

Drug Abuse and Criminal Behaviour In Penang, Malaysia: A Multivariate Analysis

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Abstract

A growing number of literature and empirical research have documented that a relationship exists between drug abuse and criminal offences. Through studying a selected sample of three hundred institutionalised drug addicts [inmates] with and without criminal history, subjects stratified by ethnicity in Government Rehabilitation Centre in Penang, Malaysia, this research affirmed that there is a relationship between drug abuse and involvement in criminal offences. The major findings of the research were: (1) heroine and cannabis (ganja) were the major drugs abused by the subjects; (2) all eight independent variables correlated with the dependent variable with the exception of broken home; (3) drug abuse is significantly related with property offences; (4) the majority of the research respondents agreed that they get involved in criminal activities in order to support their drug use habit; (5) Finally, the multivariate analysis results attest drug abuse, peer group and poverty as the major reasons why the subjects get involved in criminal activities. The theoretical implication of the study is that drug abuse alone is an inadequate explanatory variable for why drug abusers become involved in criminal activities. For a proper understanding of criminal activities committed by drug abusers, focus must go beyond their addiction to drugs to include both micro and macro factors in order to obtain a proper understanding of crime, the dependent variable of this research.

1.1 INTRODUCTION

The understanding of the relationship between drug abuse and criminal activities is currently at the heart of criminological research. There is a consistent worry in and by the mass media, communities, parents and the general public at large of the various problems brought about by youth who abuse drugs. This paper attempts to explain the relationship between abusing drugs and getting involved in criminal activities in the state of Penang, Malaysia. To accomplish the above task, the paper attempt to address the following questions: What is the relationship between drug abuse and criminal activities? To what extent are drug abusers involved in criminal activities? Why are drug abusers engaged in specific types of criminal activities? and Why are drug abusers involved in criminal activities?

In order to show that drug abuse is a serious social problem the 1998 Narcotics Report summarizes the drug problem in Malaysia as follows: (1) the Malaysian drug situation remains a serious one; (2) from 1988 to 1998, a total of 162,750 drug addicts were identified throughout the country; (3) from this total, 88,527 drug addicts were identified for the first time and the remaining 74,223 drug addicts were recidivists; (4) This invariably means that for every 100,000 inhabitants in Malaysia, there were 734 drug addicts, (5) out of which 335 were hard-core drug addicts.

In 1995, for instance, the total number of inmates in all prison institutions in Malaysia was 21,513. Out of this figure, 8,513 (39.57 percent) were inmates associated with drug related offences (Prison Statistics, 1995: 4). In addition, the 1996 Prison Statistics indicated that the total number of prisoners on remand and convicted as drug traffickers and abusers was high compared to that of the previous years. Out of 8,291 prisoners, 4,245 (50 percent) were abusers of illegal drugs, and 1,204 (46 percent) were drug traffickers, (Prison Statistics, 1996: 3).

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In the State of Penang Table 1 below shows that Butterworth and Georgetown were the two main locations among the five locations in with the highest number of drug addicts in Penang. Heroin, morphine and ganja were the most frequent drugs being abused in the two administrative areas.

**Table 1 New Reported Cases of Drug Abuse in Penang:
(January - December 1999)**

	Geographical Location	Heroin	Morphine	Ganja	Psycho-tropic	Ubat batuk codeine	Total
1.	Balik Pulau	43	-	60	-	1	104
2.	Bukit Mertajam	35	134	141	-	-	310
3.	Butterworth	144	341	220	1	1	707
4.	Georgetown	480	8	170	1	5	664
5.	Nibong Tebal	36	3	22	-	-	61
	Total	738	486	613	2	7	1,846

Source: National Drug Information System (NADI), Kuala Lumpur. February 2000.

Table 2 shows the number of drug addicts in Penang and Malaysia (1988-1998). The number of registered drug addicts in the State of Penang was high in 1988, but in 1989, 1990 and 1991, the number dropped drastically. However, there was a recorded increase in subsequent years (1992 and 1993), but the figures then dropped again in 1994 and 1995. Nonetheless, the trend indicates an increase in 1997 and 1998 with approximately 1,493 (150.0 percent). This is quite consistent with national figures between 1991 and 1995. Furthermore, there is also a tremendous increase between 1997 and 1998 as shown by the data.

**Table 2 Total Number of Drug Addicts in Penang and Malaysia
(1988-1998)**

Year	Penang	Malaysia	Penang as Percentage of Malaysia
1988	4,016	21,856	0.18
1989	2,715	17,729	0.15
1990	2,464	16,893	0.14

1991	1,934	19,085	0.10
1992	2,302	21,502	0.10
1993	3,763	25,502	0.14
1994	3,583	28,756	0.12
1995	5,443	34,104	0.15
1996	4,246	30,589	0.13
1997	4,615	36,284	0.12
1998	6,108	37,588	0.16

Sources: Agency Dadah Kebangsaan, Times Series Report (1988-1998).

There seems to be a clear indication from Table 3 below that the State of Penang recorded the highest number of drug addicts between January-March 2000 in the recidivist cases, and also records the second largest in the new reported cases. Furthermore, combining the total number of both the old and new cases of drug addicts, the State of Penang had the highest figures followed by the State of Johor.

**Table 3 New and Old Cases of Drug Abuse in Malaysia
(January - March 2000)**

	State	New	Old	Total
1.	Johor	2,550	1,934	4,484
2.	Kedah	1,068	723	1,791
3.	Kelantan	1,726	1,498	3,224
4.	Melaka	321	774	1,095
5.	N/Sembilan	907	690	1,597
6.	P/Pinang	2,303	4,427	6,730
7.	Pahang	1,259	1,113	2,372
8.	Perak	1,189	1,856	3,045
9.	Perlis	137	20	157

10.	Sabah	1,668	400	2,068
11.	Sarawak	302	47	349
12.	Selangor	1,729	2,291	4,020
13.	Terengganu	599	479	1,078
14.	Kuala Lumpur	1,546	2,710	4,256
15.	Labuan	69	15	84
	Total	17,373	18,977	36,350

Source: National Drug Information System (NADI), March 2000.
 [NADI Web Site at: <http://www.adk.gov.my/st.html>]

Table 3 above also indicates an increasing problem of addiction to drugs in the State of Penang. In old cases, for example, the statistics indicate that the State of Penang had the highest record. A careful look at the table further illustrates the differences between old and new cases, with old cases twice as much as new cases in just three months. For the overall total, Penang had 6,730 cases, Johor, 4,484 cases, Selangor, 4,020 cases and Kuala Lumpur with 4, 256 cases.

Furthermore, the current set of data covering the whole period of January to December 2000 explain an increasing trend of drug addiction over the period, with approximately two hundred percent increase from the old to the new cases as indicted in Table 3 above. The records from the table also highlight the increasing problem of drug abuse in the State of Penang. In a nutshell, the data reveals that the State of Penang had approximately higher figures than all the states in the Federation.

Recently, Othman, *et al.*, (2002) commenting on the patterns and trends of drug abuse situation in Penang argued that the drug abuse problem in Penang remained critical. According to their report on the number of drug addicts identified in the State of Penang for 2000, 2001 and January-June 2002, were a total of 516 drug addicts for a period of one month. The report further documented that a total number of 67 drug addicts were identified per day in the State of Penang. For example, out of the total number of drug addicts identified in 2001, 38.5 percent were new cases and 61.5 percent were recidivist cases.

**Table 4 New and Old Cases of Drug Abuse in Malaysia
(January - June 2002)**

No.	State	2001	2002	
			June	Average Per month
1.	Penang	2600	3033	505
2.	Kedah	892	2867	478
3.	Selangor	1243	1832	305
4.	Perak	1661	1561	260
5.	Kuala Lumpur	986	1498	250
6.	Kelantan	1425	1346	225
7.	Sabah	1180	1291	215
8.	Johor	784	974	162
9.	Terengganu	732	700	117
10.	Negeri Sembilan	673	615	102
11.	Pahang	577	456	76
12.	Perlis	64	294	49
13.	Melaka	275	266	44
14.	Labuan	57	112	19
15.	Sarawak	63	45	7
	Total	13,162	16,890	2,815

Source: Adopted from International Monograph Series, Report of The Asian Multicity Epidemiology Workgroup 2002, No. 16, Page 27.

According to the data in Table 4 above, the State of Penang had the highest number of drug addicts both in the year 2001 and between January-June 2002. For the average per month the State of Penang also had the highest reported figures of drug addicts between January-June 2002, the Penang figures are twice the number of all other states in the federation with the exception of Kedah, Selangor and Perak. In addition, for the first six months, there was a slight increase in cases detected from January to June 2002. The total number of cases, however, increased to 433 (14.2 percent) as compared to the first six-month of 2001. Thus, Penang had the highest number of drug addicts in Malaysia for the first six months of 2002 as shown in Table 4 above.

1.2 Comparison of Drug Abuse Trends of Malaysian with Some Asian Countries

One dimension to show that the problem of drug abuse is serious in Malaysia is to have comparative data with some countries in the region. According to data available from the National Centre for Drug Research University Science Malaysia (1996), in Dhaka, Bangladesh the number of persons arrested for drug related offences in the period of July 1992 to December 1993 was 2,672, while for Malaysia, a total of 5,086 cases were identified from July 1992 to December 1993 in the city of Kuala Lumpur alone.

In Nepal a total number of arrests for drug offences over a ten years period from 1988 February to 1999 show that in total, 2,663 cases were identified. Comparing Nepal's data with that of Malaysia, a year's figure exceeds that of a ten-year period. According to the National Drug Information System (NADI), in 1998 alone there were 37, 588 addicts identified, the average per month as the report shows was 3,132 addicts identified per month. For the new addicts 21,073 were identified in 1998, compared to 1997 and the number had increased by 21.51 percent.

In Singapore 5,857 local drug dependent persons were arrested in 1993. In the same year, arrest of drug addicts and offenders in Malaysia were three times higher than that of Singapore. If we are to compare Penang and Singapore on the basis of geographical size since Malaysia is comparatively bigger than Singapore, the Penang data of drug addicts identified in the same year show a figure almost two times higher. There were 15, 300 addicts, while drug offenders identified at that particular period were 10, 588.

Another comparative feature will be to look geographically again at another dimension. In Kuala Lumpur alone a total of 4,348 drug addicts were identified in 1993 to 3,740 drug addicts in Singapore in 1993.

Comparing, the Kuala Lumpur data above with that of the Jakarta between 1992 and 1993, according to the report covering the period of January to December 1993 in Jakarta there were only 238 male and 25 female drug addicts. A total of 2, 238 reported cases were reported in Kuala Lumpur. The Kuala Lumpur data is more than the Jakarta data with approximately 2,110 number of drug addicts for the period 1992 and 1993.

In terms of drug Seizure by weight, a wide range of drugs were seized in Kuala Lumpur and these included opiates (29.5 kg), cannabis (56.1 kg), hallucinogens/amphetamine type (about 13,673 pills), sedatives (1,110 pills) and other psychotropic pills (14,144), whereas in Manila, the Federal Territory of the Philippine cocaine was the major drug seized followed by cannabis (66 kg and 45.9 kg respectively).

Comparing the drug abuse patterns of some selected East Asian Cities; the National Centre for Drug Research (1999) reported that between January to June 1999, the East Asian Cities of Bangkok, Thailand; Kuala Lumpur, Malaysia and Manila, Philippines, do have a drug problem. The report provided the following insights of the seriousness of drug abuse, addiction and trafficking but Malaysia seems to top the list.

Among the three cities, for example, Kuala Lumpur reported the highest number of total admissions for the six months period (2,185 admissions), Bangkok falls on the second place (865 admissions) and Manila reported a total of 418 admissions. Heroin was the primary drug abuse among most of the drug dependents that were admitted for treatment in Bangkok (83.90 percent)

and Kuala Lumpur (70.69 percent). Reports on morphine abuse were mainly from Kuala Lumpur (3.13 percent), lower than reported in 1998 (6 percent). Manila reported a negligible (0.14 percent) of morphine abuse and none was reported in Bangkok.

The abuse of Cannabis among treatment admissions has been reported in all the three cities. However, it was more widespread in Kuala Lumpur (24 percent) and Manila (21 percent). A less significant percentage of cannabis was observed in Bangkok (0.17 percent). On drug-related offences, arrest for consumption is predominant in Kuala Lumpur, (29 percent of the total arrest); while in Bangkok the predominant arrest is that of possession (50 percent). Nine-three percent of the total arrests in Manila are of sales of drugs.

1.3 Literature Review

In this section, a review is presented on studies conducted that attempted to establish the relationship between abusing drugs and getting involved in criminal activities. Regrettably, there seems to be no empirical research conducted in the State of Penang specifically devoted to establishing a link between drug use, abuse, and addiction on the one hand, and criminal offences on the other. However, extensive studies done elsewhere such as in the United States of America (Cabrera, 1999; Bureau Of Justice Statistics, 2002), in United Kingdom (Bennet, 1998 and 2000); in Australia (Makkai, 1999, Makkai and Doak 2000) showed that there is a relationship and connection between drug abuse and involvement in criminal activities.

Clinard and Meier (1995) point out that not only are manufacturing, selling and using of certain drugs illegal, but there are also crimes associated with drug abuse, such as those committed by drug addicts in order to secure money to purchase drugs. In addition, there are other areas of establishing a relationship between drug abuse and involvement in other unwanted behaviour, specifically crime/criminal activities. These areas include: 1) euphoric feelings that result from abusing certain substances; 2) property and economic- associated crimes involved by drug abusers and addicts in order to uphold their addictions to drugs; and 3) mostly violent related crimes which result from drugs distribution and the marketing, among other factors.

The review begins with Goldstein's (1985) conceptual essay which offered a tripartite classification of drug-violence connection: 1) psychopharmacological violence: due to the direct acute effects of a psychoactive drug on the user; 2) economic-compulsive violence: committed instrumentally to generate money to purchase (expensive) drugs; and 3) systemic violence: associated with the marketing of illicit drugs such as turf battles, contract disputes, among others.

Goldstein and his colleagues (Brownstein, *et al.*, 1992, Goldstein *et al.*, 1989, Goldstein, Brownstein and Ryan, 1992) applied this scheme empirically in studying homicides rates in the State of New York (1984) and in New York City (1988). They found that drugs and alcohol were important causes for a large share of homicides in both samples. In 1988, for example, they classified: a) 53 percent of 414 homicides as drug-related; b) a substantial percentage whose drug-relatedness could not be determined; c) of those homicides that could be determined to be drug or alcohol related, 14 percent were psychopharmacological (68 percent for alcohol, 16 percent for crack), 4 percent were economic-compulsive, and 74 percent were systemic (61 percent for crack, 27 percent powder cocaine). In contrast, in 1984, before the crack surge in the United States, only 42 percent of the homicides were drug or alcohol related, 59 percent were economic-compulsive, and 21 percent were systemic.

Goldstein, *et al.*, (1990) expanded the classification of drug-related homicide beyond "pharmacological" to include "economic," in which persons rob and kill to finance their own drug use, and "systemic," in which homicides resulted from the business of drug dealing. They found that roughly half of a sample of 414 homicides in New York City in 1988 was drug-related. Most were classified as *systemic*, such as territorial disputes and other aspects of the business of selling drugs rather than being caused by the *pharmacological* effects of cocaine or other drugs or "economic" reasons. Only 14 percent of the drug-related homicides were due to the pharmacological effects or drugs and/or alcohol. As with the medical examiner studies and the prisoner studies, their study had some limitations. The classification of homicides relied on the judgment of police in the field and their decisions might have been subject to bias, problems with reliability, and limited information.

In a longitudinal/developmental research, Kaplan and Damphouse (1995) studied a sample of 7th graders in the Houston School District in 1971 and re-interviewed them at an average age of 26. They reported a direct effect of adolescent drug use (narcotics and marijuana) on adult violence, controlling for adolescent violence. However, adolescent drug use was not found to account for more than 1 percent of the variance in the young adult violence. Also, the effect of adolescent drug use on adult violent behaviour was found to be greater for those who were low rather than high in antisocial personality tendencies during adolescence. The explanation offered by these investigators for this latter somewhat unexpected finding was that those groups of individuals who were least expected to become involved in violent activities (because of the low levels of antisocial personality and self-derogation) were those who were most directly affected by the use of drugs during adolescence. The explanation offered for this finding was "These well-socialized individuals, who are highly committed to the normative social order, are highly inhibited from displaying aggressiveness. The use of drugs is disinhibiting for these individuals, resulting in their being more likely to be violent later in life" (Kaplan & Damphouse, 1995: 206). It is possible that this somewhat unexpected finding occurred because the primary drugs of abuse by the study respondents (marijuana and narcotics) were not stimulants; and that if drugs like amphetamines had been the primary substances of abuse, those among the respondents who had relatively higher degrees of antisocial personality might have increased their violent behaviour to a greater degree than those who had lower degrees of antisocial personality in adolescence.

From a study of adolescent drug users who were dealers in cocaine/crack in Dade County, and who were re-interviewed in 1989, Inciardi (1990) reported on the various types of violence associated with cocaine/crack distribution in inner city Miami. The investigator's main conclusions were: (a) that although crack distribution by hard-core adolescent offenders in Miami may not reflect as much gang-related violence as has been suggested in Los Angeles, it is nevertheless highly criminogenic; (b) the more anyone is involved in the crack business, the more crimes that person commits (currently, Miami and Dade County police officials estimate that perhaps one third of the county's homicides are drug related); (c) a somewhat more deviant group of youths is drawn into crack distribution; and (d) that participation in the crack trade facilitates crack addiction. It is not clear, however, if the same conclusion could be drawn of other drug user populations or other types of criminal activities besides violence.

The United States of America's largest National Victimization Survey (NCVS) does not ask about victims of drug use only, but uses drug use in conjunction with other data to provide insights about drugs and crime. Using NCVS (2000), a multivariate analysis of almost 450,000 observations found that marijuana decriminalisation (and proxy for lower marijuana prices) would result in higher incidence of robbery and assaults, while higher cocaine prices decrease the incidences of these crimes (Beaukimer and Reuters 2000: 8).

Mackesy-Amiti and Fendrich (1999) studied the relationship between inhalant use, delinquency and criminal behaviours among a sample of 1,300 students. They discovered that delinquent and criminal behaviour appear to be more strongly associated with the inhalant use than of other drugs. This fits clear consonance with findings from previous research on the association between inhalant use and delinquency, especially the latter. However, the research had the following limitations as acknowledged by the authors: the measurement of delinquency is not very extensive, the findings may not be generalized to other populations, and the study only relies on cross-sectional data.

Anglin and Maugh (1992) also argue that a significant proportion of crime in the United States is directly related to the use of illicit drugs. The empirical data offered in "Drugs and Crime 1989" suggest that drug use is both directly and indirectly related to committing crime at all levels, including violent, property and financial crimes. 30 to 78 percent of the arrestees had illicit drugs in their urine, suggesting that drug use played some role in their crime. The sample also showed that individuals who were dependant on heroin and cocaine had extremely high crime records, according to the official Police Crime Statistics. It was also noted that those who were involved in the regular use of hard drugs or of multiple substances are typically at high risk of recidivism after their release from incarceration.

Data from the Brown University Digest of Addiction Theory and Application (July 1997) in the United States of America reveal that women accused of crimes have much higher rates of heavy drinking and substance abuse than women in the general population. Information was gathered from self-reports and from the jail log on the type of respondents' criminal offences. The analysis reveal that women who commit crimes were likely to be older, were separated, divorced, or widowed, were unemployed, and to have lower incomes. Alcohol or drugs were equally likely to be related to the respondents' arrest and incarceration. Out of the all reported criminal activities, 50.7 percent were involved in alcohol-related events, 26.3 percent are drug-related events, and 7.0 percent violent-related events. However, it is concluded that there is a relationship between heavy drinking and violent offences. Nevertheless, the study cannot address the unresolved issue of causation.

In a study on incarceration and its relationship with alcohol and drug usage, Harry (1998) found that: (1) 80 percent of prisoners behind bars in the United States committed their crimes under the influence of drugs or alcohol; (2) the same percentage stole property to support their drug use habits; and (3) drug usage is the major reason for the increase in the nation's prison population. Edmondson (1998) studied college crimes, and his findings show that the number of Americans in prison or jail custody has been increasing at 6.5 percent a year since 1990, and more than one-third of this growth is due to drug related offences. More than 1.7 million Americans are now serving time in prison, primarily because they committed one drug offence or the other. This figure approximates the population of New Mexico. Some criminologists are concerned with the fact that first-time drugs offenders who spend years in jail will likely return to crime once they are paroled, using the connections they made while serving their prison term. If this happens, it is likely that the prison boom will become a vicious cycle.

Beaukimer and Reuters (2000), in what they called "Facts about Drug-Crime Nexus in the United States of America", noted that: 1) across 35 cities in the US in 1998, between 40 to 80 percent of male arrestees in the Arrestees Drug Monitoring (ADAM) Program tested positive for at least one drug at arrest (Arrestees Drug Monitoring Program, 1999); 2) nearly one-quarter (22 percent) of the federal prison inmates and one-third (33 percent) of state prison inmates (nearly 40 percent of the state) convicted of robbery, burglary, or motor vehicle theft reported being under the influence of drugs at the time of their offence; and 3) among state and federal inmates, 27 percent of those

serving sentences for robbery and 30-32 percent of those serving sentences for burglary said they committed their offences to buy drugs.

A more recent study, Jonathan *et al.*, (2001), acknowledged that: (1) the number of inmates in the American prisons has more than tripled over the last 20 years to nearly two million inmates, with 60-70 percent testing positive for substance abuse upon arrest; and (2) hard-core addicts in the same jurisdiction are estimated to commit hundred (100) petty crimes each year. From the findings, the study concludes that if the prison population were to continue growing at the current rate, then by the year 2053 the United States will actually have more people in prison than out, the majority of who would be drug abusers, addicts and or those who commit drug-related offences.

Jones (1999) found a similar predicament in England and Wales. According to her study, a third of all thefts, burglaries, and street robberies are drug related. Urine tests carried out to 839 people arrested in five areas in England (Cambridge, London, Manchester, Nottingham, and Sunderland) showed that nearly two thirds of them tested positive for one illegal drug, and more than a quarter did so for two or more of such substances. Her study also reveals that the drug users interviewed spent an average of 400 pounds (\$640 USD) a week on drugs, although some were spending up to two thousand pounds a week for a mixture of heroin and crack. Very little of this money was raised legally, according to her.

Harrison and Gfroerer (1992) conducted a research with a sample of 32,594 representative households respondents in England with a response rate of 95 percent. They confirmed that the rate of criminal behaviour is higher for a population more heavily involved in drug use, and lowest rates of criminal behaviour found among those who do not use alcohol or illicit drugs. The dependent variables investigated were: involvement in property crimes, involvement in violent crimes, being booked for property offences and being booked for violent offences. While using marijuana and cocaine were the independent variables. The results showed that the dependent and independent variables were significantly related.

The general deviance theory proposes that substance use may not cause violence and violence may not lead to substance use, but rather that individuals "likely to engage in one form of deviant behaviour are also likely to engage in other forms of deviant behaviour" (see Harrison & Gfroerer, 1992). This is conceptually similar to the spurious model, which posits that violence and substance use are not causally related, but rather both result from some common or shared variable, such as antisocial personality disorder (ASPD), parental modelling of both behaviours, poor relations with parents, and genetic or temperament traits (see review by White, 1991). Thus, violence and substance use are both considered deviant behaviours within the context of a general deviance syndrome. In fact, Harrison and Gfroerer (1992) showed that after controlling for alcohol and cocaine use, individuals who used marijuana in the past year were more than twice as likely to report engaging in a violent crime than nonusers.

In developing countries, the story is not different. In Nigeria, for instance, a hard-line approach dominated by interdiction and repression prevails. According to the Nigerian Drug Law Enforcement Agency (NDLEA), drug abuse is a cancer spreading across society, leading to overdoses, the break-up of families, and the collapse of law, and order in the cities. Driven by such fears, the agency devotes the bulk of its resources to interdiction, that is, the arrest of any individual involved in consuming, trading or benefiting from the profits of trading in drugs. The agency's resources are also devoted to seizures of drugs, mainly of cannabis, cocaine, and heroin. Since the appointment of General Musa Bamaïyi, who was the chairman of the Agency (NDLEA) at that time, over 3,000 Nigerians have been incarcerated for drug related offences for terms of up to 25 years. If this trend continues, according to the agency's report of 1996, drug offenders were expected to constitute the majority of Nigeria's prison population by early 2000.

Piquero (1999) discussed that the control of narcotic substances by government policies in Nigeria rested for several decades on the unchallenged assumption that drug abuse is medically harmful, socially corrosive, and conducive to violent crimes.

Drawing from the foregoing literature review we hypothesise that there is a significant positive correlation between criminal behaviour and factors like drug abuse, peer group, learning, poverty, broken home, unemployment, urbanization and rural-urban migration.

1.4 Study Materials and Method

To provide answers to the research questions, the data were collected using a questionnaire. The items in the questionnaire were sourced from literature, adapted from Arrestees Drug Monitoring System (ADAM)¹, and others developed by the researcher as described below.²

Criminal Behaviour

The dependent variable “criminal behaviour” is defined as an infraction or violation of a criminal law. In other words, crime is what criminal law defined as an offence. In Malaysia, the Malaysian Penal Code is dominated by the notion that all major crimes consist of offences against person, or state (Yakin, 1996). Several questions in the questionnaire measured the dependent variable “criminal behaviour”. Examples of such questions are: Have you ever been arrested and charged for breaking a law? With responses ranging from criminal charges, number of times charged, whether found guilty or not and if found guilty, the type of punishment. Other items are if you have not been formally arrested, have you ever been stopped and questioned on criminal activities and number of times. These items were adapted from previous studies (Hirschi, 1969; Navaratnam et al., 1990, ADAM’ 1999 and Baron 1999).

Drug Abuse

A drug is abused when its usage is socially and medically disapproved. Thus drug abuse is a situation when a drug is taken out of any medication, at the same time, it is socially disapproved and or the use of illicit drugs and substances. Drug addiction is the continued use of drugs, which leads to dependence on the drug. According to Clinard and Meier (1995), the term “addiction” refers to physical dependence, an adaptive state of the body that is manifested by physical disturbance when drug use stops (ibid: 199). It is understood from this definition that drug addiction is a situation when illicit drugs are continuously used because the addict anticipates pains or discomfort if he/she withdraws from the use of the drug.

Drug abuse was measured via question such as the types of drugs used, categories include Heroin Cannabis (Ganja); Morphine Opium; Psychotropic; Syabu; Candu Inhalant (Sniffing glue/gum); Batuk/Kodein, and others Navaratnam (1990); the age at which respondents began to use drugs; frequency of drug use; the amount spent on drug per day, etc. These are all adapted from Drug Abuse Monitoring System (1999), Bennet (1998 and 2000), and Bernburg and Throlindson (1999).

¹ Arrestee Drug Abuse Monitoring Program (ADAM) is a research program that is based on the interviewing and drug testing samples of arrestees initially called Drug Use Forecasting Program (DUF) funded by the National Institute of Justice which is a research and development agency of the U.S. Department of Justice established to prevent and reduce crime and to improve the criminal justice system. There are several researches that use and adapt the program, including Bennett, (1998 and 2000) Makkai (1999), Riley, (1997), Makkai and Doak (2000).

² A copy of the questionnaire is available on request from the author.

Subculture

Subculture is defined as an attribute, which the youth possess as a result of joining a specific deviant group. Clinard and Meier (1995) define "subculture" as a culture within cultures, with a collection of norms, values, and belief whose content is distinguishable from the dominant culture. Membership in such a group solidifies a deviant identity. It would not be an over-generalization to say that most, if not all, drug addicts operate in groups. The measurement of subculture has been treated by the Differential Association Theory has built most of its assumptions on subculture (which is one of the integrated theory used in developing the model of this research). Subculture has one dimension peer group. Some of the questions asked which were related to subculture included: Do your friends use drugs? How many of your friends use drugs? Also, questions centred on whether respondents were pressured by friends to use drugs and to get involved in criminal activities. These questioning approaches are also similar to those of Baron, (1999), Hirschi, (1969), and Acarid, *et al.*, (2000).

Socio-economic Factors

Socio-Economic variables include: poverty, broken homes, environment, and urbanization.

Poverty: As used in this study poverty is the inability of an individual to maintain his/her personal need, which includes the necessities of life. Haralambos and Heald (1980) defined "poverty" as a value judgment of the basic human needs that is measured in terms of the resources required to maintain health and physical efficiency (*ibid*: 140). Most measures of poverty are primarily concerned with the quality of food, clothing, and shelter deemed necessary for a sound life.

Absolute Poverty. Absolute poverty divides the poor and the non-poor by using some objective standards such as the lack of money to purchase adequate food, shelter and clothing (Williams and Cressey 1980: 153-154). In the Malaysian contexts, Ariffin, (1994) argued that in Malaysia absolute poverty is measured on the basis of a Poverty Line Income (PLI). For 1990, the poverty line income was designated to be RM 370 per month in Peninsular Malaysia. This is for a household size of 5.1. For Sabah, it was RM 544 for a household size of 5.4 and in the case of Sarawak; it was RM 542 for a household size of 5.2 (*ibid*: 8). The items that measures the variable absolute poverty; questions asked respondents whether the inability to obtain good food, adequate clothing, or proper shelter leads them to commit crime, with responses (1= Strongly Agree to 5=Strongly Disagree). Whereas question item number 114 requested the respondents to respond (1=Strongly Agree to 5=Strongly Disagree) poverty was responsible for their involvement in criminal activities. These items were also adapted from Hirschi, (1969) Ekpenyong, (1989), and Baron, (1999).

Relative Poverty approach holds that people are poor if they have significantly less income and wealth than the average person in the society. In Malaysia for example, Appa Rao (1977) pointed out that although the poverty line in Malaysia is intentionally defined in an ambiguous terms-referring to the minimum household income that enables acquiring the basic nutritional and other non-food requirements sufficient for sustaining a decent living standard- it applies generally to household income, in cash and in kind, of about \$ 150-175 per month (*ibid*: 95). A person is said to be relatively poor if he/she has less/average income that would enable him/her to obtain a decent living standard. Items nos. 99, 86 and 105 were used as measures of relative poverty. The items for instance requested the respondents to react to the statements that: "there is a clear relationship between my income level and the crime I have committed"; "my inability to financially support my wife and children leads me to commit crimes" with responses (1= Strongly Agree to 5=Strongly Disagree), and "have your parents had financial difficulties in their daily household needs" with responses (1=yes and 2=no).

Broken Homes: A broken home as used in this study is a household, in which the couples are either separated, living apart or dead. This situation often leads to improper socialization of children and young adults. This is often associated with underage offences. The questions asked

the respondents whether their real parents are alive (with response categories ranging from 1 = both of them are alive, to 5 = I live with my guardian), and if they were not, then up to what age was the respondent living with them. What is your father's marital status, and what is your mother's marital status? with responses (married, separated, widowed and divorced).

Urbanization: This means the concentration of people in urban areas. Miethe and Meier, (1994) state that crime is associated with mobility in at least two ways: first, individual mobility may be related to crime, if the persons who are mobile are also those who are more likely than sedentary persons to commit crime; and second, communities in which there is greater mobility, reflected in the degree of population change, may be those who also experienced more in crime (ibid: 25). Population growth in cities and urban centres has been associated with criminal offences by various sociological theories. That is primarily because greater mobility results in reduced moral commitment to norms that, in turn, increase the chances of law violation (Miethe and Meier 1994: 25). Urbanization is measured by question items: Questions items measuring urbanization demanded respondents to react if living in cities has a relation with drug use, with responses ranging from 1 = Strongly Agree to 5 = Strongly Disagree, and if the respondents who live in urban centres tend to use drugs more than those who live in rural areas, with answers 1 = Yes, 2 = No and 3= Don't Know, sourced from Miethe and Meier, (1994).

Rural-urban Migration

This is the movement of people from rural to urban areas in search for employment. In the absence of such employment these migrants become a burden to the urban centres and quite upon join criminal groups. The items that measures rural-urban migration asked the respondents if their movement from rural-urban area predisposes them to commit crime, responses (1-strongly agree-5=strongly disagreed).

1.5 Sample Size

The study is about three hundred drug addicts who were drawn from two government drug rehabilitation centres in the State of Penang, by stratified and systematic sampling procedures. The population was one thousand drug inmates with and without criminal history. To begin with, the sample size was N=300. This figure was arrived at based on Blaikie's (2000), sample determinant for varying populations. According to Blaikie, while large populations may need large samples than smaller populations, the ratio of population size to an appropriate sample size is not constant, for example: for population around 1,000, the ratio might be about 1:3 a sample of about 300 (ibid: 208). To obtain the sample elements, an inmate roster was used. The inmate roster was obtained from the authorities of the two government drug rehabilitation centres.

The sampling process began with stratification of the population into three strata according to ethnicity. This was followed by a preparation of three specific lists. In order to obtain the sample elements, the selection techniques were that for every third person on the list, one was selected. The distribution of the sample elements in the three frames (making up the population) was: 483 were Malays, accounting for 48.3 percent; 305 were Chinese, accounting for 30.5 percent and 212 were Indians, accounting for 21.2 percent. In order to maintain the same proportion in the sample, the researcher employed the systematic sampling procedure in each of the stratum, which enabled the selection of one sample element in each three elements systematically. This sampling process was guided by Blaikie, (2000) who says that the population elements can be grouped into the desired categories, or strata (ethnicity in this case) before selection is made. He adds that by using the same sampling ratio in each stratum, the population distribution on a characteristic (ethnicity as in this case) will be represented proportionately in the sample (ibid: 200).

The rationale for using the stratified sampling procedure in the selection of the study elements/respondents across the three ethnic groups was to ensure that the sample was as homogenous as the population from which it was drawn and was based on the guidelines drawn by Blaikie, (2000) and Kish, (1965). This was done to control for under and over representation of respondents from the three ethnic groups. Furthermore, the sample was a representative ratio reflection according to ethnicity of the total inmates in the two government drug rehabilitation centres, and it was also a representative of the Malaysian drug user population (see, for example, Navaratnam and Foong, 1996a and 1996b, National Narcotics Report, 1998; National Drug Information System January-December 2000, April 2000, January-December 2003, and January-July 2004 all available at the NADI web site <http://www.adk.gov.my/nadi.html>).

1.6 Findings

A total of 143 (49.5 percent) of the total respondents were Malays, 85 (29.4 percent) Chinese, 57 (19.7 percent) were Indians, and only 2 (0.7 percent) were of other ethnic group background. 148 (51.2 percent), of the respondents, were Muslims, 75 (26.0 percent) were Buddhists, 48 (16.6 percent) were Hindus, and 15 (5.2 percent) were Christians. More than half of the respondents, 187 (64.7 percent), were unmarried. About one fourth of the sample, 63 (21.8 percent), respondents were married. Whereas, the remaining respondents: 17 (5.9 percent), 11 (3.8 percent), and 6 (2.1 percent) were widows, divorced and separated respectively.

As far as the numbers of children the respondents have, 81 (97.6 percent) reported having children between 1 - 5 years of ages. There were 44 (18.7 percent) who had between 6-10 children (in number). In addition, a majority among the sample reported having siblings. There were 191 (81.3 percent) respondents with 1 - 5 siblings, and 44 (18.7 percent) with 6 - 10 siblings.

The majority of the respondents had attained some formal schooling, with 95 (32.9 percent) who attended lower secondary 1, 2 and 3 followed by those who attended upper secondary 4, 5 and upper secondary 6, 87 (31.1 percent) and then those who attended standards 1 – 6, 74 (25.6 percent). The remaining respondents 9 (3.1 percent) had no formal education at all, with an additional 12 (4.2 percent) who had attended primary school only. And finally, only 10 (3.5 percent) among the respondents had either attended some vocational/ technical training or had diploma certificates.

More than two thirds of the respondents 220 (76.1 percent) had been gainfully employed before they were enrolled into the drug rehabilitation centres. A total of 62 (21.5 percent) of the respondents acknowledged that they had not had any paying job before their enrolment into the government drug rehabilitation centres. Furthermore, in addressing the other demographic profiles of the respondents, the table shows that the average age of the respondents is thirty-six years (35), with a minimum age of twenty-one (21) and a maximum age of sixty (60).

1.7 Multivariate Analysis

Multivariate analysis is defined as a statistical method for examining the relationship between a numbers of variables. Amongst the several multivariate analyses, the multiple regression analysis was selected. The basis for selecting the multiple regression is because multiple regression allows us to establish the independent influence of a set of predictor variables on an outcome variable (Blaikie, 2003:293). Furthermore, according to Hair, *et al.*, (1995) multiple regression analysis is defined as a statistical technique that can be used to analyse the relationship between a single dependent variable (criterion) and several independent (predictor) variables. Multiple regression analysis would thus be applied in this section to establish the influence of the group of

independent (predictor) variables of this research on the dependent (outcome) variable criminal behaviour.

It is further argued that multiple regression analysis is a dependent technique and the basic requirements for adopting multiple regression analysis are: (1) the researcher must be able to classify the research variables into dependent and independent variables; (2) both the variables are to be measured at metric; (3) under certain circumstances it is possible to include non-metric (variable) as an independent variable (by either transforming either ordinal or nominal data with dummy variables); (4) the research problem must be for explanation and prediction; (5) the research must also be concerned with statistical relationship and finally (6) it requires a large sample with many observations (Hair *et al* 1995:149). The above requirements are fulfilled in this research and attempt is made to use the multiple regression to answer the why questions of this research in the next section.

In an attempt to answer the way questions of this research the multiple regression analysis is used. To illustrate how the analysis works with these variables, a bivariate regression will be used first with each of the dependent variable, consistent with the provision of Blaikie (2003; 293-302). The table below present the results of the bivariate regression of criminal behaviour with drug abuse; peer group; broken home; poverty; urbanization and migration. The table shows the result of bivariate regression. There is an indication the total variance explained (R^2) of the variable poverty is 0.28, that of peer group is 0.25 and 0.23 for drug abuse as show in table 4.23. Where as the remaining variables value are less than 0.15. However, observing the table further reveals that there is problem of collinearity, or multiple collinearity of the variables looking at their tolerance and variance inflation factor. A tolerance value of 1 indicate that the variables are not correlated with the others and a value of 0 that is perfectly correlated (Blaikie 2003:294). In our above case all the values are less that 1 indicating a collenearity of our variables. In addition, a VIF (variance inflation factor) of more than 2 indicate a close correlation and a value approaching 1 as little or no association (Ibid. p. 294).

In order to remedy the above situation of collenearity is to do a correlation matrix of all the independent variable with the dependent variable. Table 5 presents the correlation matrix of potential predictor variables of criminal behaviour.

Table 5 Correlations Matrix of potential predictor variable

(Pearson's r_1 of all variables)

	1	2	3	4	5	6	7
1 Crime							
2 Drug Abuse	.017						
3 Peer Group	.221**	.009					
4 Absolute Poverty	.108	.198**	.424**				
5 Broken Homes	-.014	-.010	.163**	.074			
6 Urbanization	.142*	-.027	.316**	.265**	.045		
7 Migration	.095	.162**	.399**	.445*	.109	.28	5**

Significant Levels: ** p-value < .01 * p-value < .05

From table 5 above which present a matrix of correlation coefficients of the crime variable with the other predictor variables, it is clearly established that drug abuse with crime is not correlated and the count number (.017 positive), crime with peer group is correlated at significant at (0.05). However, crime is correlated with urbanization at significant 0.05, but not with migration. Furthermore, drug abuse correlated with poverty and migration both at 0.05 significant levels. In addition, peer group also correlated with poverty, broken home, urbanization and migration, so are migration and urbanization correlated and poverty correlated with both urbanization and migration all at significant level 0.05.

The values above are very much low and this results and relates to the sample size used. Hence, argued Blaikie (2003) that level of significance is not a useful criterion on which to decide whether a variable should be included in the multiple regressions, the absolute value of the coefficient must be used. At a glance of the table again, it is clear that at least a reasonable association with criminal behaviour is peer group, broken home (negative), and (positive) for all other variables. These variables are therefore all worth considering.

In the first stage, all the independent variables are included. The next table shows the contribution of each of the predictor variable to the outcome variable. Table shows the result where poverty, peer group and drug abuse seems to have the highest coefficients.

Table 6 Regression of Crime (Outcome variable) with group of (Predictor variables)

Outcome	Predictor	R	R ²	Beta	P	Tolerance	VIF
Crime	Drug abuse	0.48	0.23	0.16	<0.05	0.98	1.02
	Peer group	0.50	0.25	0.17	<0.05	0.84	1.18
	Poverty	0.53	0.28	-.178	<0.001	0.91	1.08
	Broken/H	0.38	0.14	-.265	n.s.	0.99	1.00
	Urbanization	0.29	0.08	0.29	n.s.	0.90	1.01
	Migration	0.45	0.20	0.244	n.s.	0.97	1.02

In the last stage the regression analysis was run with the variables with high coefficients using the forward mode. Tables 7, 8 and 9 reports the variable the forward elimination included and the order in which they are entered. However, on the variable selection procedure Blaikie (2003:301) warned that "It is important to note that different decision about which variable to include in the analysis may produce different conclusion, what is important in this process is to be able to justify the decision and, preferably, have theoretical as well as statistical reasoning for making them".

**Table 7 Regression of Crime (Outcome variable) with group of (Predictor variables)
II**

Outcome	Predictor	R	R ²	Beta	P	Tolerance	VIF
Crime	Drug abuse	0.48	0.23	0.16	<0.05	0.98	1.02
	Peer group			<0.05	0.84	1.18	
	Poverty		-.178	<0.001	0.91	1.08	
	Broken/H			-.265	n.s.	0.99	1.00
	Urbanization			0.29	n.s.	0.90	1.01
	Migration			0.244	n.s.	0.97	1.02

Table 8 Regression of Crime (Outcome variable) with group of (Predictor variables)
III

Outcome	Predictor	R	R ²	Beta	P	Tolerance	VIF
Crime	Drug abuse			0.16	<0.05	0.98	1.02
	Peer group	0.50	0.25	0.17	<0.05	0.84	1.18
	Poverty		-0.178	<0.001	0.91	1.08	
	Broken/H			-0.265	n.s.	0.99	1.00
	Urbanization			0.29	n.s.	0.90	1.01
	Migration			0.244	n.s.	0.97	1.02

Table 9 Regression of Crime (Outcome variable) with group of (Predictor variables)
IV

Outcome	Predictor	R	R ²	Beta	P	Tolerance	VIF
Crime	Drug abuse			0.16	<0.05	0.98	1.02
	Peer group			0.17	<0.05	0.84	1.18
	Poverty	0.53	0.28	-0.178	<0.001	0.91	1.08
	Broken/H			-0.265	n.s.	0.99	1.00
	Urbanization			0.29	n.s.	0.90	1.01
	Migration			0.244	n.s.	0.97	1.02

In summary, the above multiple regression analysis between crime (outcome) variable and drug abuse, peer group, poverty, broken homes, urbanization and migration (predictor) independent variables allows us to make the following conclusion that poverty to be the best predictor of inmates involvement in criminal behaviour, peer group, i.e. peer influence comes a close second to the prediction, and lastly drug abuse is also a contributing factor of why abusers of drug get themselves in criminal activities.

This conclusion also allows us to support the earlier assumption that is not in all situations abusers of drugs involvement themselves in crime, even in situation they does so, the reasons as while as the causes of their involvement in crime must be adduced to micro and macro

factors. The findings here acknowledge micro factor (peer group influence) and macro factors (poverty).

1.8 Discussion and Summary

1.8.1 Drug Abuse and Criminal Behaviour

The findings of this study have revealed that there is a considerable relationship between drug abuse and involvement in criminal activities. This result is in accord with both national and international empirical studies. As documented by the research results, heroine and cannabis were the most popular drugs being abused by the respondents. At the national level, Navaratnam *et, al.*, (1990) also ascertain that heroine was the primary drug used by their subjects. In another research report, Navaratnam, *et,al.*, (1992) acknowledged that heroine was the most widely used drug among addicts in Kuala Lumpur, accounting for 79.5 per cent in 1991, and 87.5 per cent for the first five months of 1992. In yet another study by Hj. Mustapha (1996), he discovered that the two main drugs abused in Malaysia were heroine and cannabis, with 88 per cent abusing heroine and 11 per cent abusing cannabis. Government data in Malaysia also documented that heroine and cannabis are the commonly abused drugs (see, for example, Dadah, 1992; National Drug Information System April 2000; January – December 1999; and January – December 2000).

The police department in Penang pointed out that half of the 120,000 properties related offences are committed by hardcore drug addicts (The Star, Wednesday 23, May, 2001). In the same paper, Datuk Lee Lam, Thye the Deputy Vice Chairman of the Malaysian Crime Prevention Foundation, is reported to have said that, "The Foundation feels that by placing hardcore addicts in prisons and holding them for a period more than the maximum two-year period at Rehabilitation Centres, it may help to reduce drug-related crimes in the country".

At the international level, the National Drug Research Centre of Universiti Sains Malaysia (1996), in presenting the Patterns and Trends of Drug Abuse in selected South Asian Cities, acknowledged that heroine was the main drug abused in Colombo, Dhaka and New Delhi. The findings of this research are also consistent with those found in the United States by Jones (1999). She reported that amongst 11,000 drug addicts who entered drug treatment programs between March and July 1995 the majority were heroine users, and were responsible in part for 700 crimes in the three months before treatment.

Makkai and Doak (2000) also indicated in their sample of police detainees in Australia who are criminally active that: (1) 62.9 per cent had one charge against them, (property offences, 40.9 per cent, as the most common violent offences, 31.1 per cent, and offences against justice procedures 11.7 per cent), (2) trafficking charges, excluding drunk driving 9.4 per cent; (3) among the 28 violent offences, the largest proportion tested positive to cannabis, (46.4 per cent) to opiate 32.1 per cent, and to benzodiazepines, 17.9 per cent; (4) of the respondents charged with offences against justice procedures, 64.0 per cent tested positive to cannabis and 32.0 per cent tested positive to opiates. DUMA (Drug Use Monitoring in Australia) shows illicit drug use to be wide spread among detainees. Of the people who provided urine sample the results confirmed that 75.1 per cent tested positive to at least one type of drug. Participants were most frequently detained for property offences (40.9 per cent) almost similar to the findings of this research. The range of offences indicates that drug use is a factor predisposing persons to a variety of crimes. Makkai and Doak (2000) thus conclude that large numbers of police detainees, regardless of their offence type, are drug users. Policy wise, they suggest that the promotion of treatment diversion potions should be a priority of the government in order to break the drug-crime nexus.

As confirmed by the data of the present study, the majority of those respondents with criminal records self-reported that they engaged in property offences in order to support their drug habits. The results are similar to previous ones, which establish correlation, and not causality, between drug abuse and criminal behaviour. Xuan (1994), in his report of narcotic drug abuse in Vietnam, also found similar results to those of this study. He documented that: (1) a considerable number of drug abusers who have access to opium neglect their responsibilities towards their families and society because of their duping, deceiving and using tricks; (2) among drug addicts in cities and townships in Laos 70 per cent involved in theft, prostitution, and illegal business, 40 per cent of which are criminal offenders (Ibid. P.129). Navaratnam, *et al.* (1996) further documented in their 'Ten Years Retrospective Drug Careers' that those who spent 1 – 2 years in prison had bad criminal records, with a frequent high rate of crime commitment. Furthermore, other findings consistent with the present study like those of Navaratnam and Foong (1996a) reported that most of their respondents were arrested 1- 4 times, and that more than half of these 53.6 per cent self-reported that they have been either borrowing or stealing money to support their drug use habits.

Although the data of this study shows a relationship between drug abuse and criminal behaviour, like other previous studies, the extent of the relationship in this study is unclear. Some drug addicts reported having been involved in criminal activities, whereas others reported that they were not. As indicated by the current data, heroine and property crime were related; similarly Dawkins (1997) discovered that marijuana use was significantly related to twelve offences he studied. White (1991) also found out that, similar to the present findings, the use of drugs and delinquency patterns in the age group 15 to 18 were comparable predictors of marijuana use. Inciardi (1979) also discovered that over 90 per cent of drug users committed crimes to support their drug habits.

Recent data from the Bureau of Justice Statistics of the United States Department of Justice (2002) have revealed the following facts about drug-related crimes. In 1998, an estimated 61,000 convicted jail inmates said that they committed their offences to get money for drugs. Of the convicted property and drug offenders, about 1 in 4 had committed their crimes to get money for drugs. A higher percentage of drug offenders were registered in 1996 24 per cent, as in comparison with those registered in 1998 14 per cent. All these numbers point out that those offenders commit crime to raise money for drugs. In 1997, 19 per cent state prisoners and 16 per cent federal inmates said they committed their current offences to obtain money for drugs. These percentages represent a slight increase from 1991, when 17 per cent of state, and 10 per cent of federal prisons identified drug money as a motive for their current offences; the Uniform Crime Reporting Program (UCR) of the Federal Bureau of Investigation (FBI) reported in 2000 that 4.4 per cent of the 12,943 homicides in which circumstances known to be narcotics related (murders that occurred specially during a narcotic felony, such as drug trafficking or manufacturing) again considered drug related (Ibid, p. 1-12).

Moreover, on whether victims perceived offenders to have been drinking or using drugs at the time of their various offences, the National Crime Victimization Survey (NCVS) of the Bureau for Justice Statistics (2002: 5-6) in the US, discovered that: a) about 28 per cent of the victims of violence reported that the offender was using drugs alone or in combination with alcohol; b) based on victim perception, there were about 1.2 million violent victims each year, in which victims were certain that the offender had been using or drinking alcohol; c) for about 1 in 4 - 75 per cent of these violence victimization cases involving alcohol use by offenders victims believed their offenders were also using drugs at the time of the offences. Also, of the victims of violence in workplaces: a) 35 per cent believed the offender was drinking or using drugs; b) 36 per cent did not know if the offender had been drinking or using drugs; and c) 27 per cent of all workplace offenders had not been drinking or using drugs.

All Arrestee data of Bennet (1998 and 2000); Makkai (1999) Riley (1997) are in support that a significant relationship exists between drug use and criminal activities. Other findings in accord with the present study are Jarvis and Parker (1989); Harrison and Gfroerer (1992). Recently, Denton (2001) found in Melbourne, Australia that drug abusers and dealers commit a wide variety of property offences ranging from fraud, forgery, theft, burglary, shoplifting to handling stolen goods. What, however, may differentiate the empirical research stated above may be the methodology adopted in sorting out their various data.

1.8.2 Drug Abuse and Subculture

The bivariate analysis in the data showed a significant positive relationship between subculture variables (peer group and learning [imitation]) on the one hand and criminal activities on the other. The data shows that peer group and learning [imitation] have great influence on drug addiction and involvement in criminal activities.

The results of this study are consistent with both classical and contemporary criminological research. It is, for instance, similar with that of Becker's (1963) findings on marijuana use, Hirsch's (1969) *Causes of Delinquency*, Goode's (1989) who found substantial evidence that for a proper understanding of the reasons behind both getting addicted to drugs and involvement in criminal activities and in delinquent attitudes, focus should be on social contextual variables, including peer group and learning (imitation).

Baron's (1999) findings also posit a relationship between drinking among peer groups and their involvement in property crimes. Among his subjects who indicated that they are successful property offenders there are some who are reported to drink alcohol more regularly. Other research findings similar with the data of this study are: Farrington (1986), Navaratnam and Foong (1988), Acarid *et al.* (2000), Miethe and Meier (1994), among several others. According to Singh (1997), 62 per cent of his respondents agreed that friends and peer group had serious influence in their getting addicted to drugs. Another 68 per cent, for instance, injected themselves with drugs, greatly assisted by their peer group (*Ibid.* p. 27). Skinner and Fream (1997), also support learning as a correlate of computer crimes. Added with other kinds of deviant activities, one major predictor of crime and delinquency remains associating with friends who exhibit such behaviours, as supported by the Differential Association Theory of Sutherland and Cressey (1974).

It would not be an over generalization to say that the majority of criminological research strongly supports a connection between one's delinquency and that of a friend. But there is disagreement on causal ordering and on the meaning of the two concepts. According to the Subculture Theory, delinquent people teach younger friends delinquency values, as a result; delinquency will follow (Sutherland and Cressey 1974:12). Bernburg and Thorlindson (1999) argued that variables such as peer delinquency and peer victimization are similarly related to violent behaviour and non-violent delinquency. They further reported that peer behaviour has a relatively strong effect on smoking and alcohol use. Sommers and Baskin (1994) reported similar findings to this study. Their results confirm that neighbourhood characteristics such as poverty having delinquent peers, and marijuana use during school years were stronger predictors of delinquency in schools.

Correlates of crime found in this study are also consistent with research that has used the Integrative Perspective. The convergence of social theories tends to yield more reliable data on the relationship between the use of drugs, criminal activities, and delinquent behaviours. More importantly, social variables like peer group is indeed pertinent, primarily because social interaction among peers within communities and societies provides models for easy access to drugs, teaching peer members, when, where, how to get and use drugs.

Navaratnam and Foong (1996a) while studying on subculture as a good measure of drug use, made a follow-up of former drug addicts in Penang. The study showed that 51.5 per cent had started and continued to use drugs because their friends influenced them. Peer group, they concluded, was strong among addicts, especially in relation to the return to drugs. Other data obtained in Penang, which are in accord with this study have been reported by Navaratnam (1990), show that 30 per cent of the ample elements had friends who drank regularly and /or used marijuana, while 38 per cent had friends who used heroine or other opiates. From this, it was ultimately, concluded that friendship had a great destructive influence on their own drug use.

1.8.3 Socio-economic Factors and Criminal Behaviour

The data of this research indicates that socio-economic factors (poverty, broken home, unemployment, urbanization and rural – urban migration) have an influence on getting involved in drug use. However, it is worth noting that, as was anticipated, these factors are a crucial predictor of crime.

Poverty, according to multivariate results has emerged to be a link to criminal activities among and within the study sample. According to Schinke *et al.* (cited by Cabrera 1999), poverty had stronger influence on drug abuse. Baron (1999) also found that those who were more active in robbery on streets were heavy marijuana users. Homelessness and poverty, he posits, are predictors of hard drug use. On unemployment, his data suggests that it is an important predictor of alcohol use. Consequently, constant need of funds to ensure availability of drugs and alcohol among youth necessitates the undertaking of criminal activities.

The results of Pfeffer and Cole (1998) are also in accord with this present research. Their discovery attests that poverty is an important predictor of drug abuse and committing criminal offences. Making a comparison of youth crimes among British and Nigerian children, they discovered that the Nigerian students more frequently gave environmental explanations such as poverty, (33 per cent) and lack of home training (19 per cent) whereas, the British students, (37 per cent) used drugs for fun.

Unemployment has presently been correlated with criminal behaviour at 0.1 significant levels in the bivariate analysis. However, to what extent unemployment associates with crime, the results do not show, bearing in mind that the majority of the respondents had already been employed before they were enrolled into the Rehabilitation Centres. There is no doubt that even if unemployment correlates with crime, unemployment alone may not explain the criminal behaviour of the subjects. But research like that of Farnwoth and Thornberry (1994) considers the unemployment rate as an index for social stress. Rising unemployment is seen as a manifest expression of anti-social aggression influenced by social stress.

Furthermore, there are a number of studies, unlike this study, which have attributed the increase in crime to be the inability of a population to get employed (See for example Baron 1999; Ekpenyong, 1989; Ramsey and Percy, 1986; Van, 1996; Farrington, 1986; McCarthy and Hagan 1991). According to Cruthfield and Pitchford (1997) time out of the labour force is positively related to criminal involvement, and when workers expect the current employment to be of a longer duration, they are less likely to engage in crime. Hirschi (1969) found a high rate of self-reported delinquency in families that experienced unemployment and received welfare donations as compared to families in better circumstances.

Like the findings in this study, Farnworth and Thornberry (1994) also discovered a weak relationship between unemployment and crime. What differentiates the present findings with theirs was that unemployment, welfare and underclass status are all significantly related to street and other crimes. Street crimes and delinquency of adolescents from poorer families that persistently benefits from welfare have significant high rate of cumulative delinquency activities.

Socio-economic factors including inequality and poverty have also been found to be associated with delinquency and crime as confirmed by the Anomie and the Strain studies. Attributing these structural factors to crime, Currie (1998) even contended that the links between extreme deprivation, delinquency, and violence are consistent and compelling. In the United States, for example, it was noted that poverty, economic inequality, and social exclusion are causal agents in producing crime and violence by young people (Ibid: p. 7). A comparative analysis on urbanism and crime in Japan, Saudi Arabia, and the United States carried out by Lester (1999), also found a positive association between population density and crime, - larceny in all countries, and homicide in Japan and the United States. Association between population and homicide rates was positively significant for the two latter nations.

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