Rethinking on Drug Abuse and Crime Relationship: An Alternative Explanation for Intellectuals Criminologists

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Abstract

According to the literature on the drug-crime link, there is relationship between abusing drugs and involvement criminal activities. A growing number of literature and empirical research have documented that relationships exists between drug abuse and criminal offences. Through studying a selected sample of three hundred institutionalised drug addicts [inmates] with and without criminal history from two government drug rehabilitation centres in Penang, Malaysia, findings from an empirical research affirmed that indeed relationships exist between drug abuse and involvement in criminal offences. The result of the study reveals that is not in all situation abusers of drugs get involved in criminal activities, even in situation where they do so, abusing the drug alone is inappropriate in justifying their attitudes. In addition to abusing drugs other micro and macro factors should be put in place for proper understanding of their criminal offences.

Introduction

In speaking about the drug-crime nexus, Inciardi *et al.* (as cited in Baron, 1999) argue that the drug and crime relationship is interactive. Crime, they point out, finances the use of drugs. Continuous usage of drugs encourages more use of drugs and more use of drugs encourages more crime. According to the literature on the drug-crime link, there is an association between the use of drugs and getting involved in criminal activities. Some social conditions seem applicable to cause both drug use and crime, and many young offenders commit a wide variety of crimes, which include drug use. Even if it is assumed that drug use is not a direct cause of crime, it is unquestionable that a large proportion of youth who get involved with criminal justice agencies (the police, the courts and custodian institutions) are usually regular drug users. Empirical data indicate a correlation between drug abuse and crime. However, drug abuse by itself does not sufficiently explain criminal behaviour (Ramsay and Percy, 1996; Parker, 1996; Ekpenyong 1989).

For instance, Clinard and Meier (1995) state that substance abuse involves violations of norms surrounding the use of alcohol and other drugs, whereas crime involves violation of legal norms of legislature and other government agencies.

According to a United Nation Report (1989), the use of illegal drugs and crime go hand in hand. In so many cases, drug users will literally do anything to obtain enough money to satisfy their drug use habits. The most frequently committed unwanted behaviours by drug abusers are criminal in nature. Drug abusers tend to gain most income by theft, prostitution and drug peddling. There are some apparent relationships between drug abuse and criminal behaviour. A number of these are: crimes committed under the influence of drugs; crimes committed in order to get money or goods to buy drugs and trafficking and a host of other crimes associated with drug distribution

(Ibid p. 42). However, initially and as indicated by the literature regarding the occasional user phase, drug use and crime are spuriously related. During the continuous usage, drug use is facilitated, but not caused by, criminal income. Lastly, during the street addict phase, drug use appears to cause crime (See, for instance, Mernard 2001, Sommer and Bakin 1999 and Goldstein, 1985). Thus, although the causal relationship is not unidirectional, substance use in general appears to be a cause or at least a risk factor for criminal and other problem behaviours.

According to Bennett (1998 and 2000), there is clear evidence that as a person's drug use increases his involvement in criminal activity tends to increase as well. However, it is not in all situations that drug abusers get involved in criminal activities. Even in those situations where they are engaged in criminal activities, it is not sufficient to justify drug abuse as the only attributing factor to their criminal behaviour. Some micro[1] and macro[2] factors predisposing drug abusers to criminal behaviours must be considered for an adequate understanding of crime as a dependent variable. Present research is meant to further explore the micro and macro factors that lead drug abusers into criminal activities.

Statement of the Problem

Bennett (2000) has identified five main explanations connecting drug abuse and criminal activities. The first one is the view that drug abuse causes crime. Goldstein *et al.* (1992), Inciardi *et al.* (cited in Baron, 1999), Mackesy-Amitir and Fendrick, (l999), offered some examples of this explanation. The second one is that crime causes drug use (Bennett, 1998 and 2000; Makkai, 1999). The third one is that both drug abuse and crime are caused by other factors (Becker, 1963; Stephens, 1992; Farrington, *et al.* 1986). The fourth one is that, the relationship between drug abuse and crime is reciprocal (Inciardi, *et al.* 1993). Finally, drugs and crime are not causally connected, but simply coexist within a complex setting of events that include both (Bennett, 2000: 54).

Similarly, Mernard, (2001) presents five explanations linking substance abuse and criminal activity. The explanations are: (a) substance use causes crime; (b) crime causes substance use; (c) substance use and crime directly influence one another in a pattern of mutual causation; and (d) the relationship between substance abuse and crime is spurious. What follows with this explanation is that there are causal variables that influence both substance use and illegal behaviours, and in controlling those variables there is no direct relationship between substance abuse and other criminal behaviours; (e) the final explanation is a blend of the third and fourth explanations stating that substance use and crime may be influenced by the same or similar set of causes, but may also exert some direct influence on each other.

There are a number of arguments that examine the causal relationship between drug abuse and crime. Some argue that most addicts commit economic-associated crimes[3] to sustain their

1 In this perspective, micro factors are those that are learned in the process of interaction. Social deviation and criminality are learned through peer pressure, family members, on the street, at school, contact with criminal justice agents, mass media, individual frustration etc.

2 In this context, macro factors signify factors that predispose people to social deviation and criminality which are structural, such as social disorganization, weak social control, a host of social problems caused by social structure, population heterogeneity, environmental factors, inequality, unemployment, poverty, broken homes etc.

3 These are crimes/offences motivated by the need for money or goods to buy drugs. In other words crime committed by drug abuser in order to obtain money or property to buy drugs. Examples of such crimes could include theft of different kinds, stanching, robbery, kidnapping handling stolen goods, etc.

addictive behaviour. Others are of the opinion that drug users are more frequently involved in personal crimes like assault, family quarrels, violent crimes, and prostitution. For example, Goldstein (1985) argue that there is a causal relationship between drug use and violent behaviours in what they coin as the `Tripartite Conceptual Framework`. According to him, there are three situations that explain this term: (1) homicide is considered pharmacological when it is the consequence of a short-term injection of a substance that brings about aggression; (2) homicide is considered economically compulsive when a drug abuser feels compelled to engage in economic crimes in order to support his addiction; and (3) a systematic type of homicide (violence) is an outcome of traditionally aggressive patterns resulting from interaction with the system of drug use and distribution.

While the systemic linkage between substance use and crime actually involves illicit drug sales rather than substance use, illicit drug use is a necessary prerequisite to illicit drug sales. It therefore follows logically that the drug market is one mechanism by which substance abuse causes crime. Mernard's (2001) findings fully support the Goldstein (1985) *Tripartite Conceptual Framework* for this connection with data he obtained from a national sample of teenagers in the United States. He adopts a developmental perspective from adolescence to adulthood. The results of the research in question show that psychopharmacological inducement to offending were evidently attributed to alcohol use and other illicit drug usage. Among street addicts, for instance, economic compulsive motivation played a great role in their participation in property offences. Finally, involvement in illicit drug sales leads to violence.

Again in accord with the Tripartite Conceptual Framework, Spunt and Goldstein (1994) in a sample of 268 homicide offenders incarcerated in New York, revealed four major findings: (1) 250 (96%) of the offenders had used alcohol at some time of their lives; (2) 89 respondents (33%) had experienced some type of effects related to their alcohol use at the time the homicide occurred. A total of 89 respondents (92%) self-reported that they were actually drunk, while a total of 52 (58%) said yes when asked whether their homicide was related to their drinking; 45 (86%) of the total homicides were classified as psychopharmacological and 3 of the 52 alcohol-related cases (6%) were classified as multidimensional.

In another study, Sommers and Baskin (1999) conducted interviews with 156 women from two New York City neighbourhoods with high concentrations of drug selling to find out if there is any relationship between situational or generalized violence with drug networks. They found that the respondents were engaged in a wide range of criminal activities, and almost all of them admitted to being experienced drug users: 70 per cent of them were regular crack users, 47 per cent used cocaine regularly, 41 per cent were addicted to heroin, 38 per cent reported involvement in robbery, 17 per cent were reported involved in burglary, 44 per cent were at some time involved in prostitution, 52 per cent had sold heroin, and 45 per cent had sold cocaine. Moreover, crack, cocaine and heroin addicts were reported to have engaged in criminal activities. Other substance abusers were reported to be involved in assaults. Thus, the researchers concluded that the drug distribution market is viewed as just another domain of community life that is troubled with violence. However, it is not just the drug business that makes sellers and buyers violent, but rather drug selling itself that provides the sub-context that sustains the use of violence within a large social setting, where violence is a general culture.

On the other hand, Bennet (1998), while doing research on a sample of 225 arrestees, found that 75 per cent of the subjects tested positive for at least one drug, including alcohol. The criminal offences that correlated with the use of drugs were income generating offences, such as multiple types of theft, many shopliftings and handling stolen goods, and supplying drugs. In another empirical study between drug use and delinquency, Otero-lopez, *et al.* (1994) established the

relationship between delinquents who abuse drugs and their delinquent activities with the following hypotheses: (1) drug abuse causes delinquency; (2) delinquency causes drug abuse; and (3) delinquency and drug use are the outcomes of common causes. Their investigation on 2,022 subjects confirmed a correlation between these variables. However, they suggested that future studies in the area should focus on identifying etiological, psychological and social variables affecting both drug abuse and delinquent activities. Institutional actions against drug abuse and delinquency should not only be directed to individuals, but also to supra individual factors.

Furthermore, Hser, *et al.* (1992) acknowledged that the high level of criminal activity among addicts has raised considerable concern about the direction of causality between narcotics use and crime. Stressing this relationship, they identified three areas: (1) narcotics use leads to, or causes crime; (2) criminal orientation is a necessary antecedent of heroin use, which is an expression or consequence of the orientation; and (3) both crime and narcotics use are the results of a third factor or set of factors, ranging from inter-personal/psychological to environmental/sociological. In their research, Javis and Parker (1989) acknowledge that among their sample of 46 incarcerated hard heroin users, 83 per cent admitted that they resorted to illegal activities to finance their opiate use, 63 per cent had up to 10 offences, against their criminal records.

Another position that explains the relationship between drug abuse and other criminal activities is the learning/sub-culture point of view. The main argument presented by the Sub-culture Theories is that deviant behaviours in general are not only learned through interaction, but are also enhanced through career. In the first stage peer groups train the deviant how to deviate. The second stage is that he/she is rejected by his/her society. After the rejection he/she joins a deviant group in a form of a sub-culture. A beginner of marijuana use must first learn how to use it. Becker (1963), a prominent sub-culture theorist, in his study of how marijuana is used, found that beginners must learn three things: (1) how to smoke the drug in a way that will produce real effects; (2) how to recognize the effects and connect them with drug use (learning in other words, to get high); and finally (3) learning to enjoy the sensations he perceives and to interpret the sensations as pleasurable (Ibid: p. 58).

However, in relation to peer pressure as a correlate of drug abuse, Vicknasingam (1997) studying 400 AIDS and Intravenous Drug Users (IVDUs), found that the peer group influence seemed to be a significant factor in persuading a drug-user to practice risky behaviours. This influence is significant because a certain skill is required for the injection of drugs, and peers initially play an important role in helping a new recruit learn the technical skills. Goode (1989) views that there is a strong correlation between the use of marijuana by one's friends and the frequency with which one uses the drug. The conclusion at which he arrives is that selective peer group interaction and socialization comprised the probability that the most powerful factors related to drug usage among adolescents are imitation and the social influence. They play a significant role in initiating and maintaining drug use among teenagers.

It is often hypothesized that in the process of their development from adolescent to adulthood, children learn patterns of behaviour, whether prosocial (social behaviour that is condoned) and or antisocial (behaviours which are accepted to be anti-social), from the socializing agents of family, school, religious and other community institutions, and their peers. Socialization then follows the same processes of learning whether it produces prosocial or antisocial behaviour. Children are socialized through processes involving four constructs: (a) perceived opportunities for involvement in activities and interactions with others, (b) the degree of involvement and interaction, (c) the skills to participate in these involvements and interactions, and (d) the reinforcement they perceive as forthcoming from performance in activities and interactions. When socializing processes

are consistent, a social bond develops between the individual and the socializing agent. This social bond, once strongly established, has the power to affect behaviour independently by creating an informal control on future behaviour. This control inhibits deviant behaviours through the establishment of an individual's "stake" in conforming to the norms and values of the socializing unit (Mernard 2001: 6).

Catalano and Kosterman (1996) also observed that the social developmental models provided a great deal of knowledge regarding the effects of empirical predictors, or "risk factors," in the development of antisocial behaviour. They further empirically revealed that multiple biological, psychological, and social factors at different levels in different social domains (i.e., within the individual and in the family, school, peer group, and community) all contribute in some degree to the development of such problems as delinquency and drug use. Other empirical studies that further support peer pressure, learning and sub-culture as important yardsticks of associating drug use and criminal behaviour among others are: Farrington *et al.* (1986); Navaratnam and Foong (1988); Baron (1999); Acarid *et al.* (2000) and Miethe and Meier (1994).

Other researchers, however, consider socio-economic factors as the causal factors to both drug abuse and criminal offences. These factors include environment, poverty, broken homes, urbanization, and improper family socialization, among others. Ramsay and Percy, (1996), Johnson *et al.* (1995), Leslie (1989), Miller, *et al.* (1989), McCarthy & Hagan, (1991) and Farrington *et al.* (1986) are all in agreement that socio-economic factors are pertinent in any meaningful search for the reasons why individuals engage in drug abuse and other criminal offences.

Ramsay and Percy (1996), for instance, conducted a study to establish an association between drug use (which is treated as a dependent variable) and socio-economic factors such as unemployment, poverty and running away from home (seen as independent variables). Using a national representative sample of 14,500 household subjects in the United Kingdom, they found that: (1) cannabis is the most popular drug, one-third of the sample aged between 16 and 19 trying it; (2) 20 per cent of the same group reported as drug users in the last month; (3) drug use consumption is lower with the increase in age; (4) 22 per cent of males and females aged 30 - 59 had taken drugs some time or another; and (5) drug use was reported more by males than by females. However, like any other national household survey, that study had the following limitations: (1) it could not reach those on the fringe of society who did not live in households reachable by survey teams; (2) the age range it covered more than 16 and less than 60 for self - drug exercise was not broad, and could therefore not be used for generalisation purposes.

According to Johnson, *et al.* (1995), sales of crack were strongly associated with increased violence, property crimes, assault, and prostitution. This increased with the frequency of crack cocaine use, as the study on 1,003 drug abusers and sellers proved. The dependent variable was crack use, and drug-associated crimes as independent variables. However, the researchers noted, while discussing their results, that: (1) drug use, abuse and addiction were complex issues with multiple causes and effects, (2) a variety of factors, including personal psychological, family, peer group pressure, and environmental factors could be attributed to drug problems. A significant limitation of their study, however, as it is for the present one, was the exclusion of recreational users of drugs from the working, middle, and upper socio-economic classes.

In a study of strain, personality, and delinquency Robert, *et al.* (2002) found among the variables of their study that**,** most of the strains examined have a significant relationship with delinquency. In particular, they discovered that: (1) delinquency is higher among those who experience family, school, and neighbourhood strain; (2) it is higher among certain categories of juveniles experiencing peer abuse; and (3) the effect of the strain variables is particularly

noteworthy, and Lastly four of the six strain variables have significant positive effects on delinquency: family strain; parents lost of control; school hatred, and neighbourhood strain.

The above mentioned empirical review prompted the conduct of this study, to make similar research in the drug crime nexus in Malaysia. This research is devoted to studying the relationship between drug abuse and criminal activities in Penang. Much has been researched and written about the epidemiology of drugs in Malaysia, but there was no single local study devoted to the understanding and explanation of the reasons as well as the causes for abusing drugs and getting involved in criminal activities among drug using populations. While the use of certain categories of drugs cannot be attributed to some kinds of criminal offences, literature suggests that those who abuse expensive drugs like marijuana, ganja, heroin, cocaine and other illicit drugs, often command funds to sustain their addictive behaviours, which, in turn lead them to a wide range of criminal behaviours in order to sustain their drug addictions. Other crimes associated with drug addiction of course include those crimes that result in the distribution and marketing of drugs and or crimes like corruption, fraud, embezzlement, money laundering that are linked to drug trade in general.

Method and Participant

The study is about three hundred drug addicts who were drawn from two Government Drug Rehabilitation Centres in Penang, by stratified and systematic sampling procedures. The population was one thousand drug inmates with and without criminal history. To begin with, an ideal sample size was made 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 (P. 208). To obtain the sample elements, an inmate roster was used. The inmate roster was obtained from the authorities of the two Drug Rehabilitation Centres. The population distribution according to ethnicity was as follows; 483 were Malays, 305 were Chinese, 210 were Indians and only 2 respondents belonged to other ethnic groups.

The sampling process began with stratification of the population into four strata according to ethnicity. This was followed by a preparation of four specific lists. In order to obtain the sample elements, the selection techniques were that for every fourth person on the list, one was selected. The rationale for using the stratified sampling procedure in the selection of the study elements/respondents across the four 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 four ethnic groups. In this way, it guaranteed the two respondents belonging to other ethnic group an equal opportunity of representation.

Research Questions

The study provided answers the following questions:

1. What is the relationship between drug abuse and criminal activities?
2. To what extent are drug abusers involved in criminal activities?
3. Why are drug abusers engaged in specific types of criminal offences?
4. Why are drug abusers involved in criminal activities?

Results

Research Question 1

A series of questions were asked to solicit information from the respondents based on self-report and on the relationship between their use of drugs and involvement in criminal activities. For example, "Did you commit crime to support your drug use habit?" Table 1 below describes the responses provided by the respondents.

Table 1 *Commit Crimes to Support Drug Use*

"Did you commit criminal acts to support your drug use habit?"		
	Frequency	Percentage
Yes	113	39.1
No	158	54.7
Missing	18	6.2
Total	289	100.0

According to Table 1 above 113 respondents (39.1%) attributed their involvement in criminal activities to support their use of drugs, whereas 158 respondents (54.7%) do not commit criminal offences at all, or their involvement in criminal activities had nothing to do with their drug use habit. But beyond this, the big differences between the yes and no responses of the subjects' indicate that abusing drugs might not in all situations predispose the drug abusers to commit crime. Concerning those who said yes, abusing drugs might thus be among a series of factors that lead addicts to be involved in criminal activities

Additionally, there were two other items that were added in the questionnaire (with five response categories ranging from Strongly Agree to Strongly Disagree) (1) "There is a relationship between your casual drug(s) use and your criminal activities" and (2) "There is causal relationship between your criminal activities and casual drug use". The responses to the above two items are presented in Table 4.8 and 4.9 respectively.

Table 2 *Relationship between Your Drug Use and Criminal Activities*

"There is a causal relationship between your casual drug use and your criminal activities"		
	Frequency	Percentage
Strongly agree	40	13.8
Agree	58	20.1
Undecided	63	21.8
Disagree	87	30.1
Strongly disagree	26	9.0
Missing	15	5.2
Total	289	100.0

Table 3 *Relationship between Your Criminal Activities and Drug Use*

"There is a causal relationship between your criminal activities and your casual drug use"		
	Frequency	Percentage
Strongly agree	34	11.8
Agree	55	19.0
Undecided	71	24.6
Disagree	88	30.4
Strongly disagree	26	9.0
Missing	15	5.2
Total	289	100.0

In Tables 2 and 3 above 98 respondents (33.9%) and 89 respondents (30.8%) reported that indeed a relationship exists between their drug use and their engagement in criminal activities. However, in both cases 63 respondents (21.8%) and 71 respondents (24.6%) were undecided about the relationship. Putting together "Disagree" and "Strongly Disagree" 113 respondents (39.1%) and 114 respondents (39.4%) respectively might either not have had any criminal involvement or found no relationship between their drug use and criminal activities and vice versa.

From Tables 2 and 3 the results indicate that the respondents understood the two items[4], because the percentages obtained in both the tables are quite similar. This interpretation shows acceptance of the view that there might be other factors[5] rather than drugs could be responsible for causing drug users to commit crimes. Drug abuse might not be a major contributing factor but might be one among many factors.

Research Question 2

Furthermore, to ascertain the type of crime the respondents were involved in, with the primary aim of supporting their drug use habits, those who answered yes (n = 113) were further asked to state which offence type they had committed. Based on Table 4 below, 5 respondents (1.7%) reported personal crimes, 3 respondents reported petty crime, (1.0), with 5 (1.7%) who reported drug related offences, and finally a substantial number, 105 respondents (89.0%) reported being involved in

4 The question was a proving question, i.e. question that was twisted in order to find out whether those filling the questionnaire had really understood the wording as well as what the question/item seek to measure. In the above case, it is impaired that the item was clearly understood by the respondents. The primary reason is because the percentages obtained are similar see Table 4.8 and 4.9. For strongly agree 40 and 43 respondents; for agree 58 and 55; for undecided 63 and 71; for disagree 87 and 88 and for strongly disagree 26 and 26.

5 In fact, this was the initial position adopted in this study. That even in situations where abusers of drug get themselves involved in criminal activities, abusing the drug alone is insufficient to fully example the reason, as well as the causes, of their criminal activities. The results obtained in this research and the results of other empirical researches had actually arrived at the foregoing conclusion, see for example (Ramsay and Percy 1996; Parker 1996; Otero-lopez, et al. 1994; Farrigton et al. 1986 and McCarthy and Hagan 1991 among several others).

property offences. This is an indication that drug addicts might resort to criminal activities which are income generating, i.e. economic-associated crimes in order to sustain their use of drugs.

Table 4 *Type of Offence N=118*

"If yes, which type of offence?"

	Frequency	Percentage
Personal crimes	5	4.2
Property crimes	105	89
Petty crimes	3	2.5
Drug related crimes	5	4.2
Total	118[6]	100.0

Moreover, the data above (Table 4) shows that the relationship does exist between drug use and involvement in criminal behaviours. Thus, it is further assumed that what is illustrated in the table above, is in accord with the theoretical arguments that involvements in criminal activities by the drug using population might be economic-compulsive. This is true especially among the street drug user population from which the majority of the drug inmates in Government Drug Rehabilitation Centres were drawn.

Another opinion item requested the respondents to inscribe which type of drug(s) is related to which kinds of criminal activities. About half of the research respondents who answered the question according to Table 5 below 132 (45.7%) said that heroin is related or may lead the user to commit property offences, 8 respondents (2.8%) documented personal offences, 4 subjects (1.4%) wrote petty offences, and only one respondent (.3%) wrote drug related offences. As far as whether cannabis is related to crime, 27 respondents (9.3%), said it is related to property kinds of offences, 14 respondents (4.8%) reported personal type of offences, 3 respondents (1.0%) wrote that it had to do with drug related offences and only one respondent (0.3%) wrote the use of cannabis is associated with petty offences. Thus, the table (4.14) offers evidence in favour of the conceptual position, which argues that drug use among a user population could be economic-compulsive. This means that drug abusers may be compelled to become involved in income - generating offences in order to support their drug use habits. The table explains that the independent analysis on heroin and ganja is associated with property kinds of offences.

Table 5 *Type of Drugs associated with Type of Crimes*

Type of Drug	Type of crime	Frequency	Percentage
Heroin	Property offences	132	45.7
	Personal offences	8	2.8
	Petty offences	4	1.4
	Drug related crimes	1	.3
	Missing values	144	49.8

6 The table shows the number of offences, not the number of respondents. It should, therefore, be noted that the number of offences agreed too N=118 exceed by 5 N=113 respondent who answered yes. The explanation is that three respondents reported to have committed one offence more others, and a respondent reported to have committed two offences more than the others

Cannabis (Ganja)	Property offences	27	9.3
	Personal offences	14	4.8
	Petty offences	1	.3
	Drug related crimes	3	1.0
	Missing values	24	84.4

As presented above, it can be concluded that the evidence provided by the self-reported data combined with the opinions expressed by the respondents suggested the existence of a relationship between drug abuse and criminal activities.

Research Question 3 and 4

In order to answers the why questions # 3 and # 4 a regression analysis was conducted. The selected regression analysis was the binary logistic model. The remaining section presents the logit analysis results.

Logit analysis was selected in this study. Logit analysis was selected because it allows us to use a dichotomous dependent variable. The dependent variable of this study is dichotomous and measures whether or not the inmate was involved in criminal behaviour to support his drug use habit (It takes a value of 1 if the answer is yes and 0, if otherwise). To understand the effects of the independent variables more fully, Logit analysis allows us to estimate the probability of an event occurring, given a set of independent variables. Hair *et al.* (1995) argued that one of the advantage of the Logit analysis is that we need only to know whether an event (in the case of this research crime) occurred or not, this allows the use of dichotomous value as the dependent variable. From this dichotomous value, the procedure predicts its estimate of the probability that the event will occur or will not occur, if the predicted probability is greater than .50, then the prediction is yes, otherwise no (Ibid, p.131).

The logit model can be written as follows:

$$\text{Log}\frac{P}{1-P} = ß_o + ß_i X_i + ß_2 X_2 + \ldots + ß_n X_n + \varepsilon$$

Where,

P = the probability of committing crime to support drug use habit;
Xs = explanatory variables hypothesized to influence the above probability. These variables are Peer Group, Urbanization, Poverty, Environment, Marital Status, Ethnicity, No education/only Primary education, Broken Home and Age
ßs= estimated coefficients of the explanatory variables;
ϵ = stochastic disturbance term.

The formula is sourced from Hair, *et al.* (1995:131).

The criteria for including an independent variable into the logistic regression equation were the predictions drawn from theories. The logit model built in this study therefore includes the above-mentioned independent variables that were found to be theoretically important in explaining the inmates' involvement in criminal activities to support their drug use habit. The programme used was SPSS for Widows Version 11.5.

Table 6 *Estimated Logit Model or Factors Determining the Decision to be involved in Criminal Activities to support Drug use habits*

Independent Variables	Estimated Coefficient	Std Error	Pro. Value
Presence of Peer Group Pressure	4.1196	1.2218	.0007*
From Poverty Household	-.7275	.5686	.2007
Having Urban Residence	1.9301	.9316	.0383**
Environmental Influence	1.6113	.7323	.0278**
Single	.3809	.8139	.6398
Malay	1.2284	.8734	.1596
No/Primary Education	1.9822	.8148	.0150**
From Broken Home	.0692	.6815	.9191
Age (21-30)	-.0222	.7989	.9778
Constant	-3.2523	1.6414	.0475

*Note: **Significant at the 5 percent level or better, *Significant at the 1 percent or better*

Results from the table can be interpreted as thus:

The results in the above Table 6 (column two) suggest that the log of odds of an inmate, (i.e. drug abuser) committing crime to sustain his addiction to drugs is significantly and positively affected by peer pressure, and if he had resided in an urban area and has attained only primary school or no education. In addition, his environment also influences him. The factors that significantly encourage involvement in criminal activities to support drug use habit are peer group pressure, urban residence, environmental influence and having primary or no education.

Other factors like age, being Malay and poor, and coming from a broken household were not significant. This invariably suggests that when all other factors are controlled for, these factors had no independent or significant impact on criminal activities which addicts of drugs are involved in. Nevertheless, the negative sign associated with age suggests that the older inmates are more prone and likely to be involved in criminal attitudes than those in the young category. More interesting is the fact that the coefficient of poverty, thought not significant, carries a negative sign. Those who attributed poverty as one of the causes of their criminal behaviour were found to be less involved in criminal activities. This again, suggests that poverty per se many not be an important predictor of criminal behaviour as far as the sample of this study is concerned.

Table 7 *Marginal Effect on the Odds to be involved in Criminal Activities to support Drug use habits*

Independent Variables	Estimated Coefficient ß	Change in Odds Exp ß
Constant	-3.2523	
Presence of Peer Group Pressure	4.1196*	61.5331
From Poverty Household	-.7275	.4831
Urban Residence	1.9301**	6.8903
Environmental Influence	1.6113**	5.0094
Single	.3809	1.4636
Malay	1.2284	3.4159
No/Primary Education	1.9822**	7.2588
From Broken Home	.0692	1.0717
Age (21-30)	-.0222	.9780

*Note: **Significant at the 5 percent level or better, *Significant at the 1 percent or better*

The results in the above Table 7 above shows that out of the nine (9) explanatory variables, all with the exception of five (5) significantly affects the decision by the drug abuser to commit crime to support drug use habit. However, as predicted the result vividly confirms the early position adopted in this research, that not in all situations do drug abusers involve themselves in criminal activities. And even in those situations where they do so, drug abuse is insufficient to fully explain their decision. Other micro and macro factors should be considered. The results as obtained in the previous table attest to the foregoing.

By taking the antilog of the log of odds, in Table 7 we derive the impact of each variable, on the odds of an individual (here, inmate or the research respondent), resorting to crime to support his drug use habit (Column 3, Table 7). The strongest influence, on the odds of resorting to crime is peer group pressure. The odds of resorting to crime increase by 61.5 times, among those subjected to peer group pressure, relative to those who were not, other factors remaining constant.

Similarly, urban residence increases the odds of committing crime to support drug use habit by 6.9 times relative to those living in non-urban areas, holding other factors constant. Controlling other factors, the results also suggest that the likelihood of resorting to crime to support the drug habit is 7.3 times higher among poorly educated or non-educated inmates. And environmental influence raises the likelihood of crime by about 5 times.

In summary, the results of the above analysis suggest the following conclusion. Peer group pressure is the strongest predictor of inmates' involvement in criminal behaviour, to support their drug use habits. The lack of education or just primary education comes close second important predictor. Urban residence and environmental influence are the next in importance. However, poverty, ethnicity, marital status and being from a broken home and age do not seem to be good predictors in the sample of this study. This position is justified in the literature review section in the dissertation, from which this paper was written.

Discussions

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, heroin and cannabis were the most popular drugs being abused by the respondents. At the national level, Navaratnam *et al.* (1990) also ascertain that heroin was the primary drug used by their respondent. In another study by Hj. Mustapha (1996), he discovered that the two main drugs abused in Malaysia were heroin and cannabis, with 88 per cent abusing heroin and 11 per cent abusing cannabis. Government data in Malaysia also documented that heroin 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).

At the international level, the National Drug Research Centre of University Science Malaysia (1996), in presenting the Patterns and Trends of Drug Abuse in Selected South Asian Cities, acknowledged that heroin 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 heroin users, and were responsible in part for 700 crimes in the three months before treatment.

Bernholz (2002) presenting the drug abuse scenario in Africa found that cannabis was used extensively in all 10 countries, and reported by far as the most prevalent drug; cocaine, and heroin

(used in all 10, but widely so in South Africa and infrequently in Ethiopia), synthetic drugs including LSD, and an "other" class that included solvent abuse. The linkage between local preferences and local drug production and distribution encompasses traditional uses and historical aspects, including the legal and centuries-old production of khat (Celastrus edulis) in Ethiopia and Kenya.
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. Among the detainees 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.

The data of this research indicates that socio-economic factors (environment, urbanization) have influence on getting involved in criminal activities in order to support drug use habit by drug abusers. However, it is worth noting that, as was anticipated, these factors are crucial predictors of criminal behaviour in general. Controlling of other variables, poverty according to multivariate (logistic regression) results has emerged to have no link with criminal activities among and within the study sample. The result of the present study is not in agreement with Schinke *et al.* (Cited by Cabrera 1999), who found that poverty, had stronger influence on drug abuse and crime. Baron (1999) also found that those who were more active in robbery on streets were heavy marijuana users. He posits that homelessness and poverty are predictors of hard drug 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 not 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.

Over the course of the past century, criminological research in the ecological tradition has continually discovered that the concentration of interpersonal violence in certain neighbourhoods, especially those characterized by poverty, the racial segregation of minority groups, and single-parent families. A number of studies have used survey data from 5,302 Seattle residents nested within 100 census tracts (Miethe and Meier, 1994) to investigate the connection between social processes and crime. It should be noted that the data presented here indicated that ecological factors, like environment and living in urban centres had a great contribution towards drug abusers involvement in crime to support their drug use habits.

Environment has been correlated with criminal behaviour at 0.05, urbanization at 0.01 and peer group at 0.01 significant levels in the bivariate analysis and all the three had also emerged to

be strong predicting factors in the logistic model as the most important reasons why drug abusers get involved in crime to support their drug use habit. Environments and neighbourhoods with strong collective efficacy may be more resilient and therefore not experience higher crime rates. However, in dwellings where there is persistent poverty as while as informal control is absent, these areas are bound to be crime-producing environments (Shaw and McKay 1942; Miethe and Meier, 1994). Robert *et al.* (2002) are of the opinion that gangs typically commit their crimes close to where they live and hang out, so these gangs also disproportionately affect their own ethnic communities, even if some tend not to victimize people in their own neighbourhoods.

Consistent with the findings in this study, in their classic work, Shaw and McKay (1942) argued that low economic status, ethnic heterogeneity, and residential instability led to community disorganization, which in turn accounted for delinquent subcultures and ultimately high rates of delinquency. Stephen, *et al.* (1999), observed that family structure of a child is an important factor in the development of early onset and serious offending. Moffitt (1993) claims that a weak family structure is one of the primary features of a disadvantaged environment.

As in the case of the findings in this research, most studies of community violence focus solely on relatively poor neighbourhoods, it seems apparent from the few comparative studies that economic disadvantage gives rise to increased exposure. Esbensen and Huizinga (1999), in a study of 11–15-year-olds in Denver, found that neighbourhood type specifically, neighbourhoods characterized by poverty and unemployment and such variables as ethnic diversity, high density, and mobility was related to rate of personal victimization. In another large study of 2248 Grades 6, 8, and 10 students in New Haven public schools, Schwab-Stone *et al.* (1995), reported that the poorest children (those enrolled in the free-lunch program) were more often witnesses of severe community violence. It seems more likely that community economic resources protect against exposure to violence in a variety of ways: such as providing attractive alternatives to hanging out on the street, after-school and summer programs; better policing and neighbourhood surveillance and law enforcement.

Two situational parameters, location and time, have been found associated with increased risk for exposure to community violence for youth. As in the case of the results of this study, Bell and Jenkins (1993) consider inner city and core metropolitan neighbourhoods as high-risk areas for violence, including both homicide and potentially lethal violence such as assault. Goldstein, *et al.* (1992), comparing 339 inner-city adolescents with 435 adolescents in a resort community, found that the former were more often victimized and witnesses to assaults, rapes, knifings, life-threatening events, and murders.

Furthermore, there are a number of studies, akin to this study, which have attributed the increase in crime to be environmental and neighbourhood factors (See for example Baron 1999; Ekpenyong, 1989; Ramsey and Percy, 1986; Van, 1996; Farrington, 1986; McCarthy and Hagan 1999). Bowen and Bowen (1999), for example, found in a national probability sample of 2099 middle and high school students that students' perceptions of school danger and of problem behaviour by youth in their neighbourhoods as well as self-reports of exposure in the preceding 30 days predicted school-related problems (e.g., suspensions and school complaints to parents).

In addition, like the discovery in this study, Sampson *et al.* (1997) have devoted extensive attention to measurement of neighbourhood-level social and physical variables and their relationship to crime in general and adolescent delinquency in particular. Sampson's construct of collective neighbourhood efficacy—"social cohesion among neighbours combined with their willingness to intervene on behalf of the common good" (Sampson *et al.*, 1997) results in what he

terms informal social control found to significantly inhibit delinquency even when prior neighbourhood crime was taken into account.

Appiahene-Gyamfi, (2003) also addressed environmental issue as predictors of criminal offence in a highly urban community in Accra Ghana, his findings are consistent with the present one, he discovered that: (1) the majority of victims of violent crimes were males, but 73 percent of the victims of swindling, extortion, and fraud were females; (2) (34) percent of the fraud, swindling, and extortion victims had come to Accra from the countryside, in some cases for the first time, to transact business or in search of job opportunities; and (3) crimes occur in response to complex interactions among social, economic, political, physical, and psychological conditions and environments, but ultimately, crimes are committed within specific geographic spaces and involve the convergence and interaction of motivated offenders, suitable targets, and the absence of capable guardians.

This research supported environment as a predisposing factor to criminal activities, especially, crime committed by addicts of drugs to support their drug use habits, Moffitt (1993:682) also stated: "It is now widely acknowledged that personality and behaviour are shaped in large measure by the interactions between the person and the environment." In addition, Moffitt (1993:680-685) claims that important measures of this type of disadvantaged environment include socio-economic status and family structure. In fact, studies predicting early onset or persistent, serious, and violent offending, or both, have used both socio-economic status and poor familial environment (Sampson *et al.*1994) as indicators for disadvantaged environments. The findings in this study is also similar the findings of Stephen, *et al.* (1999), who attributed the relative proximity of blacks in racially segregated urban areas combines with weak social organization and limited access to labour markets to contribute to black interracial homicide offending, while isolating and protecting whites--spatially and economically--from black interracial homicide offending.

Findings from previous studies by Brantingham and Barantingham (1991) are consistent with the present one. It was reported in their findings "Crime does not occur in a vacuum, but is influenced by site design, location; by the social setting and situation; by the routine movement of victims and offenders" (P.240). Burgess, (1925) also argued that crime was concentrated at the centre and gradually decreased in concentration when moving further away from the city. Social disorganization theory proposes urban areas that have more poverty also tend to have high residential mobility and racial and ethnic diversity, and therefore, experience more crime. The higher crime rates likely result from residents' inability to maintain informal social control over each other Stephen, *et al.* (1999).

Conclusion

This paper is based on a research conducted to specifically study the relationship between drug abuse and criminal behaviour using drug addicts in government rehabilitation centre in Penang, Malaysia,. An attempt has been made to answer the following questions: What is the relationship between drug abuse and criminal behaviour? To what extent are drug abusers engaged in criminal behaviour? Why are drug abusers engaged in specific types of criminal behaviour? And why are they engaged in criminal behaviour?

The following objectives have been pursued: to understand the relationship between drug abuse and criminal activities; to identify, describe and explain the types of crimes committed by drug abusers; to understand the reasons why drug abusers are involved in specific types of criminal activities; and finally to explain the causes why drug abusers are engaged in criminal activities.

To answer the questions as well as to achieve the objectives, a quantitative methodology has been adopted. Drawing a sample from two Government Drug Rehabilitation Centres, in Penang Malaysia, the study has found support for the initial assumption that a relationship exists between drug abuse and criminal activities. The objectives of the research have also been achieved. The study respondents attributed their involvement in criminal activities to both micro factors and the macro factor. The findings suggest that major causes and reasons of criminal activities among the sample are peer group pressure, poor education or no education, living in an urban settlement and environmental influence. For a proper and ample understanding of crime as the dependent variable, some micro and macro factors must be put in place. As revealed in the research, drug abuse added to peer group pressure; urban living, environment and lower level of education were the reasons why abusers of drug get involved in criminal activities. This holds true of the sample of drug addict in Kampung Selamat and Bukit Mertajam in Penang. The results found are consistent with previous empirical studies (see for instance Becker, 1963; Baron, 1999; Otero-lopez, *et al.* 1994, Goldstein, *et al.* 1992 among others). Indeed, the findings of this study show that variables drawn from micro factors (learning theories) and macro factors (Strain/Anomie Theories) blended together to give better explanations with regards for the search for the reasons behind why drug abusers become involved in criminal activities.

The results have been discussed in the context of the Sociological Perspective, adopting the Integrative Theoretical Framework that merged micro and macro explanations attributes as causal model for problem behaviour, including abusing illicit drugs and getting involved in criminal activities. However, the findings have broader implications of Traditional Theories and the contemporary blending of them, as in the Integrative Perspectives in criminology. While, demanding to use the Social Control Theories, the results are encouraging to the adherents of Socialization Theories, such as, the Differential Association (Sutherland and Cressey, 1974 and the Social Learning Theory Akers, 1985).

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