involved in violent offending was not supported, as no barbiturates were reported to be used before any offences. However almost all of those who used **minor tranquillisers** before offending, committed a person offence.

The offence type with the highest percentage of pill users (in the 12 hours before the offence) was person offending. Pill use before the offence was over four times more common among person offenders than among property offenders. Of all person offenders, just under one-fifth had used minor tranquillisers before offending; this was slightly more than expected (although the overall relationship between drug type used and offence type was not significant).

Those who used Pills (mainly minor tranquillisers) in the month before the offence had a higher percentage of person offences (nearly three-quarters) than did users of other drug types. The offences with the highest percentage of pill use (in the month before the offence) were drug offending and person offending.

The high proportion of violent offences committed by users of minor tranqulisers is surprising, as the literature has not reported strong links between these drugs and violence (although there have been such reports for barbiturates). The small size of the pill-using sample makes interpretation of this result difficult.

Similarly, the hypothesis that ***stimulants*** would be related to violent offending, was not supported. Only one-third of 'miscellaneous drug' (amphetamines, hallucinogens, cocaine) users committed person offences; this was substantially lower than the proportion of the overall population committing person offences.

However property offenders were more than twice as likely to have used miscellaneous drugs as person offenders.

Of all person offenders, one-tenth had used miscellaneous drugs before offending; slightly less than expected.

Siomopoulos (1979) has reported that users of amphetamines commit more crimes; the present study found no connection between amphetamine use and crimes. Less than one-fifth of all respondents had used amphetamines in the month before the offence, and only a few respondents reported using amphetamines in the 12 hours before the offence. A possible explanation is that amphetamines are more expensive in New Zealand than in the United States. Also, the present study was conducted in a different era: amphetamines are less available now, with the medical profession not prescribing them as freely as they once did.

It is likely that stimulants, such as amphetamines, need to be used in high doses, on a long-term basis, to be linked to violence.

No ***PCP*** was used by respondents, either in the 12 hours before the offence, or in the month before the offence. PCP is not generally a drug of use in New Zealand.

The hypothesis that ***alcohol*** use would be related to violent offending has been addressed previously in this discussion. Just over half of those who had used alcohol before offending, committed a person offence; this is lower than the two-thirds of the total population who committed person offences. Over half of those who used drugs before offending used no alcohol, and only 14% had used alcohol alone.

Of all person offenders, just over one-quarter had used alcohol before offending; this was the same proportion as was statistically expected.

Welte and Miller (1987) reported only a slight difference between the use of alcohol before violent and property offences. The New Zealand results show that alcohol was more commonly the drug used by property offenders: 60% of property offenders who named a drug used alcohol, and 43% of person offenders who named a drug did so (counting up to three drugs listed by respondent). As stated earlier, this is an interesting reversal of previous research findings, in which alcohol has been related to violent offences.

It is interesting to note that those who used only alcohol in the month before the offence, committed the most person offences. Also, those who used only alcohol in the 12 hours

before the offence committed more person offences than the other groups, apart from the group who used non-alcohol drugs only. The probable reason for these high proportions of person offences, is the low proportion of drug offences committed by those who do not use illegal drugs.

Hypothesis 4

The hypothesis that ***the use of marijuana would not be related to violent offending***, was not clearly supported by the results of this study. Research by Tinklenberg et al. (1976) and others had suggested that marijuana may reduce violent behaviour. The present results indicate that offenders who reported using marijuana in the 12 hours before their offence (as the first, second, or third drug listed) committed only very slightly fewer person offences than was expected (just under half); a similar proportion to those of other drug users. Those who used marijuana in the month before the offence committed a similar proportion of person offences to users of other drugs (just under two-thirds).

The offence type with the highest percentage of marijuana users (in the 12 hours before the offence, and in the month before the offence) was drug offences, followed by property offences.

Contrary to alcohol use, little difference can be seen between the marijuana use of the two main offender types; 57% of person offenders who named a drug, and 60% of property offenders who named a drug had used marijuana before the offence. Of course, marijuana use is so common among young males in this country (Black and Casswell, 1993), that a comparison between the two offence types may be meaningless anyway. While the survey was being conducted, a number of inmates told the researcher that marijuana was their preferred drug over alcohol; that they had stopped using alcohol when they discovered the calming influence of marijuana (it made them feel "less aggro", etc).

It has been suggested that some drugs may be used to assist with the offence, e.g. tranquillisers or marijuana to control nervousness (also cocaine and heroin), or alcohol and bariturates to provide courage (Goldstein, 1989; Strug et al, 1984). The present results indicated a non-significant relationship between the main drug used before offending and the reason for using the drug, although opiate users cited "To give me courage or to calm my nervousness" more than was expected (40% of those who used opiates said this). Opiates are popular for their relaxing, 'feel-good' effects.

The main reason for using the drugs reported by Simonds and Kashani's (1980) person offenders was to increase their courage (as well as the report by some subjects that violence was not intended, the aim having been to steal). However, of the person offenders in the present study, the main reason for using drugs before the offence was Enjoyment (51%), followed by Habit (22%), and Courage (10%); the same pattern as found in the total sample. There are a number of possible reasons for why a much higher proportion of Simonds and Kashani's respondents reported 'Courage' as their reason; they were a younger sample (lack of experience/ confidence); the format of the questionnaire may have been different; the boys were being admitted to a 'training school' - and may have been afraid to admit to drug-taking as a habit, for enjoyment, and so on.

Brochu et al's (1992) summary of data from three Canadian studies included reports that a quarter of the men thought that drugs gave them courage to commit their offences: of the men in the present study, only 7.4% reported this as their main reason reason for using drugs before offending. The same small proportion of men in the present study reported that the drugs calmed them, while again, a quarter of Brochu et al's respondents said this. The questionnaire design may have influenced this: a large number of the New Zealand respondents chose the rather broad category, "enjoyment" as their main reason, which explains the low percentages for the other reasons.

Although a significant relationship was not found between drug use in the month before the offence and the main reason given for using drugs before offending, opiate users claimed "Habit" more than other users did, and cocaine users said "Enjoyment" more than others. This is not unexpected, as opiates are known to be highly addictive and habit-forming, while cocaine is known as a short-acting, euphoric, 'fun' drug.

Hypothesis 5

The hypothesis that ***property offenders would be mainly economically motivated*** was supported: of the property offenders, over two-thirds reported that the main reason they committed their offence was money-related (money for drugs, alcohol, other things, or a combination). This was considerably higher than the proportion of person offenders who cited money-related reasons (one-fifth), but the group of offenders with the highest proportion of these reasons were drug offenders (three-quarters of whom cited money-related reasons). This is not surprising, as most imprisoned drug offenders would be dealers, who, of course, deal to make money.

Nearly one-tenth of respondents cited the need for money for drugs as the main reason they offended. In addition, more than a quarter cited the need for money for alcohol, other things, or a combination of money-related reasons. This is consistent with Innes' (1988) report that 13% of inmates in his study were drug dependents who offended in order to get money for drugs (although the present study contains no measure of offenders' drug dependency at time of offence), and Harlow's (1991) finding that 13% of inmates reported 'money for drugs' as a reason for offending, although it is lower than Johnson et al's (1991) report that just under a quarter of high-offending, drug-using delinquent youths reported that their primary motivation was money for drugs. Johnson and colleagues suggested that this motivation "may be more relevant among near daily heroin and cocaine abusers". It has been suggested that crime explains drug use more than drug use explains crime, because the offenders obtain money through property crimes, then spend it on drugs (Hammersley et al., 1989; Hammersley, Forsyth, and Lavelle, 1990). The results of the present study suggest that this may be correct.

Brownstein and Goldstein (1990), using Goldstein's typology of motivators for drug-related violence, reported that only a few of the homicides they studied had arisen from economic necessity related to a drug lifestyle. The New Zealand results show that these money-oriented motives were reported by violent offenders less than was expected: very few cited money for drugs (no violent offenders except for robbers cited this reason), money for alcohol, money for other things, or a combination of these. Property offenders did cite money as a reason more than was expected: (nearly a quarter cited money for drugs, and a third money for other things, with a few citing money for alcohol or a combination). Money was the most common motive for drug offenders (a sixth for drugs, none for alcohol, and half for other things).

'Money for drugs' was cited as the main reason for offending by more of the property offenders than other offenders. Drug offenders probably do not need money for drugs - they have the drugs, they want money for other things!

Certain offender types of the New Zealand inmates were less likely than Harlow's (1991) U.S. inmates to report this motivation. Harlow found that nearly a third of robbers and burglars offended to obtain money for drugs, and a quarter of those in prison for larceny and fraud. The present study found that just over a quarter of burglars and only 3% of robbers offended for this reason (robbers tended to report 'money for other things' or anger/revenge, more than other reasons), and none of the New Zealand fraudsters cited this reason.

Many researchers (e.g. Barton, 1976, cited in Cohn, 1984; Bass et al., 1971, cited in Cohn, 1984; Eckerman et al., 1971, cited in Cohn, 1984; Jacoby et al., 1973, cited in McGlothlin, 1979; Johnston et al., 1976; Kozel and Dupont, 1977, cited in McBride, 1981; McBride, 1976, cited in McBride, 1981; O'Donnell et al., 1976, cited in McBride, 1981) have reported that drug users tend to commit property crimes more than other crimes, and more than non-drug users (although more recently, drug users have been reported to be committing more violent crimes). Harlow reported that the majority (two-thirds) of inmates who were users of major drugs, were in prison for drug crimes or crimes for economic gain. The New Zealand incidence is lower than this: just over one-third of illegal drug users were in prison for these offences. In particular, one-quarter of pill users; one-third of marijuana users; just over one-third of alcohol users; 40% of opiate users; and lastly, 44% of miscellaneous (amphetamines, hallucinogens, cocaine) users had been imprisoned for these offences. The lower New Zealand figures may be because the justice system in this country tries to put priority on imprisoning violent offenders, rather than other types of offenders.

Harlow (1991) reported that over one-quarter of those who had used drugs in the month before their offence, had offended in order to obtain money for drugs. However, Harlow's monthly drug users would have included many users of 'major' drugs, while the New Zealand respondents were mostly users of marijuana and alcohol. The New Zealand incidences are substantially lower than Harlow's: very few alcohol users or marijuana users reported offending to obtain money for drugs or money for alcohol, while slightly more of the other drug users did so. Nearly one-fifh of opiate users offended to obtain money for drugs, and none offended to obtain alcohol. More respondents reported that their main reason for offending was to obtain money for 'other things' (nearly one-fifth of respondents). Harlow found that over one-third of cocaine/crack users offended to get money for drugs; less than one-sixth of New Zealand cocaine users reported this motivation. However, this result should be interpreted with caution: the present study's sample size of cocaine users was very small compared to Harlow's. Another potential confounding factor is the possibility that results were affected by different wording of the questions - in the present study they were the main, or only, reason for offending, while the respondents in Harlow's study may have given more than one reason for offending. Also, the present study gave respondents a list of possible reasons from which to choose, while Harlow used individual interviews. Future research, if using an interview technique, could produce more accurate results by utilising open-ended questions.

In addition to money, the other main reason given by the New Zealand inmates was anger/revenge. Small percentages cited impulse, impulse due to the influence of drugs, and peer pressure as the reason for their offending.

Not surprisingly, those who used a drug prior to offending tended to report slightly more "Impulse" or "Impulse because I was wasted/high" as a reason for offending, but they also reported more money-related reasons, than was expected. It is interesting that those who did not use a drug reported "Anger/Revenge" slightly more than was expected.

There was a significant relationship between reasons for offending, and type of offence: as stated earlier, money was the primary motivation for over two-thirds of property offenders, and nearly three-quarters of drug offenders, but for only one-fifth of person offenders (which was much lower when robbery was not classed as a person offence). Anger/revenge was the primary motivation given by over one-third of person offenders, but only one-seventh of property offenders. Nearly all of those who cited anger/revenge as a reason for offending, were person offenders.

A recommendation for future research would be (if an interview technique is used) to include an open-ended question about reason for offending.

Hypothesis 6

The hypothesis, based on Goldstein's (1989) theory, that ***economically compulsive violence would be most related to the use of heroin or cocaine*** was not supported; users of these drugs were no more violent than other offenders.

Goldstein suggested that the use of opiates does not directly lead to violence, and that most drug users appear to be nonviolent; heroin and cocaine users may not be personally motivated by violent impulses, but violence may result from the offence context. It may also be that withdrawal from opiates can produce violent behaviour. One-third of the inmates in the present study reported using opiates in the month before the offence; although only 4% were using opiates daily or near-daily. Of those who used opiates in that month, only 58% committed person offences; this is less than the proportions of person offences for non-users, pill users, alcohol users, marijuana users, or the total inmate population (probably because opiate users had a higher proportion of drug offences). This would appear to support previous research: for example, Gandossy et al. (1980) had reported that narcotic addicts preferred income generating crimes and were less violent than other offenders.

A number of studies (Anglin and Speckart, 1988; Nurco et al., 1988; McGlothlin, 1978; Walters et al., 1985, cited in Harrison and Gfroerer, 1992) have found evidence that opiate use leads to crime for economic gain. Goldstein (1985, 1989) stated that heroin and cocaine were most often associated with crime for economic gain. Studies that tended to find that heroin addicts concentrated on property crimes include McBride and Swartz (1990), Nurco et al. (1988), Inciardi (1979, cited in Cohn, 1984), Inciardi and Chambers (1972, cited in Goldstein, 1989), and Finestone (1967, cited in Goldstein, 1989) (although more recently, drug users have been reported to be committing violent crimes more). However of those respondents who reported using opiates in the month before offending, 18% committed property offences; less than alcohol or marijuana users (once again, probably because opiate users had a higher proportion of drug offences: monthly opiate users and miscellaneous drug users had the highest proportions of drug offenders), but the same as the total inmate population.

Nonetheless opiate users (in the month before the offence) were more likely than other users to cite "money for drugs" as the main reason for offending, and more than was statistically expected. This was the only drug user group to be significantly related to the reason for offending. So opiate users did offend in order to obtain money for drugs more than other offenders, but their offences were not disproportionately violent.

Of the New Zealand inmates who used opiates in the 12 hours before offending, just over half committed person offences, which is lower than the proportion of person offenders in prison (two-thirds), and lower than the proportion of alcohol users and pill users who committed person offences, but higher than the proportions of marijuana users and miscellaneous drugs users. The number of pre-offence opiate users was small; of those who were violent, two committed robbery , one committed assault, and none committed sex offences.

Only 14.3% of those who used opiates before offending committed property offences (less than the total inmates population). Drug offences contained the highest proportion of opiates users (in the 12 hours before the offence and in the month before the offence), followed by person offences. It therefore seems that opiate use is related to property offending more than person offending, only in terms of use in the <u>month</u> prior to the offence (more of those who were regular users of opiates had an economic motivation to commit a property offence) not in terms of use <u>immediately</u> prior to the offence.

The hypothesis that ***cocaine*** use would be related to economically compulsive violence was not supported. Only a sixth of offenders reported having used cocaine in the month prior to offending. Over half of those who did use cocaine in the month before the offence, committed person offences; however when robbery is not counted as a person offence, the proportion drops to less than one-third. Of those who used miscellaneous drugs (which included cocaine) in the 12 hours before the offence, only one-third committed person offences; this was less than expected, because of the relatively high proportions of drug and property offences.

A major difference is evident between cocaine users in the U.S. and New Zealand: in addition to the lower proportion of cocaine users in New Zealand, in Harlow's (1991) report, 39% of cocaine users offended to obtain money for drugs (three times the proportion of other drug users), while the present study found only 16% of cocaine users offended for this reason.This was a lower proportion than opiate, pill, or amphetamine users, but higher than alcohol, marijuana, or hallucinogen users (although there was not a large difference between these figures). A probable explanation for this result, is that cocaine is more scarce, and expensive, in New Zealand, so it is not as easy to develop a habit as it may be in the U.S. (N.B. The small sample size of these users means that these results may not be particularly reliable).

Hypothesis 7

The hypothesis that ***use of drugs in the month before the offence would be reported more by robbers, burglars, and drug offenders***, was partially supported. Innes (1988) reported that half of robbers, burglars, thieves, and drug offenders were daily drug users in the month before their offence (this was higher than other offenders). Harlow (1991) reported that more than half of robbers and burglars used drugs in the month before their offence.

The present results show that between a third and eight-ninths of robbers and burglars used each of the main drug types. [four-fifths of burglars and eight-ninth of robbers used marijuana; three quarters of burglars and over half of robbers used alcohol; around half of both used miscellaneous drugs; over a third of both used opiates; and one-fifth of burglars and two-fifths of robbers used pills]. Again it is clear that marijuana use is considerably higher in the present sample than Harlow's U.S. sample.

Compared to other offenders, robbers were high users of marijuana, opiates, and pills in the month before their offence. Compared to other offenders, burglars were high users of

alcohol; also marijuana and miscellaneous drugs (especially hallucinogens). Drug offenders were, of course, high users of all drug types.

It is not surprising that drug offenders appear to have the highest use levels of specific drugs. They are lowest among violent (person) offenders; of which just over half had used alcohol, two-thirds had used marijuana, and one-third used opiates, pills (although this is higher than property offenders) and miscellaneous drugs.

In total, about three-quarters of the property offenders and person offenders had used illegal drugs in the month before their offence, while nearly all of the drug offenders had done so.

Ladouceur and Temple (1985) reported that drug use was associated with nonviolent property crime. Gandossy et al. (1980) found that narcotic addicts tended to commit income-generating crimes, i.e., property crimes. Harrison and Gfroerer (1992) stated that the preferred crimes among drug abusers were firstly drug dealing, followed by property crimes and lastly violent crimes. The findings of researchers such as these, that drug abusers tend to be more involved in non-violent property crime, were partially supported (note: the terms 'abusers' or 'addicts' may not be appropriate for this sample; the present study contains data on drug use).

Results of the present study show a non-significant relationship between offence type and whether offenders used alcohol only, illegal drugs only, alcohol and illegal drugs, or nothing, in the month before offending. (although there is a significant relationship between offence type and these usage categories for the 12 hours before offending). Offence type was not significantly related to whether alcohol, marijuana, opiates, or pills were used in the month before the offence; but it was related to whether amphetamines and hallucinogens were used. These drugs were used more by property and drug offenders.

Those offenders who used alcohol and illegal drugs in the month before their offence, committed the fewest violent offences (59%), probably because they committed more drug offences. Those who used only alcohol, committed the most violent offences (93%). However, violent offences were most prevalent among non-users of individual drugs : three-quarters of those who did not use illegal drugs, and three-quarters of those who did not use alcohol, were in prison for a violent offence. Those who did not use marijuana, and those who did not use miscellaneous drugs (mainly amphetamines, hallucinogens, cocaine) were most likely to have committed a violent offence. These

were followed by those who did not use opiates, and those who did not use pills. This supports Harlow's (1991) finding that violent offences were more prevalent among non-users (although the group in the present study who used only alcohol in the month before the offence, did commit the highest proportion of violent offences). Two-thirds of the group who used no drugs at all (including alcohol) in the month before the offence were violent offenders, but this group also includes those inmates who chose not to respond to this part of the questionnaire. Of those who used no drug (including alcohol) in the month before the offence, most were sex offenders.

Apart from pill users (who committed more person offences than other users), there was essentially no difference between the use of alcohol and other drug types in the month before the offence, regarding the proportion of users who commit person offences. This may be because many (over half) of users had used both alcohol and other drugs in the month before offence, so the figures overlap substantially.

While Harrison and Grfroerer (1992) suggested that there was a hierarchy of preferred crimes among drug abusers, with the most preferred being non-violent property crime, more recent research has suggested that hard-drug users commit violent crimes at a level at least equal to non-users. The U.S. NIJ (Gropper, 1985) found that intensive narcotic addicts were heavily involved in crime, much of it violent, and that heroin-using criminals were just as likely as non-drug using offenders to commit violent crimes, when financial gain was the attraction. Similar reports have come from Wish and Johnson (1986), who reported that some hard drug using offenders may have rates of violent crimes equal to or above those of non-using offenders, Eckerman et al. (1971, cited in Gandossy et al., 1980), Cohn (1984), and Preble and Casey (1969, cited in Gandossy et al., 1980). The present study does not confirm this latter trend. Opiate using offenders in the present study did not commit fewer violent crimes than alcohol users, pill users, or marijuana users, but they, like the users of other drugs (apart from pills), did commit fewer violent offences than non-drug users. However the previous trend, in which drug users were reported to commit mainly property offences is not supported very strongly: Users of alcohol, miscellaneous drugs, and marijuana did have slightly higher proportions of property offences than non-users, but where the real difference can be seen is in terms of drug offences: users of miscellaneous drugs and opiates had substantially higher proportions of drug offences than did non-users (creating lower proportions of violent and property offences).

Hypothesis 8

The hypothesis, based on Pallone (1990), that ***if drug use was related to offending, it would be as 'lubricant' (facilitating a predisposition to criminal behaviour), or, in the case of opiate abusers, as 'motive', rather than as 'engine' (influencing an individual to commit an offence that he would not otherwise do)*** was supported, if alcohol is not included as 'drug use'.

Those who used alcohol prior to offending were more likely to report deciding to offend after using alcohol; while those who used illegal drugs were more likely to decide to offend before using drugs; so for this group, drug use could not been an 'engine'.

Two-thirds of those who used alcohol prior to offending, said they would not have (or possibly would have) committed the offence if they had not been under the influence of alcohol. By contrast, two-thirds of those who had used illegal drugs, said they would, or probably would, still have committed the offence anyway.

For opiate users, drug use may have been a 'motive', as Pallone suggests. Of those who used opiates in the month before the offence, nearly one-fifth cited 'money for drugs' as their main reason for offending, with more than another quarter citing 'money for other things' or a mixture. No other reasons were as frequent among opiate users. (By contrast, 'anger or revenge' was the most frequent reason for other drug users.)

ADDITIONAL FINDINGS

Age

Younger inmates used a drug before offending significantly more often than older inmates, but those younger inmates who used drugs before their offence were not more likely to believe they were under the influence of drugs, than older offenders. Younger inmates also used alcohol more often in the month before the offence, and were more likely to have used marijuana, although they did not use marijuana more frequently than older users. Those under thirty years of age were more likely to have used opiates, pills, and miscellaneous drugs (especially hallucinogens), than older inmates. This is probably because of the greater willingness of younger people to experiment with drugs.

Ethnicity

The ethnicity of inmates was related to their offence type, with Maori and Pacific Islanders more likely to have committed person offences than was expected, but it was not related to whether drugs were used before the offence. Ethnicity was not related to the use of alcohol in the month before the offence, although more European than Maori respondents reported using alcohol three or more times per week. Ethnicity was not related to the use of marijuana in that month, although more Europeans used this drug every day or nearly every day, than did Maori (while Maori respondents reported all of the other usage levels more than Europeans did). Ethnicity was not related to the use of pills, but Europeans were more likely than Maoris to have used opiates, amphetamines, and cocaine in the month before the offence. These results suggest that European offenders use a wider range of drugs than do Maori offenders, who tend to stick with alcohol and marijuana. Europeans also tend to be heavier users of these drugs.

Education

Consistently with Harlow (1991), the present study found no consistent pattern regarding the educational background of inmates.

Employment

The unemployed (at time of offence) had served more prison terms than the employed (nearly two-thirds of unemployed respondents were in prison for at least their second time). Obviously, it is harder to gain employment when one has a history of imprisonment; from another angle, working for somebody else may not be very attractive to those individuals who have chosen criminal offending as a career path.

Times in Prison

Inmates who had been in prison more than once tended to have committed the same type of offence as they did on the previous occasion.

Those who were in prison for the first time reported less frequent use of alcohol in the month before the offence, than did those with more than one imprisonment. However, first-timers (probably because of their younger age group) were more likely to have used marijuana in the month before the offence, than repeaters (but frequency of marijuana use was not related). Repeaters were more likely than first-timers to have used pills (minor tranquillisers) in the month before the offence.

Dependency

It is important to note that 'dependency' does not refer to whether respondents felt they dependent on drugs at the time of the offence, or at the time of the survey, but whether they felt that they had ever been dependent on a drug. The questionnaire contained no measure of respondents' addiction (i.e., physical dependence (O'Brien et al., 1992)); the interpretation of the term 'dependence' was specific to the individual respondent.

The majority (nearly two-thirds) of respondents believed they had not been dependent on drugs. Most had never been in a drug treatment programme.

The most common drug of dependency was marijuana, followed by alcohol. This contrasts with the New Zealand Drug Outpatients Statistics (Alcoholic Liquor Advisory Council, 1987), in which half of the new-to-agency outpatients reported alcohol as their main drug of misuse, and three-quarters reported it as one of their main drugs of misuse. However, alcohol use is not illegal; the respondents in the present study may have been more willing to report involvement with illegal drugs, as they were already imprisoned for criminal offending, and had 'nothing to lose'.

Users of marijuana, opiates, pills, and miscellaneous drugs (specifically, amphetamines and hallucinogens) in the month before the offence were more likely than expected, to report having had a drug dependency, while the use of alcohol was not related to dependency.

Dependency was related to whether drugs were used before the offence: almost all of those who believed they had had a dependency, reported using drugs before their offence, and half of those who used drugs before offending, reported having had a

dependency. It is logical that dependency would be more likely to be reported by the group of offenders who had used drugs more.

The drug of dependency was not related to the type of offence, but it was related to the type of drug used before offending. The named drug of dependency was likely to be the drug used before the offence.

Respondents aged 20-24 years were more likely than expected to report a dependency on marijuana (this may be because marijuana use is so common in this age group - more reported using this drug in the month before offending, than reported using alcohol), while 25-29 year-olds were more likely to report alcohol and opiates. Those aged 30-39 years tended to report dependency on alcohol or pills more than expected.

Decision to Offend Before/After Drug Use

Of all respondents who used pre-crime drugs, approximately half decided to offend before using the drugs, and half decided afterwards. Interestingly, there was no relationship between how long before the offence the drugs were taken, and when the decision to offend was made. Neither was there a significant relationship between the type of offence, and when the decision to offend was made.

As mentioned earlier, those offenders who used alcohol before the offence were more likely than those who used other drugs to have decided to offend after using the alcohol, while those who used other drugs were more likely to have decided beforehand. This would suggest that intoxication with alcohol can lead to unpremeditated, impulsive offending, while the use of illegal drugs before the offence, may be 'part of the plan'.

Those inmates who were opiate users (they used opiates in the month before the offence), were more likely to report having decided to offend prior to using drugs before the offence, than were non-users of opiates; this may be related to the finding that opiate users were more likely to report offending to obtain money for drugs, and also the finding that opiate users committed more drug offences, which are not usually impulsive offences). Similarly, users of miscellaneous drugs (particularly hallucinogens) were more likely to decide before drug use at the time of the offence. The use of alcohol, marijuana, or pills in the month before the offence was not related to when inmates decided to offend.

Offenders who had been dependent on expensive, more addictive drugs such as opiates, tended to form the intent to commit their offences prior to using drugs before the

offence. The drug of dependence reported by those who believed they had had a dependency, was related to whether they decided to offend before or after pre-crime drug use. All opiate dependents who used a pre-crime drug, decided to offend before using that drug. By contrast, just over half of marijuana dependents decided before using a pre-crime drug (probably because they would have used marijuana anyway - use of this drug is so common), while all pill dependents decided after using a pre-crime drug, and two-thirds of alcohol dependents decided to offend after using a pre-crime drug.

Companions when using pre-crime drugs

Most of those respondents who used drugs prior to offending reported being with others, and most were with more than one other person. A substantial proportion were with five or more people; this reflects the role of drug-taking as a social activity.

There was no relationship between the type of companions, and the type of offence, or whether they tried to talk the offender out of using the drugs, or committing the offence.

Most respondents reported that nobody tried to discourage them from using the drugs, especially alcohol users. Most also reported that nobody tried to discourage them from committing the offence; this was not related to the type of offence.

Drug use after offending

Of the 48% of offenders who reported using a drug after the offence (within 12 hours), 31% did so within 15 minutes, and another 38% within three hours, i.e. over two-thirds had used the drugs within three hours of completing their offence. A possible confound is that it may have been easier for respondents to remember drug use that took place immediately after the offence, rather than up to 12 hours later.

Those who had used alcohol prior to offending were less likely than other users to use a drug afterwards. A possible confounding factor is that if alcohol use is related to an increased likelihood of apprehension, these users may be more likely to be in custody and unable to use a drug immediately afterwards.

General Limitations of the Present Research

The present study contains similar methodological flaws to those of previous research: the use of a sample that was convenient to identify and access (incarcerated offenders), which is neither representative of all violent offenders, nor of their drug use patterns; the retrospective nature of the study; and the measures of drug/alcohol use did not quantify the amount consumed. Limitations such as these impose constraints on what can be inferred from the results, about the relationship between drug use and offending (Collins and Messerschmidt, 1993).

This research has had to rely upon retrospective data and correlational relationships between drug use and crime. There are numerous problems inherent in these approaches; an obvious limitation is that evidence for drug use by offenders prior to the offence is based on historical accounts provided by the offenders. Because the self-reports were confidential and uncorroborated by collateral information from family, acquaintances, or official records, the researcher's inability to accurately verify the reported presence of substances substantially restricts interpretation of findings. Estimating the magnitude of under- or overestimating is difficult, because no other source of information can provide an adequate standard for comparison with these data. However, the use of self-reported information has been generally validated in large epidemiologic surveys of sensitive and illegal behaviours, such as illicit drug use (Johnston, O'Malley, and Bachman, 1986, cited in Johnson and White, 1989).

It is important to stress that the data analysed are cross-sectional in nature. Hence, it is not possible to assess the causal connections that may be involved in the association found between drug use and committing criminal offences. It is hoped that future research - involving longitudinal data sets - will shed light on the causal relationships between drug use and offending.

As with most of the previous studies of drug use and crime, this study used a sample that was convenient to identify and access: incarcerated offenders. However, the prison population described in this study are not necessarily representative of all offenders (or of their drug use patterns). Pernanen (1993) reports that "the proportion of violent crime incidents that are not detected and thus do not enter the researchers' data sources is considerable (U.S. Department of Justice, 1977; Wolfgang and Singer, 1978; Cherpitel, 1989)" (p. 102). In one report, it was estimated that three out of five violent criminals, and one in two non-violent criminals (burglars) are unidentified by police or court authorities (Fingarette, 1981, cited in Myers, 1982). The associations shown in this study

are, in fact, with 'bungled crime' rather than crime successfully committed (i.e. undetected crime). Alcohol/drug consumption at the time of the offence may have contributed to the failure of the event in a number of ways. If it is true that alcohol/drug use contributes to bungled crime, it cannot be assumed that the mechanisms which operate are the same for violent and non-violent events. In addition to any role which alcohol/drugs may have in the detection of the crime, there are also possible effects on sentencing to be considered. Firstly, clear and accurate recall by many of the participants of the details of the crime will, doubtless, be related to their level of alcohol/drug consumption at the time of the offence, and an absence of information will not create a strong defence. Secondly, intoxication by the offender at the time of committing the offence may bias judicial proceedings. This may operate both for and against the defendant.

As noted above, one probable difference between unsolved and solved cases is that an offender who was intoxicated at the time of the crime is more likely to be traced and apprehended than a sober offender (Shupe, 1954, cited in Holcomb and Anderson, 1983; Greenberg, 1981; Pernanen, 1993); this would result in an overestimation of how often alcohol or other drugs are involved. An assumption made in this study is that drug/alcohol use is accurately reported. This is unlikely; drug/alcohol use may be overreported / exaggerated, because the offender may wish to minimise personal responsibility for the offence (Pernanen, 1993). Although it might be well to remember that the findings of the present study are subject to possible qualification because of the nature of the sample analysed (most offenders are not caught, nor convicted), this does not necessarily invalidate the conclusions of this study, which are based on comparisons of the drug/alcohol use between incarcerated violent and property offenders. Although the selection process introduces biases, it does not seem that it would select differentially on the basis of the alcohol or drug use of property offenders as opposed to violent offenders (see Welte and Miller, 1987). Of course, the question still remains as to the degree of association between drug use and offending in the general population.

The use of inmate populations has the advantage of including the most extreme offenders, so that if a relationship is to be found between drug use and offending, it should be most obvious among those in prison. Therefore, if a relationship cannot be found with this group, then it is unlikely to be found in any other (Bakker, 1991).

Classification into the broad categories of 'person' and 'property' offences may cause problems, in that a wide range of behaviours are included in, particularly, the 'person' category (e.g., murder, assault, threatening to kill, rape, robbery). The effects of drugs

on these behaviours may vary greatly (Bakker, 1991). Although chi-square analysis was conducted using specific offences as well as the broad categories, and the relationships were found to be nonsignificant, the small individual sample sizes of these groups would make any conclusions meaningless.

The limited sample size restricts the significance of inter-variable relationships, particularly for those questionnaire items which some respondents chose not to answer. For some variables the sample size dropped from to 139 to as low as 81, and for items on drug use which were not applicable if drugs had not been used by the respondent, the sample size was reduced to between 44 and 94, depending on the particular item.

The term "drugs" may have been a potential confounding variable in the study, as it is possible that some inmates would have found it difficult to conceptualise alcohol as a "drug", although alcohol was at the top of the drug list used in the questionnaire, and the questionnaire administrator verbally explained to respondents at the beginning of the exercise that the study included alcohol.

A 1987 New Zealand Justice Department Survey of 19 prisons showed that almost half of inmates had reading ages of less than 10 years. An important potential limitation to this study is the use of a written questionnaire. Although the option was given for inmates to respond to the questions verbally, in private, this was not popular, possibly owing to (a) inmates' embarrassment at admitting to low literacy levels, or (b) reluctance to allow the researcher to connect responses to individuals. However, many inmates responded well to the availability of the researcher to give assistance with any part of the questionnaire; and the small group sizes meant that all respondents were able to receive assistance if/when it was required.

Another possible limitation arises from the volunteer nature of the survey. It may have attracted a disproportionate number of inmates who were interested in drugs!

It may be useful to keep in mind the length of time that various drugs are reported to be effective after ingestion: for example, while opiates can last up to 8 hours, cocaine lasts less than an hour, peaking in 15-20 minutes. Marijuana usually peaks within 10-30 minutes, and lasts 2-3 hours, although this can be hugely variable.

Finally, this study included some respondents who had been incarcerated for a drug offence. The nature of the data made it impossible to determine whether these respondents had also been convicted of non-drug offences, as questionnaire respondents

were asked to indicate their main or most serious offence only. However the inclusion of data from respondents who had been incarcerated solely for drug offences is inappropriate in an analysis of links between drug use and crime. Drug offences will be inevitably be associated with drug use; therefore analyses should only include person and property offenders, if their purpose is to determine whether significant differences exist between the pre-offence drug use of these offenders.

Summary

Half of the inmate sample surveyed, reported being under the influence of drugs while committing the offence for which they were incarcerated; over two-thirds of the sample had used drugs in the 12 hours before the offence, which was similar to or higher than most overseas figures. The high usage was particularly evident for younger offenders. Most pre-offence users had used illegal drugs, or a combination of illegal drugs and alcohol. Only a small number had used alcohol only. The most common pre-offence drugs were marijuana, followed by alcohol, and then 'miscellaneous' drugs (mainly amphetamines). Contrary to U.S. data, there was very little cocaine, PCP, or opiate use before offending.

Over three-quarters of those who reported using drugs prior to commission of the offence, had done so within three hours of the offence.

The offenders with the most frequent pre-offence drug use were drug offenders, followed by burglars, then robbers. However the overall relationship between offence type and pre-offence drug use was non-significant. Violent offenders reported the lowest pre-offence drug use (this was most evident when robbery was not classed as a violent offence). The highest frequency of pre-offence drug use was for property offenders. This did not support previous research which had reported strong links between drug use prior to offending, and violent offences. Drug users committed a lower proportion of violent offences, than did the overall sample (this is in some part due to their higher proportion of drug offences). In contrast to the literature, property offenders were more likely than person offenders to have used alcohol before the offence. There was no significant difference between the proportion of violent offences committed by illegal drug users and alcohol users, although when robbery was not classed as a violent offence, the proportions of violent offences committed by users of the illegal drugs dropped substantially. Overall, sober offenders (those who used no drugs in the 12 hours before the offence) committed the highest proportion of violent offences. The offenders who had used only illegal drugs, or only alcohol, had the next highest proportions of violent offending, while those who had used both alcohol and illegal drugs, had the lowest.

In terms of the main drug used prior to the offence, those who had used minor tranquillisers committed the highest proportion of violent offences, followed by those who were sober. Those who had used opiates, and those who had used marijuana, committed the lowest proportions of violent offences.

Fewer offenders reported that the reason for their offence was to obtain money for drugs than in U.S. studies, although over one-quarter did report that they offended in order to obtain money for other things, or alcohol, or a combination (mainly property offenders). Anger or revenge was the most frequent reason given by person offenders.

Nearly three-quarters of the sample reported having used illegal drugs in the month before their offence. The most common drugs were marijuana, alcohol, hallucinogens, and opiates. Marijuana was the most frequently used, with over half of those who used this drug doing so daily or almost daily. Less 'major' drugs (opiates, cocaine, PCP, LSD) were used than in U.S. research, but more marijuana.

Conclusions and General Implications of the Present Research

There is clearly a relationship between drug use and criminal offending: a high proportion of the inmates surveyed, particularly of the younger inmates, had used drugs in the 12 hours before committing their offences. Ladouceur and Temple's (1985) research suggested that "while the crime is in progress, many offenders who use drugs are not under the influence". However the present results indicate that nearly three-quarters of those who used drugs in the 12 hours before offending, reported being under the influence at the time of offending (half of the offender sample).

However, this does not necessarily mean that drug use causes offending. Many respondents had been drug users in the month before the offence (nearly one-third of respondents had been using alcohol three or more times per week, and over half had been using marijuana this frequently), and thus were likely to have been using drugs on the day of the offence.

An important finding of this research is that violent offenders were not more likely than other offenders to have been under the influence of drugs at the time of the offence. There was a non-significant relationship between whether drugs were used before offending, and offence type; nearly three-quarters of property offenders and nearly two-thirds of person offenders consumed drugs before offending. The use of alcohol was not related to a higher proportion of violent offending than was the use of illegal drugs (mainly owing to the fact that a proportion of the users of illegal drugs committed robbery, which is classed as a violent offence); in fact, a much higher proportion of property offenders had used alcohol before the offence than had person offenders.

However, respondents who had used alcohol before offending, were substantially more likely than users of illegal drugs to report having decided to offend after using the alcohol, and were more likely than the users of illegal drugs to deny that they would still have offended if they had not used alcohol. This indicates that while offending by illegal drug users is usually pre-planned and may be 'inevitable', offending by individuals intoxicated by alcohol may be preventable, i.e., the offences may not have happened if it were not for the alcohol intoxication.

The offenders who had used both alcohol and illegal drugs were least likely to have committed a violent offence, while those who had used no drugs at all were the most likely. Sober offenders were more likely to report that their main reason for offending was 'anger or revenge', while those who used drugs (including alcohol) before offending,

tended to give the reasons 'impulse' or 'impulse because I was wasted/high', and money-related reasons.

The acquisition of drugs as a motivation for offending was reported most frequently by those respondents who had used opiates in the month before the offence, probably owing to the addictive nature, and expense, of opiates.

The widely held belief that "drugs cause violence" is not substantiated by the results of this study. A lower proportion of the person offenders had used drugs before the offence and in the month beofre the offence, than the proportions of property and drug offenders who had done so. As Collins and Messerschmidt (1993) and Bakker (1991) point out, violence can be accounted for by a wide variety of causal factors, including personality, social and cultural influences, and economic conditions. Ladouceur and Temple (1985) concluded that drug use is probably only one of a combination of factors influencing a specific crime - if any influence at all. They found that (a) alcohol use did not significantly discriminate between offender types, while the present study found that alcohol was used before the offence by nearly half of the property offenders, but only one-quarter of person offenders, and one-fifth of drug offenders; and (b) less than half of any of any offender groups reported being under the influence of drugs, or alcohol, at the time of offence, while the present study found that well over half of property offenders and drug offenders reported being under the influence of drugs at time of offence, but less than half of person offenders did so.

A review of the literature linking the use of psychoactive substances with aggressive and violent behaviour by Moss and Tarter (1993), stated, "In general, the effects of alcohol and other drugs on aggression and violence are influenced through the complex interaction of (1) the particular pharmacological effects and dose of the specific drug, (2) the psychological and biological characteristics of substance-using individuals, and (3) the situational context in which the drug use occurs" (p. 149). The authors acknowledge that

> "Superficially, a direct relationship between alcohol, drugs, and aggressive violence seems deceptively apparent: a disproportionate number of violent crimes are committed by individuals who are under the influence of psychoactive drugs or are in the drug trade (Brownstein and Goldstein, 1990). Reinforcing this perspective is the observation that prisons are also largely populated by substance-abusing individuals (National Institute of Justice, 1986). However, the argument for a direct causal link is seriously undermined by the fact that a significant proportion of the younger

> American population uses alcohol and/or other drugs (Johnston, O'Malley, & Bachman, 1991) but apparently do not engage in violent behaviour" (p. 149-50).

The authors agree with Blum (1969), that "drugs only modify the judgement and self-control of the user who, in a specific situation, may become violent" (p. 150). Experimental evidence (Eichelman, 1978, cited in Moss and Tarter, 1993) has suggested that "the direct pharmacological effects of drugs alone are neither necessary nor sufficient for violent behaviours to be manifested in humans and other animals" (p. 150). Moss and Tarter cite research suggesting that the psychological makeup of the individual seems to be an important determinant of drug-related violence: many substance-abusing individuals display aggressive and violent behaviour prior to drug use (Robins, 1966, cited in Moss and Tarter, 1993).

Clearly, some of the widely held beliefs about drugs and drugs users are false, or at best simplistic. "The reality of drug abuse is so interconnected with other factors affecting human behaviour as to make such beliefs a poor basis for guiding public policy unless these other factors are taken into account" (Gropper, 1985, p. 2). There is ongoing debate about the appropriate legal status for psychoactive drugs; the prohibition position is premised on assumptions about the behavioural effects of drugs.

Mitchell (1988), has said that if intoxication/drug use increases violence, then voluntary drug use should amplify the offender's punishment. However the present study did not find a relationship between drug use and offence type, so Mitchell's suggestion may not be an appropriate one. The finding that sober offenders committed more violent offences than intoxicated offenders suggests that drug abuse prevention programmes may not be the most effective method of reducing violent offending; other factors contributing to violence should be addressed, such as anger management.

As Reiss and Roth (1993) argue, the strategy of selectively longer prison terms for convicted offenders with histories of drug use would have "minimal effects on violent crime levels without massive increases in prison populations" (p. 208).

Recommendations for Future Research

- The use of an interview technique would eliminate problems with the literacy of respondents, and would enable the collection of a larger amount of information.
- It would be preferable to conduct any future study as soon as possible after offending has taken place; in practical terms, as soon as possible after the conviction of offenders.
- To check the reliability of responses, it would be desirable to readminister the questionnaires / interview, after enough time has elapsed for respondents to have little recollection of their previous responses.
- As a validity check, it would be desirable to obtain access to official records, so as to crosscheck the offence type reported by respondents, as well as possible drug use information.
- Include a fake drug on the drug list, as a check on people who might claim to have used everything (Black and Casswell, 1993, p. 27). Black and Casswell's (1993) results showed that no person in their sample reported use of the fake drug, suggesting that the "respondents did not boast about illicit drug use" (p. 21).
- A larger sample size would clearly be desirable; and the inclusion of Maximum Security inmates in the study (although only 4% of male inmates in New Zealand in 1993, were classified as maximum security (Southey, Spier, and Edgar, 1995)).
- The inclusion of the general population, or non-apprehended offenders, would be invaluable for the investigation of drugs-crime links; however for obvious reasons it is inherently difficult to question individuals in the general population about illegal behaviour.
- A longitudinal study would be most useful, as one could investigate drug use and offending over time, and obtain a much more accurate picture of relationships between the two.

Suggested areas for future investigation include:

- Gender differences
- Other individual differences (behavioural/genetic/neurological) that distinguish people who behave violently when using drugs/alcohol from those who do not.
- Relating different combinations of multiple psychoactive drug use pharmacologically to violent behaviour.
- Study of the sample of events in detail: what actually happens in criminal events where drugs are consumed (motives/intentions, sequences of events, interactions, and events following the offence).

- Careful measurement of the supposed links between drug use and offending, e.g., emotions, neurological functions, psychopharmacological effects, cognition, perception, interpretation of social cues (Fagan, 1993).
- It would be preferable if future studies were to use some standardised definitions of terms such as 'drug abuse', 'violence', etc.

REFERENCES

Abel, E.L. (1977). The relationship between cannabis and violence: A review. Psychological Bulletin, 84(2), 193-211.

Alcoholic Liquor Advisory Council (1987). New Zealand Alcohol / Drug Outpatient Statistics (1987). Wellington: Alcoholic Liquor Advisory Council.

Allen, R.M., & Young, S.J. (1978). Phencyclidine-induced psychosis. American Journal of Psychiatry, 135, 1081-1083.

Anglin, M.D., & Speckart, G. (1988). Narcotics use and crime: A multisample, multimethod analysis. Criminology, 26(2), 197-233.

Anthony, J.S. (1988). Drug abuse as a forensic issue. American Journal of Forensic Psychology, 6(3), 29-35.

Asher, B. (1988). Parole Decisions of District Prison Boards Wellington: Policy and Research Division, Department of Justice.

Asnis, S., & Smith, R. (1978). Amphetamine abuse and violence. Journal of Psychedelic Drugs, 10, 317-377.

Bakker, L.W. (1991). Alcoholism and offending in male prison inmates: Thesis. Christchurch: University of Canterbury.

Ball, J.C., Rosen, L., Flueck, J.A., & Nurco, D.N. (1981). The criminality of heron addicts:When addicted and when off opiates. In J.A. Inciardi (Ed.) The Drugs-Crime Connection (Sage Annual Reviews of Drug and Alcohol Abuse, Vol 5) (pp. 39-65). Beverly Hills: Sage Publications.

Ball, J.C., Shaffer, J.W., & Nurco, D.N. (1983). The day-to-day criminality of heroin addicts in Baltimore - A study in the continuity of offence rates. Drug and Alcohol Dependence, 12, 199-142.

Bartol, C.R., & Bartol, A.M. (1986). Criminal behaviour: A Psychosocial Approach (2nd ed.). New Jersey Prentice-Hall.

Bean, P.T., & Wilkinson, C.K. (1988). Drug taking, crime, and the illicit supply system. British Journal of Addiction, 85(5), 533-539.

Belenko, S., Maria-Drita, I., & McElroy, J.E. (1992). Drug tests and the prediction of pretrial misconduct: Findings and policy issues. Crime and Delinquency, 38(4), 557-582.

Bergman, B., & Brismar, B. (1993). Assailants and victims: A comparative study of male wife-beaters and battered males. Journal of Addictive Diseases, 12(4), 1-10.

Berkowitz, L. (1993). Aggression: Its Causes, Consequences, and Control. New York: McGraw-Hill.

Black, S., & Casswell, S. (1993). Drugs in New Zealand: A Survey, 1990. Auckland: Alcohol and Public Health Research Unit, University of Auckland.

Blumberg, H.H., & Crow, I. (1978). The epidemiology of nonmedical drug use. Community Health, 9(4), 201-205.

Blumstein, A., Cohen, J., Roth, J.A., & Visher, C.A. (Eds.). (1986). Criminal Careers and "Career Criminals" Vol II. Washington, D.C.: National Academy Press.

Boyatzis, R.E. (1974). The effect of alcohol consumption on the aggressive behavior of men. Quarterly Journal of Studies on Alcohol, 35, 959-972.

Braybrook, B., & Southey, P. (1992). Census of Prison Inmates 1991. Wellington: Policy and Research Division, Department of Justice.

Brecher, M., Wang, B.W., Wong, H., & Morgan, J.P. (1988). Phencyclidine and violence. Journal of Clinical Psychopharmacology, 8(6), 397-401.

Brochu, S., Desjardins, L., Douyon, A., & Forget, C. (1992). Drug use prevalence among offenders. In F. Losel, D. Bender, & T.Bliesener (Eds.), Psychology and law: International Perspectives (pp. 105-110). Berlin: Walter de Gruyter.

Brown, W.A., Manderson, D., O'Callaghan, M., & Thompson, R. (1986). Our Daily Fix. Australian National University Press.

Brownstein, H.H., & Goldstein, P.J. (1990). A typology of drug-related homicides. In R. Weisheit (Ed.), Drugs, Crime and the Criminal Justice System. Cincinnati, OH: Anderson Publishing Co. & Academy of Criminal Justice Sciences.

Bunt, G.C. (1992). New perspectives in the legal psychiatry of cocaine-related crimes. Journal of Forensic Sciences, 37(3), 894-901.

Bureau of Justice Statistics (1983). Prisoners and Alcohol. Washington, D.C.: U.S. Department of Justice.

Burr, A. (1987). Chasing the dragon. British Journal of Criminology, 27(4), 333-357.

Burrowes, K.L., Hales, R.E., & Arrington, E. (1988). Research on the biologic aspects of violence. Psychiatric Clinics of North America, 11(4), 499-509.

Busch, K.A., & Schnoll, S.H. (1985). Cocaine- Review of current literature. Behavioral Sciences and the Law, 3(3),: 283-298.

Bushman, B.J., & Cooper, H.M. (1990). Effects of alcohol on human aggression: An integrated research review. Psychological Bulletin, 107(3), 341-354.

Bywater, C.L. (1982). Drink, drugs and criminal intent. New Law Journal, 615-617.

Cameron, N. (1990). Defences and the Crimes Bill. In N. Cameron & S. France (Eds.), Essays on Criminal Law in New Zealand (pp. 57-82). Wellington: Victoria University of Wellington Law Review and Victoria University Press.

Campbell, I.G. (1988). Mental Disorder and Criminal Law in Australia and New Zealand. Wellington: Butterworths.

Central Office of Information (1985). The Prevention and Treatment of Drug Misuse in Britain. London: Central Office of Information.

Chaiken, J.M., & Chaiken, M.R. (1982b). Varieties of Criminal Behavior: Summary and Policy Implications. Santa Monica: Rand.

Chambers, C.D., Dean, S.W., & Pletcher, M.F. (1981). Criminal involvements of minority group addicts. In J.A. Inciardi (Ed.) The Drugs-Crime Connection Beverly Hills: Sage Publications.

Chase, C.I. (1984). Elementary Statistical Procedures (3rd ed.). United States: McGraw-Hill Book Company.

Cherek, D.R., Steinberg, J.L., & Manno, B.R. (1985). Effects of alcohol on human aggressive behaviour. Journal of Studies on Alcohol, 46(4), 321-328.

Clayton, R.R., & Tuchfield, B.S. (1982). The drug-crime debate: Obstacles to understanding the relationship. Journal of Drug Issues, 12(2), 153-166.

Cohn, A.V. (1984). Drugs, crime and criminal justice: State-of-the-art and future directions. Federal Probation, 48(3), 13-24.

Collins, J.J. (1981). Alcohol careers and criminal careers. In Collins, J.J. (Ed.), Drinking and Crime: Perspectives on the Relationships Between Alcohol consumption and Criminal Behavior (pp. 152-206). New York: The Guildford Press.

Collins, J.J., Hubbard, R.L., & Rachal, J.V. (1985). Expensive drug use and illegal income: A test of explanatory hypotheses. Criminology, 23, 743-763.

Collins, J.J., & Messerchmidt, P.M. (1993). Epidemiology of alcohol related violence. Alcohol Health and Research World, 17(2), 93-100.

Collins, J.J., & Schlenger, W.E. (1988). Acute and chronic effects of alcohol on violence. Journal of Studies on Alcohol, 49(6), 516-621.

Cookson, H.M. (1992). Alcohol use and offence type on young offenders. British Journal of Criminology, 32(3), 352-360.

Cordilia, A. (1985). Alcohol and property crime: Exploring the causal nexus. Journal of Studies on Alcohol, 46(2), 161-171.

Criminal Law Reform Committee (1984). Report on Intoxication as a Defence to a Criminal Charge. Wellington: Criminal Law Reform Committee.

Dembo, R., Washburn, M., Wish, E.D., Schmeidler, J., Getreu, A., Berry, E., Williams, L., & Blount, W.R. (1987) Further examination of the association between heavy marijuana use and crime among youths entering a juvenile detention center. Journal of Psychoactive Drugs, 19(4): 361-373.

Dembo, R., Williams, L., Berry, E., Getreu, A., et al (1990) Examination of the relationships among drug use, emotional/psychological problems, and crime among youths entering a juvenile detention center. International Journal of the Addictions, 25(11): 1301-1340.

Dobinson, I., & Ward, P. (1986) Heroin and property crime: An Australian perspective. Journal of Drug Issues, 16(2): 249-262.

Donovan, J.E., & Jessor, R. (1985) Structure of problem behaviour in adolescence and young adulthood. Journal of Consulting and Clinical Psychology, 53(6): 890-904.

D'Orban, P.T. (1976) Barbiturate abuse. Journal of Medical Ethics, 2: 63-67.

Dunford, F.W., & Elliot, D.S. (1984) Identifying career offenders using self-report data. Journal of Research in Crime and Delinquency, 21: 57-86.

Ellard, J. (1987) Drugs and prisons. Australian and New Zealand Journal of Psychiatry, 21(2): 186-193.

Ellinwood, E.H. (1971) Assault and homicide associated with amphetamine abuse. American Journal of Psychiatry, 127: 1170-1175.

Elliot, D.S., Huizinga, D., & Ageton, S.S. (1985) Explaining Delinquency and Drug Use. Beverly Hills: Sage Publications.

Ellis, L. (1990) Universal behavioural and demograhic correlates of criminal behavior: Toward common ground in the assessment of criminological theories. In L.Ellis & H. Hoffman (Eds.), Crime in Biological, Social, and Moral Contexts. New York: Praeger.

Ensor, T., & Godfrey, C. (1993) Modelling the interactions between alcohol, crime and the criminal justice system. Addiction, 88(4): 477-487 (Abstract only).

Fagan, J. (1993) Interactions among drugs, alcohol, and violence. Health Affairs, Winter: 65-79.

Fauman, M.A., & Fauman, B.J. (1980) Chronic PCP use: A psychiatric perspective. Journal of Psychedelic Drugs, 12: 307-314.

Feldman, H., Agar, M.H., & Beschner, G.M. (1979) Angel Dust: An Ethnographic Study of PCP Users. Lexington, MA: D.C. Heath.

Felson, R.B., & Steadman, H.J. (1983) Situational factors in disputes leading to violent crime. Criminology, 21: 59-74.

Field, G. (1985) The Cornerstone Program: A client outcome study. Federal Probation, 49: 50-55.

Fishbein, D.H. (1990) Biological perspectives in criminology. Criminology, 28: 27-72.

Fishbein, D.H., Lozovsky, D., & Jaffe, J.H. (1989) Impulsivity, aggression, and neuroendocrine responses to serotonergic stimulation in substance abusers. Biological Psychiatry, 25(8): 1049-1066.

Fishbein, D.H., & Pease, S.E. (1990) Neurological links between substance abuse and crime. In L. Ellis & H. Hoffman (Eds.), Crime in Biological, Social and Moral Contexts. New York: Praeger.

France, S. (1990) The mental element. In N. Cameron & S. France (Eds.), Essays on Criminal Law in New Zealand (pp. 43-56). Wellington: Victoria University of Wellington Law Review and Victoria University Press.

Franklin, R.D., Allison, D.B., & Sutton, T.R. (1992) Alcohol, substance abuse, and violence among North Carolina prison admissions, 1988. Journal of Offender Rehabilitation, 17(3-4): 101-111.

Fry, L.J. (1985) Drug abuse and crime in a Swedish birth cohort. British Journal of Criminology, 25(1): 46-59.

Gandossy, R., Williams, J., Cohen, J., & Harwood, H. (1980) Drugs and Crime: A Survey and Analysis of the Literature. Washington, D.C.: National Institute of Justice.

Gerson, L.W., & Preston, D.A. (1979) Alcohol consumption and the incidence of violent crime. Journal of Studies on Alcohol, 40: 307-312.

Giannini, A.J., Miller, N.S., & Loiselle, R.H. (1993) Cocaine-associated violence and relationship to route of administration. Journal of Substance Abuse Treatment, 10(1): 67-69.

Goldkamp, J.S., & Jones, P.R. (1992) Pretrial drug-testing experiments in Milwaukee and Prince George's County: The context of implementation. Journal of Research in Crime and Delinquency, 29(4): 430-465.

Goldman, F. (1981) Drug abuse, crime, and economics: The dismal limits of social choice. In J.A. Inciardi (Ed.), The Drugs-Crime Connection, (pp. 155-181) Beverly Hills: Sage Publications.

Goldstein, A., & Kalant, H. (1990) Drug policy: Striking the right balance. Science, 24(9): 1513-1521.

Goldstein, P.J. (1981) Getting over: Economic alternatives to predatory crime among street drug users. In J.A. Inciardi (Ed.), The Drugs-Crime Connection (pp 61-82). Beverly Hills: Sage Publications.

Goldstein, P.J. (1985) The drugs-violence nexus: A tripartite conceptual framework. Journal of Drug Issues, 15(4): 493-506.

Goldstein, P.J. (1989) Drugs and violent crime. In N. A Weiner & M.E. Wolfgang (Eds.), Pathways to Criminal Violence (pp. 16-48). Newbury Park, CA: Sage Publications.

Goldstein, P.J., Bellucci, P.A., Spunt, B.J., & Miller, T. (1991) Volume of cocaine use and violence: A comparison between men and women. Journal of Drug Issues, 21(2): 345-367.

Goldstein, P.J., Brownstein, H.H., & Ryan, P.J. (1992) Drug-related homicide in New York: 1984 and 1988. Crime and Delinquency, 38(4): 459-476.

Goldstein, P.J., Brownstein, H.H., Ryan, P.J., & Bellucci, P.A. (1989) Crack and homicide in New York City, 1988: A conceptually based event analysis. Contemporary Drug Problems, Winter: 651-687.

Goodman, R.A., Mercy, J.A., & Rosenberg, M.L. (1986) Drug use and interpersonal violence. American Journal of Epidemiology, 124(5): 851-855.

Gossop, M., & Roy, A. (1977) Hostility, crime and drug dependence. British Journal of Psychiatry, 130: 272-278.

Gottlieb, P., & Gabrielson, G. (1992) Alcohol-related homicides in Copenhagen, 1959-1983. International Journal of Law and Psychiatry, 15(1): 77-87.

Greenberg, S.W. (1981) Alcohol and crime: A methodological critique of the literature. In J.J. Collins (Ed.), Drinking and Crime: Perspectives on the Relationship Between Alcohol Consumption and Criminal Behavior (pp 70-109) New York: Guilford Press.

Gropper, B.A. (1985) Probing the Links Between Drugs and Crime. Washington, D.C.: National Institute of Justice, U.S. Department of Justice.

Hall, W., Bell, J., & Carless, J. (1993) Crime and drug use among applicants for methadone maintenance. Drug and Alcohol Dependence, 31(2): 123-129.

Hamilton, C.J., & Collins, J.J. (1981) The role of alcohol in wife beating and child abuse: A review of the literature. In J.J. Collins (Ed.), Drinking and Crime: Perspectives on the Relationships Between Alcohol Consumption and Criminal Behavior (pp. 253-287). New York: Guilford Press.

Hammersley, R., Forsyth, A., Morrison, V., & Davies, J.B. (1989) The relationship between crime and opioid use. British Journal of Addiction, 84(9): 1029-1043.

Hammersley, R., Forsyth, A., & Lavelle, T. (1990) The criminality of new drug users in Glasgow. British Journal of Addiction, 85(12): 1583-1594.

Harlow, C.W. (1991) Drugs and Jail Inmates, 1989. Washington, D.C.: Bureau of Justice Statistics, U.S. Department of Justice.

Harrison, L., & Gfroerer, J. (1992) The intersection of drug use and criminal behaviour: Results from national household survey on drug abuse. Crime and Deliquency, 38(4): 422-443.

Herrman, H., McGorry, P., Mills, J., & Singh, B. (1991) Hidden severe psychiatric morbidity in sentenced prisoners: An Australian study. American Journal of Psychiatry, 148(2): 236-239.

Hodgins, D.C., & Lightfoot, L.O. (1988) Types of male alcohol- and drug-abusing incarcerated offenders. British Journal of Addiction, 83: 1201-1213.

Hogan, R., Mankin, D., Conway, J., & Fox, S. (1970) Personality correlates of undergraduate marijuana use. Journal of Consulting and Clinical Psychology, 35(1): 58-63.

Holcomb, W.R., & Anderson, W.P. (1983) Alcohol and multiple drug use in accused murderers. Psychological Reports, 53: 159-164.

Holden, C. (1986) Growing focus on criminal careers. Science, 233(4771): 1377-1378.

Holland, T.R. (1977) Multivariate analysis of personality correlates of alcohol and drug abuse in a prison population. Journal of Abnormal Psychology, 86(6): 644-650.

Honer, W.G., Gewirtz, T., & Turey, M. (1987) Psychosis and violence in cocaine smokers. Lancet, Aug 22: 451.

Hunt, D.E., Lipton, D.S., & Spunt, B. (1984) Patterns of criminal activity among methadone clients and current narcotics users not in treatment. Journal of Drug Issues, 14(4): 687-702.

Inciardi, J.A. (1974) The villification of euphoria: Some perspectives on an elusive issue. Addictive Diseases An International Journal, 1(3): 241-267.

Inciardi, J.A. (1980) Youth, drugs, and street crime. In F. Scarpetti & S. Dateman (Eds.), Drugs and the Youth Culture (pp. 399-429). Beverly Hills, CA: Sage Publications.

Inciardi, J.A. (1981) Drug use and criminal behavior: Major research issues. In J.A. Inciardi (Ed.), The Drugs-Crime Connection (pp. 7-16). Beverly Hills: Sage Publications.

Inciardi, J.A. (1986) The War on Drugs: Heroin, Cocaine, Crime and Social Policy. Palo Alto, CA: Mayfield.

Inciardi, J.A., & Pottieger, A.E. (1991) Kids, crack, and crime. Journal of Drug Issues, 21(2): 257-270 (abstract only).

Innes, A. (1988) Drug Use and Crime: State Prison Inmate Survey. Washington, D.C.: Bureau of Justice Statistics.

Jarvis, G., & Parker, H. (1989) Young heroin users and crime: How do the "new users" finance their habits? British Journal of Criminology, 29(2): 175-185.

Jessor, R. (1979) Marihuana: A review of recent psychosocial research. In R.L. Dupont, A. Goldstein, & J. O'Donnell (Eds.), Handbook on Drug Abuse (pp. 337-355). National Institute on Drug Abuse.

Jessor, M.D., Chase, J.A., & Donovan, J.E. (1980) Psychosocial correlates of marijuana use and problem drinking in a national sample of adolescents, American Journal of Public Health, 70(6): 804-813.

Johnson, B.D., Goldstein, P.J., Preble, E., Schneidler, J., Lipton, D.S., Spunt, B., & Miller, T. (1985) Taking Care of Business: The Economics of Crime by Heroin Abusers. Lexington, MA: Lexington Books.

Johnson, B.D., Wish, E.D., Schmeidler, J., & Huizinga, D. (1991) Concentration of delinquent offending: Serious drug involvement and high delinquency rates. Journal of Drug Issues, 21(2): 205-229.

Johnson, V., & White, H.R. (1989) An investigation of factors related to intoxicated driving behaviors among youth. Journal of Studies on Alcohol, 50(4): 320-330.

Johnston, L.D. (1980) Review of General Population Surveys on Drug Abuse: World Health Organisation Offset Publication No.52. Geneva: World Health Organisation.

Jones (1987) Pharmacology of cocaine. In A. Washton & M.S. Gold (Eds.), Cocaine: A Clinician's Handbook (pp. 55-72). New York: The Guilford Press.

Julien, R.M. (1981) A Primer of Drug Action (3rd ed.). San Francisco: W.H. Freedman.

Kaplan, H.B., Martin, S.S., Johnston, R.J., & Robbins, C.A. (1986) Escalation of marijuana use: Application of a general theory of deviant behavior. Journal of Health and Social Behavior, 27: 44-61.

Knight, F. (1976) Role of cannabis in psychiatric disturbance. Annals of the New York Academy of Sciences, 282: 64-83.

Koss, M.P., Dinero, T.E., Siebel, C.A., & Cox, S.L.(1988) Stranger and acquaintance rape. Are there differences in the victim's experience? Psychology of Women Quarterly, 12: 1-24.

Kozel, N., DuPont, R., & Brown, B. (1972) Narcotics and crime: A study of narcotic involvement in an offender population. International Journal of Addiction, 7: 443-450.

Kraska, P.B. (1990) The unmentionable alternative: The need for, and the argument against the decriminalisation of drug laws. In R. Weisheit (Ed.), Drugs, Crime and the Criminal Justice System (pp. 111-137). Cincinnati, OH: Anderson Publishing Co.

Ladouceur, P., & Temple, M. (1985) Substance use among rapists: A comparison with other serious felons. Crime and Delinquency, 31(2): 269-297.

Lindquist, P. (1991) Homicides committed by abusers of alcohol and illicit drugs. British Journal of Addiction, 86(3): 321-326.

Leukefeld, G.G. (1985) The clinical connection: Drugs and crime. International Journal of Addiction, 20(6-7): 1049-1064.

Lightfoot, L.O., & Hodgins, D. (1988) A survey of alcohol and drug problems in incarcerated offenders. International Journal of the Addictions, 23(7): 687-706.

Lindquist, P. (1991) Homicides committed by abusers of alcohol and illicit drugs. British Journal of Addiction, 86(3): 321-326.

McBride, D.C. (1981) Drugs and violence. In J.A. Inciardi (Ed.) The Drugs-Crime Connection. Beverly Hills: Sage Publications.

McBride, D.C., & McCoy, C.B. (1982) Crime and drugs: The issues and the literature. Journal of Drug Issues, 12(2): 137-152.

McBride, D.C., & Swartz, J.A. (1990) Drugs and violence in the age of crack cocaine. In R. Weisheit (Ed.), Drugs, Crime and the Criminal Justice System (pp. 141-169). Cincinnati, OH: Anderson Publishing Co.

McElrath, K. (1994) A comparison of two methods for examining inmates' self-reported drug use. International Journal of the Addictions, 29(4): 517-524.

McGlothlin, W.H. (1978) The etiologic relationship between drug use and criminality. In Y.Israel, F. Glaser, H. Kalant, R. Popham, W. Schmidt, & R. Smart (Eds.), Research Advances in Alcohol and Drug Problems Vol 4. New York: Plenum Press.

McGlothlin, W.H. (1979) Drugs and crime. In R.L. Dupont, R.L. Goldstein, A. Goldstein, & J. O'Donnell (Eds.), Handbook on Drug Abuse (pp. 357-363). National Institute on Drug Abuse.

McGuire, J.S., & Megargee, E.I. (1974) Personality correlates of marijuana use among youthful offenders. Journal of Consulting and Clinical Psychology, 42(1): 124-133.

McLaren (1992) Reducing Reoffending: What Works Now. Wellington: Penal Division, Department of Justice.

McLean, A. (1988) Screening for alcoholism in New Zealand prison inmates. Australia and New Zealand Journal of Criminology, 21: 45-57.

MacCoun, R.J. (1993) Drugs and the law: A psychological analysis of drug prohibition. Psychological Bulletin, 113(3): 497-512.

Maden, A., Swinton, M., & Gunn, J. (1991) Drug dependence in prisoners. British Medical Journal, 302: 880.

Maden, A., Swinton, M., & Gunn, J. (1992) A survey of pre-test drug use in sentenced prisoners. British Journal of Addiction, 87(1): 27-33.

Malmquist, C.P. (1971) Premonitary signs of homicidal aggression in juveniles. American Journal of Psychiatry, 128: 461-465.

Manning, M. (1985) The Drugs Menace. London: Columbus Books.

Martin, S.E. (1992) The epidemiology of alcohol-related interpersonal violence. Alcohol Health and Research World, 16(3): 230-237.

Mednick, S.A., Polock, V., Volavlka, J., & Gabrielli, W.F. (1982) Biology and violence. In M.E. Wolfgang N.A. Weiner (Eds.), Criminal Violence (pp. 21-80). Beverly Hills: Sage Publications.

Mieczkowski, T (1990) The accuracy of self-reported drug use: An evaluation and analysis of new data. In R.Weisheit (Ed.), Drugs and Crime and the Criminal Justice System (pp. 276-302). Cincinnati, OH: Anderson Publishing Co.

Milgram, G.G. (1993) Adolescents, alcohol and aggression. Journal of Studies on Alcohol, 11: 53-61.

Miller, R.E. (1984) Nationwide profile of female inmate substance involvement. Journal of Psychoactive Drugs, 16(4): 319-326.

Miller, B.A., & Welte, J.W. (1987) Comparisons of incarcerated offenders according to use of alcohol and/or drugs prior to offense. Criminal Justice and Behavior, 13(4): 366-392.

Miller, N.S., Gold, M.S., & Mahler, J.C. (1990) A study of violent behaviors associated with cocaine use: Theoretical and pharmacological implications. Annals of Clinical Psychiatry, 2(1): 67-71.

Ministerial Committee of Inquiry into the Prison System (1989) Prison Review: Te Ara Hou: The New Way. Wellington: Crown.

Mitchell, C.N. (1988) The intoxicated offender: Refuting the legal and medical myths. International Journal of Law and Psychiatry, 11(1): 77-103.

Morrison, V., & Plant, M. (1991) Licit and illicit drug initiations and alcohol-related problems amongst illicit drug users in Edinburgh. Drug and Alcohol Dependence, 27(1): 19-27 (Abstract only).

Moss, H.B., & Tarter, R.E. (1993) Substance abuse, aggression, and violence: What are the connections? American Journal on Addictions, 2(2): 149-160.

Mott, J., & Rathod, N.H. (1976) Heroin misuse and delinquency in a new town. British Journal of Psychiatry, 128: 428-435.

Moyer, K.E. (1987) Violence and Aggression. New York: Paragon House.

Murdoch, D., Pihl, R.O., & Ross, D. (1990) Alcohol and crimes of violence: Present issues. International Journal of the Addictions, 25(9): 1065-1081.

Myers, T. (1982) Alcohol and violent crime re-examined: Self-reports from two sub-groups of Scottish male prisoners. British Journal of Addiction, 77: 399-413.

Myerscough, R., & Taylor, S. (1985) The effects of marijuana on human physical aggression. Journal of Personality and Social Psychology, 49(6): 1541-1546.

National Commission on Marihuana and Drug Abuse (1973) Drug Use in America: Problem in Perspective (Report No.2) Washington, D.C.: U.S. Government Printing Office.

National Institute of Justice (1991) Drug Use Forecasting Drugs and Crime 1990 Annual Report. Washington, D.C.: U.S. Government Printing Office.

New Zealand Department of Justice (1992) Imprisonment as "the Last Resort": the New Zealand Experience. Wellington: Department of Justice.

New Zealand Police Association (1991) Drug and Alcohol Awareness Handbook (2nd ed.). Wellington: New Zealand Police Association.

Norris, S.M., & MacPherson, S. (1990) Offending in New Zealand: Trends and International Comparisons. Wellington: Policy and Research Division, Department of Justice.

Nourisis, M.J. (1988) SPSS/PC Base Manual. Chicago, Illinois: SPSS Inc.

Nurco, D.N. (1979) Etiological aspects of drug abuse. In R.L. Dupont, A. Goldstein, & J.O'Donnell (Eds.), Handbook on Drug Abuse. National Institute on Drug Abuse.

Nurco, D.N., Hanlon,. T.E., & Kinlock, T.W. (1991) Recent research on the relationship between illicit drug use and crime. Behavioral Sciences and the Law, 9(3): 221-242.

Nurco, D.N., Hanlon,. T.E., Kinlock, T.W., & Duszynski, K.R. (1988) Differential criminal patterns of narcotic addicts over an addiction career. Criminology, 26(3): 407-423.

Nurco, D.N., Hanlon,. T.E., Kinlock, T.W., & Duszynski, K.R. (1989) The consistency of types of criminal behavior over preaddiction, addiction, and nonaddiction status periods. Comprehensive Psychiatry, 30(5): 291-402.

Nurco, D.N., Kinlock, T., & Balter, M.B. (1993) The severity of preaddiction criminal behavior among urban, male narcotic addicts and two nonaddicted control groups. Journal of Research in Crime and Delinquency, 30(3): 293-316.

Nurco, D.N., Kinlock, T.W., Hanlon, T.E., & Ball, J.C. (1988) Nonnarcotic drug use over an addiction career: A study of heroin addicts in Baltimore and New York City. Comprehensive Psychiatry, 29(5): 450-459.

O'Brien, R., Cohen, S., Evans, G., & Fine, J. (1992) Encyclopedia of Drug Abuse, Second Edition. New York: Facts on File.

Ojesjo, L. (1983) Alcohol, drugs and forensic psychiatry. Psychiatric Clinics of North America, 6(4): 733-749.

Orchard, H.K. (1987) New Zealand Alcohol/Drug Outpatient Statistics 1987. Alcohol Liquor Advisory Council.

Osgood, D.W., Johnston, D.J., O'Malley, P.M., & Bachman, J.G. (1988) The generality of deviance in late adolescence and early adulthood. American Sociological Review, 53(Feb): 81-93.

Osgood, D.W., O'Malley, P.M., Bachman, J.G., & Johnston, L.D. (1989) Time trends and age trends in arrests and self-reported illegal behaviour. Criminology, 27(3): 389-411.

Pallone, N.J. (1990) Drug use and felony crime: Biochemical credibility and unsettled questions. Journal of Offender Counseling, Services and Rehabilitation, 15(1): 85-110.

Parker, H., & Newcombe, R. (1987) Heroin use and acquisitive crime in an English community. British Journal of Sociology, 38(3): 331-350.

Pernanen, K. (1976) Alcohol and crimes of violence. In B. Kissen & H. Beglester (Eds.), The Biology of Alcoholism Vol.4: Social Aspects of Alcoholism (pp. 351-443). New York: Plenum Press.

Pernanen, K. (1991) Alcohol in Human Violence. New York: Guilford Press.

Pernanen, K. (1993) Research approaches in the study of alcohol related violence. Alcohol Health and Research World, 17(2): 101-107.

Pihl, R.D., & Peterson, J. (1993) Alcohol/drug use and aggressive behavior. In S Hodgins (Ed.), Mental Disorder and Crime (pp. 263-283) London: Sage Publications.

Pottieger, A.E. (1981) Sample bias in drugs/crime research. In J.A. Inciardi (Ed.), The Drugs-Crime Connection. Beverly Hills: Sage Publications.

Pringle, G.H. (1982) Impact of the cxriminal justice system on the substance abusers seeking professional help. Journal of Drug Issues, 12(3): 275-283.

Rabkin, J.G. (1979) The epidemiology of forcible rape. American Journal of Orthopsychiatry, 49(4): 634-647.

Radcliffe, A.B., & Rush, P.A. (1988) Physical effects and consequences of mind altering drugs used by college students. Journal of College Student Psychotherapy, 2(3-4): 19-40.

Rainey, J.M., & Crowder, M.K. (1975) Prolonged psychosis attributed to phencyclidine: Report on three cases. American Journal of Psychiatry, 132: 1076-1078.

Reiss, A.J., Jnr, & Roth, J.A. (Eds.) (1993) Understanding and Preventing Violence. Washington, D.C.: National Academy Press.

Research Triangle Institute (1976) Report of the Panel on Drug Use and Criminal Behavior. Springfield, VA: National Technical Information Service.

Restak, R. (1993) The neurological defense of violent crime: "Insanity defense" retooled. Archives of Neurology, 50(8): 869-871.

Robinson, R.G. (Ed.) (1990) The New Zealand Medical Association Guide to Medicines and Drugs. Sydney: Reader's Digest.

Rosenthal, B.J., & Nakkash, K. (1982) Drug addiction and criminality: A model for predicting the incidence of crime among a treatment population. Journal of Drug Issues, 12(3): 293-303.

Salzman, C., Bessel, A., Van der Kolk, M.D., & Shader, R. (1976) Marijuana and hostility in a small-group setting. American Journal of Psychiatry, 133(9): 1029-1033.

Schafer, J., & Brown, S.A. (1991) Marijuana and cocaine effect expectancies and drug use patterns. Journal of Consulting and Clinical Psychology, 59(4): 558-565.

Schubert, D.S., Wolf, A.W., Patterson, M.B., et al (1988) A statistical evaluation of the literature regarding the associations among alcoholism, drug abuse, and antisocial personality disorder. Journal of the Addictions, 23(8): 797-808.

Scully, D., & Marolla, J. (1984) Convicted rapists' vocabulary of motive: Excuses and justifications. Social Problems, 31: 530-544.

Selzer, M.L., Vinokur, A., & Wilson, T.D. (1977) A psychological comparison of drunken drivers and alcoholics. Journal of Studies on Alcohol, 38(7): 1294-1299.

Selzman, C., Bessel, A., Van der Kolk, M.D., & Shader, R. I. (1976) Marijuana and hostility in a small-group setting. American Journal of Psychiatry, 133(9): 1029- 1033.

Senay, E., & Wettstern, R. (1983) Drugs and homicide: A theory. Drug and Alcohol Dependence, 12(2): 157-166.

Shaffer, J.W., Nurco, D.N., & Kinlock, T.W. (1984) A new classification of narcotic addicts based on type and extent of criminal activity. Comprehensive Psychiatry, 25(3): 315-328.

Shaffer, J.W., Nurco, D.N., Ball, J.C., & Kinlock, T.W. (1985) The frequency of nonnarcotic drug use and its relationship to criminal activity among narcotic addicts. Comprehensive Psychiatry, 26(6): 558-566.

Shaffer, J.W., Nurco, D.N., Ball, J.C., Kinlock, T.W., et al (1987) The relationship of preaddiciton characteristics to the types and amounts of crime committed by narcotic addicts. International Journal of the Addictions, 22(2): 153-165.

Sheard, M.H. (1988) Clinical pharmacology of aggressive behaviour. Neuropharmocology, 11(6): 483-492.

Showalter, C.V., & Thornton, W.E. (1977) Clinical pharmacology of phencyclidine toxicity. American Journal of Psychiatry, 134: 1234-1238.

Siann, G. (1985) Accounting for Aggression. London: Allen & Unwin.

Siegal, R.K. (1982) Cocaine smoking. Journal of Psychoactive Drugs, 14: 272-341.

Siegal, R.K. (1980) PCP and violent crime: the people versus peace. Journal of Psychedelic Drugs, 12: 317-324.

Silberman, C.E. (1978) Criminal Violence, Criminal Justice. New York: Random House.

Silverman, I.J. (1982) Women, crime and drugs. Journal of Drug Issues, 12(2): 167-183.

Simonds, J.F., & Kashani, J. (1979) Drug abuse and criminal behavior in delinquent boys committed to a training school. American Journal of Psychiatry, 136(11): 1444-1448.

Simonds, J.F., & Kashani, J. (1980) Specific drug use and violence in delinquent boys. American Journal of Drug and Alcohol Abuse, 7(3-4): 305-322.

Siomopoulos, V. (1979) Drug involvement in crimes committed by mentally ill offenders. Psychological Reports, 45(3): 875-879.

Solursh, L. (1975) Psychoactive drugs, crime and violence. Psychological Reports, 37: 1177-1178.

Southey, P., Spier, P., & Edgar, N. (1995) Census of Prison Inmates 1993. Wellington: Policy and Research Division, Department of Justice.

Speckart, G., & Anglin, M.D. (1987) Narcotics use and crime: An overview of recent research advances. Contemporary Drug Problems, 13(4): 741-769.

Spier, P. (1995) Conviction and Sentencing of Offenders in New Zealand: 1985 to 1994. Wellington: Ministry of Justice.

Spier, P., & Norris, M. (1993) Conviction and Sentencing of Offenders in New Zealand: 1983 to 1992. Wellington: Policy and Research Division, Department of Justice.

Stephens, R.C., & Ellis, R.D. (1975) Narcotic addicts and crime: Analysis of recent trends. Criminology, 12: 474-488.

Strug, D., Wish, E., Johnson, B.D., Anderson, K., & Miller, T. (1984) The role of alcohol in the crimes of heroin abusers. Crime and Delinquency, 30(4): 551-567.

Sutker, P.B., 7 Allain, A.N. (1973) Incarcerated and street heroin addicts: A personality comparison. Psychological Reports, 32: 243-246.

Swanson, J.W. (1993) Alcohol abuse, mental disorder, and violent behavior. Alcohol Health and Research World, 17(2): 123-132.

Taylor, P.J. (1986) Psychoatric disorder in London's life-sentenced offenders. British Journal of Criminology, 26: 63-78.

Tayman, J., & Pennell, S. (1992) Toward a causal model of drug use. Crime and Delinquency, 38(4): 583-601.

Thornicroft, G. (1990) Cannabis and psychosis: Is there epidemiological evidence for an association? British Journal of Psychiatry, 157: 25-33.

Tieman, C.R. (1981) From victims to criminals to victims: A review of the issues. In J.A. Inciardi (Ed.), The Drugs-Crime Connection (pp. 239-267). Beverly Hills, CA: Sage Publications.

Tinklenberg, J.R. (1973) Drugs and crime. In National Commission on Marihuana and Drug Abuse, Drug Use in America: Problem in Perspective, Appendix. Washington, D.C.: U.S. Government Printing Office.

Tinklenberg, J.R. (1978) Drugs and crime. In National Commission on Marihuana and Drug Abuse, Drug Use in America: Problem in Perspective (Appendix). Washington, D.C.: U.S.Government Printing Office.

Tinklenberg, J.R., Murphy, P.L., Murphy, P., Darley, C.F., Roth, W.T., & Kopell, B.S. (1974) Drug involvement in criminal assaults by adolescents. Archives of General Psychiatry, 30(5): 685-689.

Tinklenberg, J.R., Murphy, P.L., Murphy, P., & Pfefferbaum, A. (1981) Drugs and criminal assaults by adolescents: A replication study. Journal of Psychoactive Drugs, 13: 277-287.

Tinklenberg, J.R., Roth, W.T., Kopell, B.S., & Murphy, P. (1976) Cannabis and alcohol effects on assaultiveness in adolescent delinquents. Chronic Cannabis Use. Annals of the New York Academy of Sciences, 282: 85-94.

Tuchfield, B.S., Clayton, R.R., & Logan, J.A. (1982) Alcohol, drug use, and delinquent and criminal behaviors among male adolescents and young adults. Journal of Drug Issues, 12(2): 185-198.

Turner, S., Petersilia, J., & Deschenes, E.P. (1992) Evaluating intensive probation/parole (ISP) for drug offenders. Crime and Delinquency, 38(4): 539-556.

Van Hoeven, K.H., Stoneburner, R.L., & Roeney, W.C. (1991) Drug use among New York City prison inmates: A demographic study with temporal trends. International Journal of the Addictions, 26(10): 1089-1105.

Vinogradov, S., Dishotsky, N.I., Doty, A.K., & Tinklenberg, J.R. (1988) Patterns of behavior in adolescent rape. American Journal of Orthopsychiatry, 58(2): 179-185.

Virkunnen, M. (1974) Alcohol as a factor precipitating aggression and conflict behaviour leading to homicide. British Journal of the Addictions, 69: 149-154.

Weisheit, R.A. (Ed.) (1990) Drugs, Crime and the Criminal Justice System. Cincinnati, OH: Anderson Publishing Co.

Weitzel, S.L., & Blount, W.R. (1982) Incarcerated female felons and substance abuse. Journal of Drug Issues, 12(3): 259-273.

Welte, J.W., & Miller, B.A. (1987) Alcohol use by violent and property offenders. Drug and Alcohol Dependence, 19(4): 313-324.

Wexler, H.K., Falkin, G.P., & Lipton, D.S. (1990) Outcome evaluation of prison therapeutic community for substance abuse treatment. Criminal Justice and Behavior, 17(1): 71-92.

White, H.R. (1990) The drug use-delinquency connection in adolescence. In R. Weisheit (Ed.), Drugs, Crime and the Criminal Justice System (pp. 215-256). Cincinnati, OH: Anderson Publishing Co and Academy of Criminal Justice Sciences.

White, H.R., & Labouvie, E.W. (1989) Towards the assessment of adolescent problem drinking. Journal of Studies on Alcohol, 50(1): 30-37.

Whitney, L. (1992) Substance Abuse: A Survey of the Treatment Needs of Prison Inmates. Wellington: Research and Policy Division, Department of Justice.

Wikler, A. (1952) Mechanisms of action of drugs that modify personality function. American Journal of Psychiatry, 108: 590-599.

Wilson, R.J., & Jonah, B.A. (1985) Identifying impaired drivers among the general driving population. Journal of Studies on Alcohol, 46(6): 531-537.

Wish, E.D., & Johnson, B.D. (1986) The impact of substance abuse on criminal careers. In A. Blumstein, J. Cohen, J.A. Roth, & R.A. Visher (Eds.), Criminal Careers and "Career Criminals" Vol II (pp. 52-88). Washington, D.C.: National Academy Press.

APPENDIX A
INFORMATION SHEET

MASSEY UNIVERSITY

Links between the use of psychoactive drugs and the commission of crimes.

Information Sheet

Who is the researcher?	Rebecca Hathaway. Her supervisor is Joan Barnes, Lecturer in Forensic Psychology
Where can she be contacted?	At the Psychology Department, Massey University, phone 356099 ext 4120
What is the study about?	This study is looking at some of the possible links between drug use and crimes - whether drugs were involved at all when people committed crimes.
What will the participants have to do?	Fill out a brief questionnaire.
How much time will be involved?	The questionnaire will take no more than 30 minutes.

What can be expected from the researcher?

If you choose to do this questionnaire, you have the right to:

- refuse to answer any particular question, and to withdraw at any time
- ask any further questions about the study that occur to you during you participation
- provide information on the understanding that it is completely confidential to the researcher. All information is collected anonymously, and it will not be possible to identify you in any reports that are prepared from the study
- be given access to a summary of the findings from the study when it is finished.

The general results of this study may eventually be published, but absolutely no individual information will be made public in any way.

APPENDIX B
CONSENT FORM

MASSEY UNIVERSITY

Links between the use of psychoactive drugs and the commission of crimes.

Consent Form

I have had explained to me the Information Sheet for this study and have had the details of the study explained to me. My questions about the study have been answered to my satisfaction, and I understand that I may ask further questions at any time.

I also understand that I am free to withdraw from the study at any time, or to decline to answer any particular questions in the study. I agree to provide information to the researcher on the understanding that it is completely confidential and anonymous.

I wish to participate in this study under the conditions set out in the Information Sheet.

Signed: _____

Date: _____

APPENDIX C
QUESTIONNAIRE

This questionnaire is to do with drugs, and the offence you did that led to you being in prison. When you see the word "drugs", that includes all drugs (e.g. marijuana, pills, glue, etc) that can be used to get stoned or wasted. Even if you have never used any drugs, your answers are still important to this study.

When you answer these questions, please be as truthful and honest as you can. You do not have to answer every question if you would rather not. Remember that nobody will know who you are, and the only person who will read your answers is the researcher.

1. How old are you? _____years ☐☐ 5

2. Which ethnic group do you belong to? (tick)
   - ☐ European
   - ☐ Maori
   - ☐ Pacific Island (Other Polynesian)
   - ☐ Asian
   - ☐ Other (specify_____) ☐

3. At the time of the offence that led to your going to prison, what was your occupation?____ ☐☐
   _____

   If you were on a Social Welfare beneit, tick:
   - Unemployment ☐
   - DPB ☐
   - Sickness ☐
   - Other_____ ☐

4. What is your current marital status? (tick)
   - ☐ Married
   - ☐ De Facto
   - ☐ Single
   - ☐ Divorced/Separated
   - ☐ Widowed ☐

5. Which of these describes your household (at the time of your offence)?
   - ☐ Living alone
   - ☐ Living with partner/wife
   - ☐ Living with parents
   - ☐ Living with partner/wife and children
   - ☐ Living with children but no partner/wife
   - ☐ Living with other adults but no partner/wife ☐ 10
   - ☐ Other (specify_____
   _____)

6. (a) What was your highest year of education? (tick)

- ☐ Form 1
- ☐ Form 2
- ☐ Form 3
- ☐ Form 4
- ☐ Form 5
- ☐ Form 6
- ☐ Form 7
- ☐ University/Polytech (Number of years there_____)

(b) Did you complete that year?

- ☐ Yes
- ☐ No

13

7. What type of main offence are you in prison for: (tick)

- ☐ Burglary/Theft/Receiving stolen goods
- ☐ Drug dealing/Drug offences
- ☐ Assault/Aggravated Assault
- ☐ Robbery/Aggravated Robbery
- ☐ Sex offence (e.g Rape or Indecent assault, etc)
- ☐ Child abuse/Incest
- ☐ Manslaughter/Murder
- ☐ Drunk driving
- ☐ Traffic offences
- ☐ Fraud
- ☐ Arson
- ☐ Other (specify_____)

8. Did you use a weapon while committing this offence?

- ☐ Yes
- ☐ No

If you said Yes, what weapon did you use?

- ☐ Knife
- ☐ Gun
- ☐ Other (specify_____)

9. When did you do this offence?

19__

18

10. Was there anyone else with you when you committed this offence?

- ☐ Yes
- ☐ No

If you said Yes, how many others were with you?_____

21

11. (a) How many times have you been sent to prison (including this time)?
_____times

(b) On the last occasion that you were sent to prison (before this time), what type of main offence had you done?

- ☐ Burglary/Theft/Receiving stolen goods
- ☐ Drug dealing/Drug offences
- ☐ Assault
- ☐ Robbery
- ☐ Sex offence (e.g Rape or Indecent assault, etc)
- ☐ Child abuse
- ☐ Manslaughter/Murder
- ☐ Drunk driving
- ☐ Traffic offences
- ☐ Fraud
- ☐ Arson
- ☐ Other (specify_____)

12. On the next page is a list of drugs. If you used any of these drugs in the month or so before you committed this offence, tick them. (If you're not sure what the drug's name was, but you know what type of drug it was, just tick one of the main names, printed in capital letters).

If you used any drugs that have been missed out on this list, please add them to the bottom.

Then, if you ticked any, in the column next to them, say how often you would have used them in that month. To do this, choose a number from the scale below:

1	2	3	4	5
Hardly ever	Less than once a week	Once or twice a week	Three to five times a week	Every day or nearly every day

DRUG	HOW OFTEN	
☐ ALCOHOL	____	☐
☐ MARIJUANA / HASH / HASH OIL *(Cannabis)*	____	☐
☐ NARCOTICS		☐ 28
☐ Opium / Poppies	____	☐
☐ Heroin *(gear, hammer, H, scag)*	____	☐
☐ Morphine *(M, morph, misties)*	____	☐
☐ Homebake	____	☐
☐ Codeine *(Cod's, Deen)*	____	☐
☐ Hydromorphone / Dilaudid *(dillies)*	____	☐
☐ Pethidine / Demerol *(Peth)*	____	☐
☐ Methadone *(Done, Meth)*	____	☐
☐ Palfium *(Palf, Shit)*	____	☐
☐ Paracodin	____	☐
☐ Doloxene *(D's, Dollies)*	____	☐
☐ Temgesic *(T's, Temies)*	____	☐
☐ Digesic	____	☐
☐ MINOR TRANQUILLISERS (Benzodiazepines) *(Sleeping pills / Tranks / Downers)*		☐ 42
☐ Serepax *(Sere's)*	____	☐
☐ Valium *(V's, Blues)*	____	☐
☐ Rohypnol *(Rollies)*	____	☐
☐ Librium	____	☐
☐ Mogadon *(Moggies)*	____	☐
☐ Mandrax *(Mandies)*	____	☐
☐ Halcion *(Footies, Footballs)*	____	☐
☐ BARBITURATES *(Downers)*		☐ 50
☐ Amytal	____	☐
☐ Nembutal	____	☐
☐ Seconal	____	☐
☐ Phenobarbital	____	☐
☐ Tuinal	____	☐
☐ Chloral Hydrate (Noctec)	____	☐
☐ Other depressants e.g. Equanil, Placidyl	____	☐
☐ AMPHETAMINES *(Speed, Crank, Meth, Uppers)*		☐ 58
☐ Benzedrine / Amphetamine sulphate *(Bennies)*	____	☐
☐ Dexedrine / Dexamphetamine sulphate *(Dexies)*	____	☐
☐ Desoxyn / Methamphetamine *(Crystal meth)*	____	☐
☐ Ritalin	____	☐

DRUG	HOW OFTEN	
☐ HALLUCINOGENS		☐ 63
☐ LSD *(acid, trips, wedges)*	____	☐
☐ PCP *(angel dust, dust, crystal)*	____	☐
☐ Mescaline / Peyote *(cactus)*	____	☐
☐ Datura	____	☐
☐ Magic Mushrooms	____	☐
☐ COCAINE *(coke, C, snow)*	____	☐ 69
☐ AMPHETAMINE VARIANTS e.g. DOM/STP, DET, DMT	____	☐
☐ ECSTASY *(Adam, E, essence)*	____	☐
☐ SOLVENTS (Glue / Petrol / Paint etc)	____	☐
☐ MORNING GLORY SEEDS	____	☐
☐ PIPANOL	____	☐
☐ NUTMEG	____	☐
☐ OTHER (specify_____)	____	☐ 76

13. Would you say that you have been dependent on any of the drug(s) you ticked above?

☐ Yes

☐ No ☐

If you said Yes, which one(s)?_____ ☐☐

_____

14. (a) Have you ever been in a drug abuse treatment programme?

☐ Yes

☐ No ☐

(b) If you said Yes, were you in any drug abuse treatment programme in the month before your offence?

☐ Yes

☐ No ☐

The next questions are about drug use around the time of your offence. If you did the offence more than one time, think about the last time you did it. Please try to remember as much as you can.

15 (a) Did you use a drug in the 12 hours before you did the offence?

☐ Yes

☐ No ☐ 82

If you said Yes to question 15(a), answer all the next questions. If you said No, skip to question 22.

(b) If you said Yes, which drug(s) did you use?_____

_____

(c) How long beforehand?

- ☐ Less than 15 minutes
- ☐ Between 15 minutes and 1 hour
- ☐ Between 1 and 3 hours
- ☐ Between 3 and 5 hours
- ☐ Between 5 and 12 hours

16. (a) Would you say you were you under the influence of drugs at the time of the offence?

- ☐ Yes
- ☐ No

(b) If you said Yes, do you think that you would have done the offence if you had NOT been under the influence of drugs? (Circle a number)

1	2	3	4
NO	POSSIBLY	PROBABLY	YES

17. Who was with you when you took the drug(s)? (tick)

- ☐ Partner/wife
- ☐ Friend(s) . . . . . How many? _____
- ☐ Workmate(s) . . . . . How many? _____
- ☐ Parent(s)
- ☐ Other relative(s) . . . . . How many? _____
- ☐ Neighbour(s) . . . . . How many? _____
- ☐ People I did not know very well . . . . . How many? _____
- ☐ Mixed group of above
- ☐ Nobody
- ☐ Other (specify _____)

18. Did anybody try to talk you out of taking the drug(s)?

- ☐ Yes
- ☐ No

19. Did anybody try to talk you out of doing the offence?

- ☐ Yes
- ☐ No

20. Did you decide to do the offence

- ☐ Before you took the drug(s)
- ☐ After you took the drug(s)

21. Why did you take the drug(s)?

- ☐ To give me courage or to calm my nervousness
- ☐ Because I was bored
- ☐ Because it was a habit
- ☐ Because I enjoy it
- ☐ The people I was with encouraged me to
- ☐ Because I was experiencing withdrawal
- ☐ Because I had never tried it before
- ☐ Other (specify_____)

22. (a) Did you use any drugs WHILE you were doing the offence?

- ☐ Yes
- ☐ No

(b) If you said yes, which drug(s)? _____

_____

(c) Who was with you while you were doing the offence:

- ☐ Partner/wife
- ☐ Friend(s) . . . . . How many? _____
- ☐ Workmate(s) . . . . . How many? _____
- ☐ Parent(s)
- ☐ Other relative(s) . . . . . How many? _____
- ☐ Neighbour(s) . . . . . How many? _____
- ☐ People I did not know very well . . . . . How many? _____
- ☐ Mixed group of above
- ☐ Nobody
- ☐ Other (specify _____)

23. (a) Did you use any drugs AFTER the offence?

- ☐ Yes
- ☐ No

(b) If you said yes, how soon after? _____

(c) If you said yes, Who was with you when you took the drugs after the offence:

- ☐ Partner/wife
- ☐ Friend(s) . . . . . How many? _____
- ☐ Workmate(s) . . . . . How many? _____
- ☐ Parent(s)
- ☐ Other relative(s) . . . . . How many? _____
- ☐ Neighbour(s) . . . . . How many? _____
- ☐ People I did not know very well . . . . . How many? _____
- ☐ Mixed group of above
- ☐ Nobody
- ☐ Other (specify _____)

24. What was the main reason you committed the offence?

- ☐ To get money for drugs
- ☐ To get money for alcohol
- ☐ To get money for other things
- ☐ Anger or revenge
- ☐ Impulse
- ☐ Impulse because I was wasted/high
- ☐ Peer pressure (I went along with the group)
- ☐ Other (specify_____)

25. Do you think that being affected by drugs had an influence on your getting CAUGHT for doing the offence?

- ☐ Yes
- ☐ No

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Thank you very much for completing this questionnaire.