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REPORT

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**A Ten Year
Retrospective
Follow - up of
Drug Dependence
Career**

Pusat Penyelidikan Dadah dan Ubat-Ubatan
(Centre for Drug Research)
U.N./W.H.O. Research and Training Centre
Universiti Sains Malaysia
Penang, MALAYSIA.

**A TEN YEAR RETROSPECTIVE FOLLOW-UP
OF DRUG DEPENDENCE CAREER**

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RESEARCH REPORT SERIES NO. 25

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Pengenalan

Laporan penyelidikan ini menunjukkan hasil kajian mengenai riwayat hidup penagihan dalam suatu jangkamasa sepuluh tahun. Salah satu objektif kajian ini adalah untuk menghuraikan corak penggunaan dadah, penjenayahan, penangkapan, pemenjaraan dan pekerjaan yang sah disisi undang-undang yang merupakan ciri-ciri penagih dadah. Aturan ini akan dihubungkan kepada sifat penagih akibat dari penagihan pada masa ketagihan, dalam masa menjauhkan diri dari dadah dan semasa ditemuduga dalam kajian. Kajian ini juga bertujuan untuk menghuraikan tingkahlaku penagih dadah dalam jangkamasa sepuluh tahun yang pertama penagihannya dan menghubungkan setiap daripada pembolehubah corak hidup yang berlainan kepada suatu tipologi riwayat hidup penagih dadah.

Metodologi

Dalam kajian ini, populasinya terdiri daripada individu-individu yang telah ditahan di Balai Polis Georgetown, Pulau Pinang kerana terlibat dalam jenayah yang berkaitan dengan dadah dalam tahun 1976 dan tahun 1977. Satu sampel seramai 420 subjek telah dicari untuk ditemuduga tetapi hanya 51 subjek sahaja yang dapat dihubung untuk ditemuduga. Subjek yang berumur 50 tahun ke atas adalah dikecualikan dalam kajian ini. Temuduga secara soalselidik telah dijalankan oleh dua orang penemuduga yang terlatih. Data mengenai ciri-ciri sosio-demografik, penggunaan dadah, rancangan tempat tinggal, pekerjaan, sumber pendapatan dan penjenayahan subjek telah dikumpul. Satu penilaian mengenai maklumat yang diterima telah dibuat oleh penemuduga pada akhir setiap temuduga. Ini adalah untuk memastikan ketepatan maklumat yang telah diberikan oleh subjek. Maklumat sejarah hidup yang berkaitan dengan aspek-aspek yang berlainan telah disemak berulang kali untuk memastikan kesempurnaan dan keselarasan dalaman.

Keputusan

Ciri-Ciri Demografik Semasa

- o 39.2% daripada jumlah responden adalah di antara umur 30 dan 34 tahun sementara 25.5% lagi adalah di antara 40 hingga 44 tahun. Satu bilangan yang kecil (7.8%) adalah di antara umur 25 dan 29 tahun dan 9.8% pula berada dalam lingkungan umur akhir 40an.
- o Lebih separuh (54.9%) daripada 51 responden adalah bujang. 35.3% telah berkahwin dan 9.8% telah berpisah atau bercerai.
- o Kebanyakan (88.2%) responden adalah berpelajaran. 47.1% telah mendapat pendidikan selama 1 - 6 tahun. Sementara itu, 41.2% telah menghabiskan 7 - 10 tahun untuk pendidikan.
- o Lebih kurang satu pertiga (31.4%) daripada responden bekerja sepenuh masa sementara 25.5% pula bekerja secara sambilan. 31.4% daripada jumlah responden dipenjarakan semasa mereka ditemuduga.
- o Punca pendapatan bagi responden yang bekerja adalah dari gaji pekerjaan mereka yang sah. Untuk mereka yang tidak mempunyai pekerjaan dan berada dipenjara, sumber pendapatan mereka adalah dari keluarga dan pendapatan dari pekerjaan yang haram terutamanya dengan mengedar dadah atau berjudi. 12 orang (23.5%) daripada responden melaporkan bahawa mereka tidak mempunyai sebarang pendapatan dalam jangkamasa 30 hari yang lepas.
- o Kebanyakan responden (62.7%) tinggal bersama keluarga mereka.
- o Kurang daripada separuh (41.2%) responden telah kerap menghubungi ibubapa mereka. Perhubungan dengan adik-beradik mereka adalah baik dengan lebih dari 60% yang adakala/kerap berhubung dengan adik-beradik mereka. Hanya 17.6% sahaja yang tidak pernah berbuat demikian.

- o Mengikut pendapat responden, secara umum, keluarga mereka mengambil berat, saling memberi sokongan, mempunyai sikap negatif terhadap penggunaan dadah dan menyokong penentangan penggunaan dadah.

- o Tetapi, bila ditanya mengenai sokongan keluarga dalam jangkamasa 30 hari yang lepas, satu jumlah yang besar (38.3%) dari mereka tidak pernah menerima sebarang pertolongan atau galakkan daripada keluarga. 14.9% yang lain jarang sekali menerima sokongan keluarga.

- o Lebih kurang 30% daripada responden mempunyai kawan yang kerap minum dan/atau menggunakan marijuana (31.2% dan 29.2%) sementara 38.0% mempunyai kawan yang menggunakan heroin atau lain-lain jenis dadah.

Corak Penggunaan Dadah Dalam Jangkamasa 10 Tahun Yang Lepas (Termasuk Masa Dalam Kajian)

- o Tembakau dan heroin digunakan oleh semua responden sementara lebih tiga perempat dari responden (86.3%) telah menggunakan alkohol dan ganja (78.4%). Candu dan tranquillizers telah diguna oleh lebih kurang separuh dari responden dan sebilangan kecil dari mereka juga menggunakan barbiturates, morfin, "methaqualone" dan LSD.
- o Purata umur penggunaan tembakau untuk pertama kali adalah 15.25 tahun. Ini diikuti pula oleh alkohol (umur 17.77 tahun), ganja (umur 19.15 tahun) dan heroin (umur 21.37 tahun).
- o Kawan merupakan punca utama memperkenalkan penggunaan pertama kali untuk semua jenis dadah yang pernah digunakan.
- o Sebab-sebab utama untuk mereka memulakan penggunaan kebanyakan dadah adalah untuk mendapat keseronokan/ menjadi peramah dan sebab ingin tahu. Untuk tranquillizers, penggunaan pertama adalah untuk melepaskan ketegangan psikologikal dan untuk rawatan kesihatan.

- o Heroin merupakan dadah utama yang digunakan dalam jangkamasa 10 tahun yang lepas untuk semua responden.
- o Kebanyakan responden mempunyai dua (25.5%), tiga (31.4%) atau empat (29.4%) jangkamasa penagihan dadah yang berasingan dalam 10 tahun yang lepas.
- o Sebilangan besar (58.5%) responden mempunyai purata jangkamasa di antara 1.00 hingga 2.99 tahun untuk setiap jangkamasa penagihan.
- o 68.6% daripada responden belum pernah menjauhi penggunaan dadah secara sukarela dalam 10 tahun penagihan yang pertama.
- o Lebih kurang separuh (49.0%) dari jumlah responden menghabiskan masa 1 - 2.99 tahun dalam penjara. 15.7% menghabiskan masa 3 tahun atau lebih dan 35.3% menghabiskan masa kurang dari satu tahun dalam penjara, dalam jangkamasa 10 tahun yang pertama.

Tipologikal Ciri-Ciri Jenis Penagih Yang Berlainan

- o Penglibatan 51 responden ini dalam penagihan dadah telah diklasifikasikan ke dalam 6 kategori, bermula dari penglibatan yang rendah (Jenis I) ke penglibatan sangat tinggi (Jenis VI).
- o Kebanyakan responden (66.7%) telah dikategorikan dalam penglibatan yang tinggi/sangat tinggi dalam penagihan dadah.
- o Penagih Jenis I mempunyai purata 2.94 tahun penglibatan dalam penagihan dadah. Penagih Jenis II mempunyai purata 4.21 tahun sementara Jenis III dan IV adalah agak hampir kepada 5.81 tahun dan 5.96 tahun. Jenis V secara purata menghabiskan 8.18 tahun dalam penagihan dan Jenis VI pula 9.33 tahun. Ini menunjukkan penglibatan yang sangat tinggi.

- o Penagih dadah Jenis II menghabiskan masa yang paling lama dalam penjara (5 tahun) kerana mereka terdiri dari penagih yang mempunyai tahap yang rendah dalam penglibatan penagihan dadah dan tahap penghentian penggunaan dadah secara sukarela juga rendah.
- o Penagih Jenis VI (penglibatan yang sangat tinggi) menghabiskan jangkamasa yang paling pendek dalam penjara (0.51 tahun) kerana kebanyakan masa mereka terlibat dalam penagihan dadah.
- o Penagih dari Jenis I dan II belum pernah dirawat sementara purata kekerapan rawatan penagih Jenis V (penglibatan tinggi) dan Jenis III (penglibatan sederhana) adalah 0.26 dan 0.33. Secara purata kekerapan penagih Jenis IV dan Jenis VI pernah dirawat adalah 0.43 dan 0.40.
- o Penagih Jenis V dan Jenis VI, dengan penglibatan yang tinggi dan sangat tinggi dalam penagihan, pernah mencegah dari penggunaan dadah untuk 0.11 tahun (1 bulan 10 hari) dan 0.02 tahun (7 hari) dari jangkamasa 10 tahun dalam kajian ini. Untuk penagih Jenis VI, 13 (86.7%) dari 15 orang penagih tersebut belum pernah menghentikan penggunaan dadah secara sukarela.
- o Penagih Jenis II dan IV (penglibatan dalam penagihan secara rendah dan sederhana), didapati adalah kumpulan yang berkemungkinan mewujudkan masalah kepada masyarakat. Keinginan diri mereka untuk menghentikan penggunaan adalah rendah dan ini menunjukkan bahawa jarang sekali mereka dapat sembuh dari tingkahlaku penagihan dadah dan tingkahlaku devian jenayah.
- o Penagih Jenis I dan II mempunyai jumlah tahun dalam pendidikan yang lebih tinggi sedikit sementara penagih Jenis V mempunyai bilangan tahun dalam pendidikan yang rendah.
- o Separuh daripada penagih Jenis II dan Jenis IV, dalam masa penggunaan dadah yang tetap, telah mendapat sumber pendapatan secara haram. Sementara kebanyakan penagih Jenis V dan VI mempunyai pendapatan dari pekerjaan yang sah.

- o Penagih Jenis I dan III didapati mempunyai hubungan yang paling baik dengan keluarga.

Kesimpulan

Dalam kajian ini, banyak perbezaan didapati di kalangan 51 responden yang terlibat dalam penagihan dadah selama sekurang-kurangnya 10 tahun. Ini menunjukkan bahawa rancangan semasa berkenaan dengan pencegahan, rawatan dan pemulihan, dan pencegahan pengembalian kepada penagihan dadah patut mempertimbangkan perbezaan penagih dadah serta ciri-ciri peribadi dan sosial mereka agar mendapat pencapaian yang lebih baik.

SUMMARY

Introduction

This research report presents findings on addiction careers over a ten year period. One of the objectives of this study is to describe the patterns of drug use, criminality, arrest, incarceration and legitimate employment which characterised the addicts, and to relate these configurations to characteristics prior to addiction, during the periods of abstinence and at the point of interview. The study also aims to describe the addictive behaviour of addicts during the first 10 years of addiction and to relate each of the several life-style variables to a typology of addict careers.

Methodology

The population in this study comprised of individuals arrested by the Georgetown Police Station, Penang, for drug related crimes in the years 1976 and 1977. A sample of 420 subjects were searched for interviews but only 51 subjects were successfully contacted for interviews. Subjects above 50 years of age were excluded in the study.

Interviews utilising a questionnaire were conducted by two trained interviewers. Data concerning the socio-demographic characteristics, drug use, living arrangements, employment, source of the income and criminality of the subjects were collected. An evaluation on the information received was made by the interviewers at the end of each interview in order to ascertain the accuracy of the information given by the subjects. The life history information pertaining to different aspects were repeatedly checked for completeness and internal consistency.

Results

Current Demographic Characteristics

- o 39.2% of the respondents were between 30 and 34 years old, while 25.5% of them were 40-44 years. A small number (7.8%) were 25 - 29 years old and 9.8% of them were in their late forties.
- o More than half (54.9%) of the 51 respondents were single, 35.3% were married and 9.8% were separated/divorced.
- o Majority (88.2%) of the respondents were literate. 47.1% of them had attained 1 - 6 years of education, while 41.2% had completed 7 - 10 years of education.
- o Slightly less than one-third (31.4%) of the respondents were employed full-time while 25.5% of them were employed part-time. 31.4% of the respondents were incarcerated when interviewed.
- o Source of income for the respondents who were employed were from salaries and wages from legitimate job. For those unemployed and incarcerated their source of income were from family, and illegal income mainly from pushing drugs or gambling. 12 (23.5%) of the respondents reported that they had no income in the last 30 days.
- o Majority (62.7%) of the respondents were living in apartment/family dwelling.
- o Less than half (41.2%) of the respondents had contact with their parents frequently. Contact with their brother(s) and sister(s) were good with more than 60% of them sometimes/often in contact with their brother(s) and sister(s). Only 17.6% of them never did so.
- o In the respondents' opinion, generally their families were concerned, helpful or supportive of each other, having negative attitudes towards drug use and supportive against drug use.

- o However, when asked on family support in the last 30 days, a large number (38.3%) of them never received any help or encouragement from family, 14.9% rarely received family support.
- o About 30% of the respondents had friends who drink regularly and/or used marijuana (31.2% and 29.2% respectively) while 38.0% have friends who used heroin or other opiates.

Drug Use Pattern In the Last 10 Years (Including the period of time under survey)

- o Tobacco and heroin were used by all the respondents while more than three quarter of the respondents (86.3%) had used alcohol and cannabis (78.4%). Opium and tranquillisers were used by about half of the respondents, and a small number of them used barbiturates, morphine, methaqualone and LSD.
- o The average age for first use of tobacco is at 15.25 years old, followed by alcohol (17.77 years), cannabis (19.15 years) and heroin (21.37 years).
- o Friends was the major source that introduced the first use for all the types of drug ever used.
- o The main reasons for initiation of use for most drug were to have fun/be sociable and curiosity. For tranquillisers, initial use were to relief psychological stress and for treatment of health disorder.
- o Heroin was the primary drug used in the last 10 years for all the respondents.
- o Most of the respondents have two (25.5%), three (31.4%) or four (29.4%) separate periods of addiction during the first 10 years of addiction.
- o A large number (58.5%) of the respondents have an average duration of 1.00 to 2.99 years of each addiction period.

- o 68.6% of the respondents had never abstained from drug use voluntarily in their first 10 years of addiction.
- o About half (49.0%) of the respondents spent 1 - 2.99 years in prison, 15.7% spent 3 years or more and 35.3% spent less than a year in prison in the first 10 years under study.

The Typological Characteristic of Different Types of Addicts

- o The involvement in drug addiction of these 51 respondents were classified into 6 categories, starting from low involvement (Type I) to very high involvement (Type VI).
- o Majority of the respondents (66.7%) were categorised in the high/very high involvement in addiction.
- o Type I addicts have an average of 2.94 years devoted to addiction, Type II has the average at 4.21 years while Type III and IV were quite close at 5.81 years and 5.96 years respectively. Type V, on average devoted 8.18 years to addiction and Type VI 9.33 years, indicating extremely high involvement.
- o Type II addicts spent the longest time incarcerated (5.00 years) because it comprised of addicts with low involvement in addiction but high involuntary abstinence.
- o Type VI (Very High Involvement) spent the shortest time incarcerated (0.51 years) since most of the time was devoted to addictions by these addicts.
- o Addicts from Type I and Type II had never been treated before while the average number of times treated for Type V (High Involvement) and Type III (Medium Involvement) were 0.26 and 0.33 respectively. Type IV and Type VI on average were treated 0.43 and 0.40 times respectively.

- o Type V and Type VI with high and very high involvement in addiction abstained from drug use for 0.11 year (1 month 10 days) and 0.02 year (7 days) respectively out of the ten years under survey. For the Type VI addicts, 13 (86.7%) out of 15 of them had never voluntarily abstained from drug.
- o Type II and Type IV (with low and medium involvement in addiction) were found to be the groups who were likely to give problems to the community. They have low will-power to stay drug free implying the rare possibility of recovery from drug taking behaviour and criminal deviancy.
- o Type I and II addicts have slightly higher number of years of education while addicts from Type V have the lowest number of years of education.
- o Half of the addicts from Type II and Type IV addicts have illegal income during their regular drug use, while majority of the Type V and Type VI addicts have source of income from legitimate jobs.
- o Type I and Type III addicts were found to have best family contact.

Conclusion

In this study of 51 respondents who were in the drug scene for at least a period of 10 years, it was found that they were highly heterogeneous. This implies that current programmes on prevention, treatment and rehabilitation, and relapse prevention should take into account the heterogeneity of addicts and their personal and social characteristics to achieve better results.

1.0 INTRODUCTION

To date, research studies on Malaysian drug addicts have mainly confined to the delineation of addicts from non-addicts by means of socio-psychological test responses. In studying the young abusers in schools, the psycho-social profile of the drug-using and non-drug-using school children were compared (Navaratnam and Spencer, 1976; Navaratnam, 1981; Navaratnam, Spencer and Lee, 1978; and Choo et al., 1986). In these studies, the social background, family relationship, religiosity, school performance, attitude towards drug use were among the social variables examined to differentiate the drug-using school children from those non-drug-using group. In addition, the psychological tests on the self concept (Tennessee Self Concept Scale), the anxiety (Spielberger's Trait Anxiety Inventory), the locus of control (Rotter Internal-External Locus of Control) and the personality (Stern Activities Index) were administered to compare the psychological traits between the drug-using and non-drug-using school children. Similar types of psycho-social comparative analyses on the drug-using and non-drug-using population in the community were reported in the studies by Choo and Navaratnam (1980a and 1980b) and Wong, Navaratnam and Foong (1988). Choo and Navaratnam described the socio-economic and psychological profiles of a group of drug dependents which comprised of drug dependents in the community who were not receiving medical treatment, those undergoing rehabilitation and those in the penal institution. Comparisons were made on these profiles with those for the non-drug using group drawn from the same community. On the other hand, Wong, Navaratnam and Foong (1988) examined the socio-economic and psychological profiles of women drug dependents in Malaysia. Comparative analyses on these profiles between the women addicts and non-addicts were also reported in this study.

Several studies have focussed on the drug dependent as a group itself. The psychological profiles of addicts institutionalised in treatment centres and prisons were compared in a study by Dittmar, Ratnasingham and Navaratnam (1984). In this study, psychological tests such as the Eysenck Personality Inventory (EPI), Taylor Manifest Anxiety Scale (TMAS), and Tennessee Self-Concept Scale were administered to obtain responses for delineation of addicts from different institutions. Women addicts were the target for the studies conducted by Foong, Navaratnam and Wong (1987) and Wong, Navaratnam and Foong (1988). In the first study, the socio-demographic characteristics and the patterns of drug use of the women addicts in Malaysia were surveyed. The second study was an indepth study on the women addicts in which the natural history of drug dependence, the effect of drug dependence and the psychological profile of women drug addicts were examined. The comparative analyses on the psycho-social profile of the women addicts and women non-addicts were also included in this study.

Drug abusers in their adolescence were surveyed in a study by Hoo and Navaratnam (in press). The study which focussed on the young abusers of 21 years old and below examined the socio-demographic characteristics and the patterns of drug use of this target group. The young abusers who were students at identification were surveyed and a comparative study on the socio-demographic profile of these abusers and the young abusers who were non-students were also reported in this study. As an effort to document the addiction history of a sample of opiate abusers in Malaysia and to examine the use pattern of the various other drugs prior to or subsequent to opiate use, a study was conducted by Navaratanam and Foong Kin (1988) to assess the extent, nature and patterns of use of psychoactive substances, and to determine the factors associated with use of these substances among heroin users in Malaysia.

For record keeping and/or law enforcement purposes, narcotic addicts are lumped into a single category as a rough index at identification for classification according to the drug law. However, from the standpoint of etiology, psychopathology, prognosis, human behavioural science, potential for recovery and the related theories, the practice of aggregating addicts into a single category is less effective. According to the Strategy Council on drug abuse in the United States, the narcotic addicts are a very heterogeneous group and this diversity must be fully recognized in order to have effective approaches for their treatment and rehabilitation (Strategy Council on Drug Abuse, 1973).

The acknowledgement of the fact that the narcotic addicts do not constitute a homogeneous group has resulted in the proposals of several varieties of addicts based on naturalistic approach within the broad category of drug abuser life-style. Stephens and Levine (1971) and Preble and Casey (1969) have written about the "street addict role" in which they ascribed the behaviour of minority group slum dwellers who use heroin to a deviant set of norms and values. Sutter (1966) referred to these addicts as "righteous dope fiends" in his paper. In some other literature, these addicts are referred to as "cool cats" (Levine and Stephens, 1974) and "junkies" (Agar, 1973). Other than the "street addict", Stephens and Levine have identified another two varieties: the white, middle-class, "hippie" youngsters who experiment with addictive drugs and the "medical" addicts which comprised of chronically ill individuals whose addiction may have originated during medical treatment and for whom its continuation depends upon the medical profession's willingness to serve as the source of supply. The backgrounds and psychodynamics of these three varieties of addicts were compared by Stephens and Levine. Similarly, Hamburger (1969) contrasts the life-styles of "hippies" with those of "junkies" in terms of their area of location, sex, age, race, socio-economic origins, patterns of drug abuse, external appearances, employment,

leisure-time activities and psychiatric patterns. The list of varieties of addicts identified by Stephens and Levine was later extended to include the dealer addict, the shooting gallery addict, the female addict, the suburban addict, the employed addict and the addict under treatment (Nurco, 1973). In this respect, the "criminal" addict involved in drug-related crimes (Dittmar, Ratnasingam and Navaratnam, 1984) and the student addict (Hoo and Navaratnam, in press) can be added to the list of varieties of drug addict life-styles. Classifying the addicts into different categories according to the mode and degree of access to drug in conjunction with demography, occupation and social status is useful for descriptive purposes. However, this typology is situational in which the categories of addicts identified mainly represent behavioural manifestations of a smaller number of social situations. The approaches used for classification were not theoretically based and the addicts were classified along an inconsistent set of dimensions.

In contrast to the naturalistic approach which relied on the addicts' life-style, numerous studies have applied psychometric test to classify addicts as attempts to pursue a more structured and objective solution to the categorization problem. Cavior et al., (1967), Lombardi et al., (1968), Sutker (1971), Gilbert and Lombardi (1967), Reith et al., (1975), Gasser et al., (1974), Gulas and King (1976) and Schooler et al., (1972), have attempted to delineate above the same line the personality features of addicts from comparable non-addicts in institutions.

Further categorization of the heterogeneous addict group itself were attempted by Burke and Eichberg (1972), Green et al., (1971), Hollaran (1972), Holroyd (1974), Kendall and Pittel (1971), McAree et al., (1969, 1972), Sadava (1970), Stokes (1974) on the adolescent drug users using personality inventory. Among the hospitalized drug abusers and the patients in drug treatment programme, Fitzgibbons et al., (1973), Berzins et al., (1971, 1974), Hekimian and Gershon (1968), Hill et al. (1960), Sheppard et al., (1972, 1973), Sutker et al., (1974), Zuckerman (1975), Arnon et al., (1974), Cryns (1974), Gasser et al., (1974), Korin (1974), Kwant et al., (1976), Strauss (1977) have proposed the possibility of classifying them on a more objective basis using psychometric test. Hampton and Vogel (1973), and Jarvis et al., (1975) have investigated along the same line with the military inpatient drug abusers.

Although in these early research, the possibility of classifying addicts on a more objective basis (compared to naturalistic approach) is illustrated, several limitations exist. Firstly, the studies were restricted to particular groups of interest which may not be representative of other types of addicts and addicts in general. Secondly, the responses collected using psychometric tests may have been affected by the conditions of institutions and by factors other than addiction. Thirdly, very limited form of data are provided by the psychometric instrument on which the addicts are classified.

Nurco (1981) has proposed a typology which classify the addict along the dimension of addict career. Addict career is viewed as the patterned distribution of drug using behaviour over time : the interplay of periods on and off drugs with time spent incarcerated. The typology of addict career proposed is built upon the concepts of opportunity and motivation to use drugs; that, the characterization of each addict depends upon his degree of involvement with narcotic drugs in relation to his opportunity for voluntary abstinence in his first ten years of addiction.

For the present study, it is recognized that the narcotic addicts do not constitute a homogeneous group. They are considered to be different in the degree of addiction, the extent to which they invest drug-taking as their central life interest, the degree of involvement in drug-related crimes and the strength of their will power to be drug-free. Hence, the study intends to establish a typology taking into account the above heterogeneities.

2.0 PURPOSE OF THE STUDY

The present study has two-fold purpose. Firstly, to describe the patterns of drug use, criminality, arrest, incarceration and legitimate employment which characterised the addicts, and to relate these configurations to characteristics prior to addiction, during addiction and any periods of abstinence, and at the point of interview. More specifically, the study intend to answer the following research questions:-

- i. What are the personal, social and demographic characteristics of addicts in the drug scene (for at least 10 years) prior to addiction, during addiction, during any periods of voluntary abstinence and at the point of interview?
- ii. What are the drug related problems encountered by these addicts and what are the types, sources and usefulness of community services received prior to addiction, during addiction, and at the point of interview?
- iii. What are the types and sources of services needed by these addicts at present?
- iv. What are the patterns of involvement of these addicts in illegal and criminal activities prior to addiction, during addiction and any periods of abstinence and at the point of interview?
- v. What are the patterns of drug use of these addicts?
- vi. What is the primary drug used and to what extent was it the dominant drug?
- vii. What are the employment status and legitimate and illegitimate source of income of these addicts prior to addiction, during addiction, during any periods of abstinence and at the point of interview?
- viii. What are the treatment and hospitalization history of these addicts?
- ix. What sort of living arrangements characterised periods of addiction, prior to addiction and voluntary abstinence?

Secondly, the purpose of the study is to describe the addictive behaviour of addicts during the first 10 years of addiction, relating each of the several life-style variables

to a typology of addict careers based on their degree of severity in addiction. Specifically, the research questions concerned are: -

- i. What is the average length of time of addiction, incarceration, treatment, hospitalization and voluntary abstinence for these addicts during the ten years?
- ii. How many separate periods of addiction, incarceration, treatment, hospitalization and voluntary abstinence occurred during the ten years?
- iii. How long were the average periods of addiction, incarceration, treatment, hospitalization and voluntary abstinence?
- iv. What typology (based on the addiction history of addicts) can be used to indicate the degree to which an addict has become a permanent and continuing problem to the society, or has made an acceptable social adjustment to possibly return to conventional behaviour?
- v. What are the personal, social and demographic characteristics of the different types of addicts?
- vi. What are the patterns of involvement of these addicts in illegal and criminal activities for the different types of addicts?
- vii. What are the employment status and legitimate and illegitimate source of income of the different types of addicts?
- viii. What are the type of living arrangements for these different types of addicts?
- ix. What are the treatment and hospitalization history of these different types of addicts?

3.0 METHODOLOGY

3.1 POPULATION

In this study, the population is made up of individuals arrested by the Georgetown Police station, Penang for drug related crimes. Since the study attempts to examine the addiction history of the addicts over the first ten year period, the population was narrowed down to those arrested in the year 1978 and earlier. However, with reference to the data collected by the National Drug Abuse Monitoring System (Foong and Navaratnam, 1987) where the reported incidence of drug addicts in the state of Penang from 1970 - 1975 was only 429 cases while 10,206 cases were reported in 1976 and 1977, it was felt that attempts to conduct the small number of reported addicts prior to 1976 would merely be an exercise in futility, hence individuals reported by the Georgetown Police Station, Penang for the drug-related crimes in 1976 and 1977 formed the population to be studied.

3.2 SAMPLING FRAME

A total of 1050 individuals arrested by the Georgetown Police Station, Penang for drug-related crimes in 1976 and 1977 formed the sampling frame of this study. Individuals older than 50 years of age were excluded because it was revealed in the pilot test that most of the individuals in this age category have great difficulties in recalling events which have happened in the past 25 to 30 years. Data from these old subjects will contaminate the results and hence affect the validity and reliability of the study. For these 1050 individuals, their addresses were collected from the record in the Georgetown Police Station, Penang. In these drug-related criminal records, information on whether the arrest is an addict or not was not available and hence this identity could be known only after the interviewer has contacted the individuals. Those individuals identified as engaging in narcotics traffic, but not users themselves were excluded from this study.

3.3 SAMPLE SELECTION

Since the entire population will not be used for this study, the sample selection is executed in such a way that each case selected for the study will have statistically same sampling probability. To obtain the equal sampling probability for each selected case, firstly the total population of 1050 individuals were divided into 5 groups of 210 each in a random systematic manner. From these 5 groups, 2 groups were randomly selected for search by the locators/interviewers. The above method of selection gives a sampling probability of 1.90×10^{-3} and a sampling fraction of 40% (420 out of 1050). With this sample selection procedures a total of 420 cases will be searched for face-to-face interviews.

The distribution of subjects searched in the study by age and ethnicity are shown in Tables A and B respectively:-

TABLE A : DISTRIBUTION OF SUBJECTS SEARCHED BY AGE

Current Age (years)	Frequency (n)	Percentage (%)
20 and below	0	0
21 - 25	5	1.10
26 - 30	60	13.25
31 - 35	153	33.77
36 - 40	144	31.79
41 - 45	67	14.79
46 - 50 *	24	5.30
Total	453**	100.00

* Subject above 50 years of age were not included in the study.

** This total includes 33 subjects searched during the pilot fieldwork.

TABLE B : DISTRIBUTION OF SUBJECTS SEARCHED BY ETHNICITY

Ethnicity	Frequency (n)	Percentage (%)
Malays	64	14.13
Chinese	274	60.48
Indian	115	25.39
Total	453*	100.00

* This total includes 33 subjects searched during the pilot field work

3.4 LOCATING SUBJECTS

In common with other longitudinal studies of opioid users (Nurco, *et al*, 1975; Maddux and Desmond, 1974), finding the subjects for interviews often became a tedious and time-consuming task. Moreover, the locators/interviewers had to conduct the search with sufficient discretion to preclude inappropriate invasion of privacy or disclosure of information about subjects.

In this study, a total number of 453 subjects were searched. This includes 33 subjects searched during the pilot fieldwork of the study.

In the pilot search, 33 subjects were attempted and 4 of them were contacted for interviews. This gives a success rate at 12.12%. In the actual study, 420 subjects were searched and 51 subjects were contacted for interviews. This gives a success rate at 12.14% which is very close to that of the pilot fieldwork.

In this study, the main problem in searching and contacting the subjects for interviews is that subjects could not be located. Nearly half of the unsuccessful search were due to this reason. Other than this, about one-fifth of the unsuccessful search were due to the fact that the addresses in the records could not be located. This is mainly because the available addresses are probably only valid 12 years ago. Some of the other problems faced were like false addresses, house demolished, refusal by some of the subjects to cooperate in the study, subjects in prison (not local) or treatment centre and of course death. Please refer to the Table C below for the reasons of failure in the search in the pilot test as well as in the actual study.

In the search for the subjects, 38 of them were engaged in narcotic trafficking and were not addicts themselves; 21 of them were believed to be in prison other than the Penang Prison; 5 subjects were un-interviewable due to old age or suffering from mental problems, and 3 subjects who did not meet the criteria since they were addicted for less than 10 years. All the above subjects were excluded from the present study.

TABLE C : DISTRIBUTION OF UNINTERVIEWED SUBJECTS BY REASON FOR FAILURE IN LOCATION

Reason for failure in subject location	Frequency (n)	Percentage (%)
Subject unlocated	182	45.7
Address unlocated	83	20.9
Non-Addicts	38	9.6
House demolished	23	5.8
Incarcerated	21	5.3
Refusal	19	4.8
Death	18	4.5
In treatment	6	1.5
Uninterviewable	5	1.2
Not meeting the criteria	3	0.7
Total	398	100.0

In most of the similar longitudinal studies on addicts, usually the subjects are searched by the locator and then interviewed by the interviewers. However, in this study the task for locating and interviewing the subjects were done by the interviewers. Since there was no intention of bringing the subjects to the study centre for interview and the interview were mostly carried out in the field after locating the subject, there is no need for the locator. Moreover, after the subject was located and in engaging him in a face-to-face interview, an interviewer who is different from the locator might create suspicion and distrust on the interviewer. In most cases, the subjects refused to talk freely and openly when they were first located hence the task of interviewing them became prolonged and complicated. However, with the initiative, empathy, patience, and persistence from the interviewers, they were able to gain the trust from the subjects and the interviews were made possible.

The distribution of the respondents interviewed by age and ethnicity are shown in Tables D and E respectively.

TABLE D : DISTRIBUTION OF RESPONDENTS INTERVIEWED BY AGE

Current Age (years)	Frequency (n)	Percentage (%)
21 - 25	2	3.92
26 - 30	5	9.80
31 - 35	19	37.26
36 - 40	15	29.41
41 - 45	6	11.77
46 - 50*	4	7.84
Total	51	100.0

* Subjects above 50 years of age were not included in the study.

TABLE E : DISTRIBUTION OF RESPONDENTS INTERVIEWED BY ETHNICITY

Ethnicity	Frequency (n)	Percentage(%)
Malays	10	18.18
Chinese	25	45.46
Indian	20	36.36
Total	55*	100.0

* This total includes 4 cases interviewed during the pilot fieldwork

In the process of searching for the subjects, the Chinese were found to be the least cooperative group among the ethnic groups. Most frequently the Chinese families gave stereotyped responses when asked about the location of a subject: he is not at home and they do not know where he is or when he will return, or they do not know such person in search for. Of the total 453 subjects searched, 274 (60.48%) were Chinese, 115 (25.39%) Indians and 64 (14.13%) were Malays. For the 55 cases (including 4 cases in pilot) of successful search, 25 (45.46%) were Chinese, 20 (36.36%) Indian and 10 (18.18%) Malays. These figures give a success rate for the search of 9.12% for the Chinese, a rate lower than that of the overall rate of successful search (12.12%) reflecting on the situation discussed earlier. The rate of success for Indians is 17.39% and 15.63% for the Malays.

3.5 OBTAINING INTERVIEWS

After the subject was located, the next research task was to interview him. To initiate and to get complete and consistent life history information over more than 10 year period in the areas of study was time consuming and complicated. Most of the subjects located were unwilling to talk openly and freely on their addiction history and criminality in the beginning stage. Their behaviour revealed their suspicion and distrust of the interviewer. However, the interviewer managed to have conversation with them on other topics in their daily lives as an approach to establish some rapport. When the interviewer has gained trust from the subjects, they were indeed very responsive and cooperative in the interview.

Table F shows the distribution of the 51 subjects interviewed by places where interviews were conducted.

TABLE F : DISTRIBUTION OF SUBJECTS BY PLACE OF INTERVIEW

Place of Interview	Frequency (n)	Percentage (%)
Residence	21	41.18
Jail	17	33.33
Common place	11	21.57
Friend's house	1	1.96
Rubber estate	1	1.96
Total	51	100.00

Twenty-one (41.18%) of the subjects were interviewed in their residences. These subjects were willing to talk about their addiction history and criminality when first located. The interviews were conducted in their homes and sometimes with their family member around. For these subjects, the family member gave fairly good assistance to them to recall certain events in their addiction history.

Seventeen case interviews were conducted in the Penang Prison since the subjects were incarcerated at the time of interview. For these 17 subjects, the interviewers were told that the subjects were incarcerated in Penang Prison by their neighbours or their families. Penang Prison was referred and the subjects located in the prison were interviewed in the prison with permission of the agency. Most of the subjects in the prison talked openly and freely, and they provided complete and consistent addiction history and criminality information. These subjects seem to feel that they had nothing to lose by talking openly about their addiction history and criminal activities. Among the 51 subjects interviewed, 11 of them were interviewed at the common place like coffee shop, hawker's stall, playground, community hall and on the street. All of these subjects were located in their residences. However, appointments were made to interview them at the common places as above. For most of the subjects, the intention was to avoid their family members or neighbours to know about their addiction and criminality history. Compared to the subjects interviewed in their residences or in jail, these subjects were slightly less cooperative. Satisfactory interviews were conducted with sufficient initiative, empathy, patience and persistence from the interviewer.

One of the subjects were interviewed in a friend's house and another one in the rubber estate.

None of the subjects were interviewed at the workplace since the working subjects would not want to expose their addiction and criminality history to their colleagues.

3.6 METHOD OF DATA COLLECTION

3.6.1 QUESTIONNAIRE

Subjects in the study were interviewed by means of a questionnaire devised by the research team in the Centre. To gather sufficient information for answering the research questions proposed in section 2, the questionnaire was designed to elicit data primarily within five areas of activity: drug taking, living arrangements, employment, source of income, and criminality. Other data obtained covered the areas of family contact, education, marital status, incarceration, drug treatment history, leisure time, community services received, race and religion.

In the area of drug taking activity, the subjects were asked on the type of drugs ever used and currently (in the last 12 months) used, the age at first use, source of introduction to first use, main reason for initiation of use, the route of administration and frequency of use. In examining the addiction history of the subjects, a decision was made not to include too detailed a set of questionnaire pertaining to changes in their addiction history from the time the subject has been categorised as an addict to the time of interview. This is because of the high probability of the subject not being able to recall the details and thus giving answers of low reliability. Instead, changes in addiction history are obtained by enquiring from the addicts the number of times and length of the periods of hospitalization, treatment, incarceration and voluntary abstinence happened in the years of the research interest. The addiction history was then reconstructed from the information gathered on these major events in their life history.

In the area of living arrangement, factors examined includes living place, people living with, stability of abode, the types of close social associate, time spent with family, friends and alone, and family contact. Employment and source of income were studied from the aspects of employment status, occupation and primary source of income. In the area of criminality, the history of arrest, conviction and incarceration were enquired. Other than the number of times and the reason for arrest, conviction and incarceration, the amount of time spent incarcerated was also asked. The community services received by the subjects during the period under study were examined by enquiring from the subjects the problem encountered; the types and the source of services received, as well as the usefulness of the services received.

In studying the changes in above personal and social factors from the time the individual has been identified as an addict to the time of interview, these factors were retrospectively examined in three distinct periods namely, prior to regular drug use, during regular drug use and currently in the last 30 days.

3.6.2 TRAINING OF INTERVIEWERS

Two interviewers were specifically trained to administer the questionnaire. Training consisted of several sessions aimed at increasing interviewers' understanding of the information being sought and the effective ways of registering the answers. In the pilot fieldwork, the

interviewers were trained to practice effective ways of locating the subjects. Two practice interviews were conducted by each of the interviewers and feedback were provided to them. The interviewers were considered proficient in locating and interviewing the subjects after the search on 33 subjects in the field and 4 practice interviews which are satisfactorily completed.

Since the sample of the study is made up of mainly Chinese, Malays and Indians, the selection of interviewers must take into consideration the communication aspect with the subjects of different ethnicity. For this study, an Indian and a Chinese interviewer were selected to execute the task of interviewing the subjects. Both of these interviewers are proficient in the Malay language (Bahasa Malaysia), hence the problem of communicating with the subjects of different ethnicity during face-to-face interview is made minimal if not nil.

3.6.3 DATA COLLECTION

Data collection started in October 1988 and ended in February 1989. Throughout the data collecting process, the life history information from different aspects was repeatedly checked for completeness and internal consistency. Although discrepancies were frequently found, most of these were resolved without much difficulty. At most the interviewers need to re-interview the subject on certain section of the life history where discrepancies were found.

3.7 RELIABILITY AND VALIDITY

In the process of data collection, the life history information given by the subjects is repeatedly checked for internal consistency. However, the credibility of self-reported information on the life history over years from the addicts is questionable. This is a "universal" problem in the longitudinal studies of human subjects in their natural environments where the subjects cannot be kept under constant observation, and consequently much of the information gathered from face-to-face information-producing interview came from the subjects themselves. Several studies concerned entirely or partly with reliability and validity of interview data from opioid users collectively indicated a surprising high degree of accuracy, reliability and validity of such data (Maddux and Desmond, 1973, Ball 1971). In both clinical and research interviews with opioid users, the opioid users were found frequently to give reliable and valid life history information. However, the amount and nature of the information given by the subjects are affected by

the conditions in and outside the subjects during the interview. The interviewer needs to make critical judgements about the effect of these conditions the information received. In this study, the conditions of interview, characteristics of subjects during the interview and the accuracy of responses given by subjects were evaluated immediately after leaving the subjects on completion of interview. Table G reveals the interviewers comments on the conditions of interviews conducted and characteristics of subjects in the study.

Generally, the conditions for interviews in this study were satisfactory. 72.5% of the interviews were conducted in complete privacy while 25.5% in privacy most of the time. Privacy is the major factor that contribute to truthful answers from the subject during the interview, especially indepth interview on the addiction and criminality history which highly invades the disreputable past and experience of the subject. Interruptions during the interviews were minimal as revealed by the fact that 92.0% of the interviews had no interuptions while 8.0% were interrupted by others entering and leaving the place of interview. However, the people entering and leaving the place of interview were the family members of the subjects hence the interuption is indeed nil since this will not affect the quality of the answer given by the subject. During the interviews, there were no phone calls for the subject and none of the subjects or the interviewers left the place.

TABLE G: INTERVIEWER'S COMMENTS ON THE CONDITIONS OF INTERVIEW AND CHARACTERISTICS OF THE SUBJECTS

Comments	Frequency (n)	Percentage (%)
CONDITIONS OF INTERVIEW		
A. <u>Privacy</u>		
Complete privacy	37	72.5
Privacy most of the time	13	25.5
Privacy some of the time	1	2.0
No privacy	0	0.0
B. <u>Interruptions</u>		
No interruptions	46	92.0
Others entering and leaving place of interview	4	8.0
Subject left the place	0	0.0
Interviewer left the place	0	0.0
Phone calls	0	0.0
SUBJECT'S CHARACTERISTICS		
A. <u>Subject's attitude towards interview</u>		
Very positive	6	11.7
Positive	29	56.9
Neutral	15	29.4
Negative	1	2.0
Very negative	0	0.0
Hostile	0	0.0
B. <u>Attention to interviewer</u>		
Very high	5	9.8
High	27	52.9
Medium	18	35.3
Low	1	2.0
Very low	0	0.0

Comments	Frequency (n)	Percentage (%)
C. <u>Understanding of Questions and Comprehension</u>		
Very high	4	7.8
High	29	56.9
Medium	17	33.3
Low	1	2.0
Very low	0	0.0
D. <u>Articulation of Answers</u>		
Very high	2	4.0
High	15	30.0
Medium	31	62.0
Low	2	4.0
Very low	0	0.0
E. <u>Apparent Physical Health</u>		
Good	19	37.3
Fair	28	54.9
Poor	4	7.8
F. <u>Weight</u>		
Emaciated	3	5.9
Thin	20	39.2
Average	26	51.0
Obese	2	3.9
G. <u>Intoxication/Withdrawal</u>		
No symptoms of intoxication or withdrawal	50	98.0
Drunk	0	0.0
Intoxication	0	0.0
In withdrawal	0	0.0
Nervous problem	1	2.0

The conditions of the subjects during the interviews were satisfactory. 68.6% of the subjects had very positive/positive attitude towards the interview and 29.4% of them had neutral attitude. Most of the subjects (62.7%) paid very high/high attention to the interviewer while 35.3% were with medium attention.

In addition to the conditions for interview and the subject's conditions during interview, the accuracy of the responses given by the subjects on different factors was evaluated by the interviewer. The evaluation is done based on:-

- i. How well the subject could recall the events enquired;
- ii. Consistency of the answers given;
- iii. Disclosure of the subject on the topics enquired.

Table H reveals the interviewers' comments on the accuracy of the responses given by the subjects on different factors.

TABLE H : INTERVIEWERS' COMMENTS ON THE ACCURACY OF RESPONSES

Factors	Accuracy					Overall Accuracy
	Very High (5)	High (4)	Medium (3)	Low (2)	Very Low (1)	
Employment Status	3 (5.9)	10 (19.6)	20 (39.2)	13 (25.5)	5 (9.8)	2.86 Medium
Sources of income	4 (7.8)	10 (19.6)	21 (41.2)	11 (21.6)	5 (9.8)	2.94 Medium
Living Place	7 (13.7)	19 (37.3)	12 (23.5)	12 (23.5)	1 (2.0)	3.37 Medium
Living with whom	6 (11.7)	22 (43.1)	14 (27.5)	8 (15.7)	1 (2.0)	3.47 Medium
No. of Dependents	5 (9.8)	16 (31.4)	22 (29.4)	11 (13.7)	1 (15.7)	3.05 Medium
Stability of Abode	1 (2.0)	16 (31.4)	22 (43.1)	11 (21.5)	1 (2.0)	3.10 Medium
Lifestyle	0 (0.0)	18 (35.3)	21 (41.2)	11 (21.5)	1 (2.0)	3.10 Medium
Family contact	0 (0.0)	22 (43.1)	22 (43.1)	6 (11.8)	1 (2.0)	3.27 Medium
Leisure time spent	0 (0.0)	21 (41.2)	21 (41.2)	9 (17.6)	0 (0.0)	3.63 High
Family Support	2 (3.9)	13 (25.5)	29 (56.8)	6 (11.8)	1 (2.0)	3.18 Medium

TABLE H : INTERVIEWERS' COMMENTS ON THE ACCURACY OF RESPONSES - Continuation

Factors	Accuracy					Overall Accuracy
	Very High (5)	High (4)	Medium (3)	Low (2)	Very Low (1)	
Criminality	0 (0.0)	9 (17.6)	17 (33.3)	24 (47.1)	1 (2.0)	2.67 Medium
Reasons for arrest/ conviction/ incarceration	9 (17.6)	15 (29.4)	22 (43.2)	5 (9.8)	0 (0.00)	3.55 High
Community services	0 (0.0)	12 (23.5)	27 (52.9)	11 (21.6)	1 (2.0)	2.98 Medium
Primary drug-related problems	8 (15.7)	17 (33.3)	23 (45.1)	3 (5.9)	0 (0.00)	3.59 High
Illegal activity	0 (0.00)	8 (15.7)	20 (39.2)	23 (45.1)	0 (0.00)	2.71 Medium
Drug Use History	8 (15.7)	18 (35.3)	19 (37.3)	4 (7.8)	2 (3.9)	3.51 High
Period of Non-addiction	4 (7.8)	12 (23.5)	18 (35.3)	6 (11.8)	11 (21.6)	2.84 Medium
Treatment	8 (15.7)	15 (29.4)	11 (21.6)	8 (15.7)	9 (17.6)	3.10 Medium
Hospitalization	3 (5.8)	10 (19.6)	18 (35.3)	14 (27.5)	6 (11.8)	2.80 Medium

By giving a score of 5 for very high, 4 for high, 3 for medium, 2 for low and 1 for very low for the interviewers' comments on the responses of the subjects, the overall accuracy of the responses to factors enquired are calculated.

Responses to the questions on drug use history, drug-related problems, reasons for arrest/conviction/incarceration and leisure time spent were with high accuracy. Relatively, the accuracy of the responses to the questions on criminality, illegal activity, period of non-addiction and hospitalization were lower. The disclosure of the subjects on topics like criminality and illegal activity were relatively higher while the certain subjects could not remember very well on the period of non-addiction and hospitalization. For the other factors, the responses to those questions were with medium accuracy.

4.0 RESULT

This section presents the results of the study on the addicts over a ten-year period retrospectively. Presentation of the results are divided into eight parts. Part one describes the current demographic characteristics of subjects the relationship with the family and the relationship with the social associates in the last 30 days preceding the interview. The results provide us with the current socio-economic status of addicts who are in the drug scene for at least ten years. Part two of this section describes the pattern of drug use for these addicts taking into account the frequency of use, age at first use, main reasons for initiation and the route of administration. In addition, the primary drug career is also described in this part of the results.

Starting from part 3 of this section, the results of the survey on the addiction history over the ten years for the addicts under study are reported. Part 3 describes the degree at which the addicts involved themselves in addiction, institutionalisation and voluntary abstinence, taking into account the number of times and the length of periods of addiction, institutionalisation and voluntary abstinence. Part 4 explains the conceptual frame to create a new typology for the drug addict career and procedure to divide the addicts into different type by the typology. The characteristics of the addicts of different types are described here. In the last part of this section, the results on the comparison on the socio-economic characteristics, criminality and employment status of the addicts of different types are reported.

4.1 CURRENT DEMOGRAPHIC CHARACTERISTICS

In this study, the current demographic characteristics denotes the characteristics of the addicts in the last 30 days from the point of interview. Since the fieldwork were executed during October 1988 to February 1989, current demographic characteristics reported in this section is specifically the demographic characteristics of the addicts during the period between September 1988 and January 1989.

4.1.1 SOCIO ECONOMIC CHARACTERISTICS

Table 1.1 reveals the distribution of respondents by their demographic characteristics. No respondent has current age of 50 and above because these older addicts were excluded from this study.

TABLE 1.1 : DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

Characteristics	Number	Percentage
<u>Age</u>		
25 - 29	4	7.8
30 - 34	20	39.2
35 - 39	9	17.7
40 - 44	13	25.5
45 - 49	5	9.8
<u>Ethnicity</u>		
Chinese	22	43.1
Indian	19	37.3
Malay	10	19.6
<u>Religion</u>		
Buddhism	22	43.1
Hinduism	12	23.5
Islam	11	21.6
Roman Catholic	5	9.8
Christianity	1	2.0
<u>Marital Status</u>		
Single	29	56.9
Married	17	33.3
Separated	2	3.9
Divorced	3	5.9
<u>Literacy</u>		
Literate	45	88.2
Illiterate	6	11.8
<u>Years of Education</u>		
0	4	7.8
1 - 6	24	47.1
7 - 10	21	41.2
11 - 12	2	3.9

39.2% of the respondents were between 30 and 34 years old while about a quarter (25.5%) of them were 40 - 44 years of age when interviewed. A small number (4; 7.8%) of them were 25 - 29 years old when interviewed indicating they were very much younger (between 13 - 18 years old) when arrested by the Penang Georgetown Police. 5(9.8%) of them were in their late forties when interviewed.

Even though the success rate of searching for the Chinese subjects were lowest, the proportion of Chinese respondents in this study is the largest (43.1%). This is because of the large number of Chinese subjects in the sampling frame. Out of these 51 respondents, 19 (37.3%) were Indians and 10 (19.6%) were Malays. The proportion of respondents by ethnicity in this study does not represent the drug-use involvement by addicts of different ethnicity since many factors have affected the search for the respondents in the study.

Twenty-two (43.1%) of the total respondents were Buddhists, 12 (38.5%) Hindus, 11 (21.6%) Muslims, 5 (9.8%) Roman Catholics and 1 (2.0%) Christians. The distribution of the respondents by religion is closely related to the ethnicity of the respondents where all Malays are Muslims, majority of Chinese are Buddhists and most of the Indians are Hindus.

Out of these 51 respondents, 29 (56.9%) of them were found to be single at the time of interview, 17 (33.3%) married and a small number (5; 9.8%) separated or divorced. These data reveals that more than half (56.9%) of the addicts contacted for interview were single even though more than 90% of them were within the age of 30 years old and above. This indicates the existence of probable problems with inter-personal skills among the addicts.

Most of the addicts (88.2%) were literate. Twenty-four (47.1%) of them had attained 1 - 6 years of education while 21 (41.2%) had completed 7 - 10 years of education. These results indicate that the majority of the addicts in the study were drop-outs of primary or lower-secondary education.

Table 1.2 shows the distribution of respondents by their employment background.

At the point of interview, 16(31.4%) of the addicts were employed full-time while 12 (23.6%) of them were employed part-time. The results indicate that more than half of the addicts contacted for interview were working. However, 17 (33.3%) of these addicts were incarcerated when interviewed and the interviews were conducted in the prison. 5(9.8%) addicts were reported unemployed and one operating his own workshop.

TABLE 1.2: EMPLOYMENT BACKGROUND OF RESPONDENTS

	Number	Percentage
<u>Employment</u>		
Employed full-time	16	31.4
Employed part-time	12	23.6
Institutionalised	17	33.3
Unemployed	5	9.8
Others	1	1.9
<u>Occupation</u>		
Unskilled labour	19	37.2
Semi-skilled labour	11	21.6
Mechanical work	1	2.0
Managerial	1	2.0
Institutionalised	14	27.4
Unemployed	5	9.8
<u>Source of income</u>		
Salary and wages from a legitimate job	32	62.8
Spouse/family	4	7.8
Illegal Income	3	5.9
No Income	12	23.5

When the occupation of the addicts were examined, 19 (37.2%) were employed as unskilled labour like labourer, guard, general worker or illegal parking attendant. Eleven (21.6%) were employed as semi-skilled labour like driver, bartender, tailor, hawker or mechanic. One was involved in mechanical work, operating his own workshop while another one was employed in the managerial line. Fourteen out of the 16 addicts interviewed in the prison were not employed for the last 30 days and 5 addicts were unemployed in the community.

Source of income was a major factor surveyed in this study. Source of income for the 32 (62.7%) addicts who were employed were from salaries and wages from legitimate job. For those unemployed and incarcerated, 12 (23.5%) of them had no income in the last 30 days, 4 (7.8%) received the financial support from their family, and 3 (5.9%) had illegal income mainly from pushing drugs or gambling.

Based on the data revealed in Table 1.3, a large number (62.7%) of the addicts were living in apartment/family dwelling. Seventeen (33.3%) were staying in jail and one of them living in a hotel/boarding house.

When the addicts were asked on the types of people living together, 31(60.8%) were living with their spouse and family members while 17(33.3%) were living with the members of the same institution (prison). One of them were living with friends while another 2 were living alone (Please refer to Table 1.3).

Majority (94.1%) of the addicts stayed in one similar address in the last 30 days and only two of them had two addresses. However, there was one addict without address indicating this addict did not have a stable place to stay (Please refer to Table 1.3).

TABLE 1.3 : LIVING ARRANGEMENTS OF RESPONDENTS

	Number	Percentage
<u>Current Living Place</u>		
Apartment/family dwelling	32	62.7
Hotel or board house	1	2.0
Jail	17	33.3
None	1	2.0
<u>Type of people living together</u>		
Spouse/Family members	31	60.8
Members of the same institution	17	33.3
Friends	1	2.0
Alone	2	3.9
<u>Stability of Abode in last 30 days preceding interview</u>		
0	1	2.0
1	48	94.1
2	2	3.9

TABLE 1.4: DISTRIBUTION OF RESPONDENTS BY NUMBER OF FINANCIAL DEPENDENTS

No of financial dependent	Frequency (n)	Percentage (%)
0	37	72.5
1	6	11.7
2	1	2.0
3	3	5.9
4	2	3.9
5	1	2.0
6	1	2.0
Total	51	100.0

Table 1.4 reveals the distribution of respondents by number of financial dependents. Most of the addicts (72.5%) did not have any financial dependent at the time of interview. Six of them (11.7%) had one financial dependent, mostly the spouse. Eight of them had between two to six financial dependents, mainly the children and other family members.

TABLE 1.5 : DISTRIBUTION OF RESPONDENTS BY CURRENT FAMILY CONTACT

Frequency of contact	Frequency (n)	Percentage (%)
<u>Mother/Father</u>		
Not living	12	23.5
Never	9	17.6
Rarely	3	5.9
Sometimes	6	11.8
Often	21	41.2
<u>Brother(s)/Sister(s)</u>		
Not living	2	3.9
Never	9	17.6
Rarely	9	17.6
Sometimes	12	23.5
Often	19	37.3
<u>Other Relatives</u>		
Not living	0	0.0
Never	20	39.2
Rarely	12	23.5
Sometimes	8	15.7
Often	11	21.6

Table 1.5 reveals the distribution of addicts by current family contact. Twenty-one (41.2%) of the addicts had contact with the parents frequently. Six (11.8%) sometimes contacted the parents while three (5.9%) rarely and nine (17.6%) had never contacted the parents in the last 30 days. Generally, the contact with their brother(s) and sister(s) were good with more than 60% of them sometimes/often contact their brother(s) and sister(s), nine (17.6%) rarely contact their brother(s) and sister(s) while another nine (17.6%) never did so. The contact with their relatives was poor generally with 62.7% of them never/rarely contact their relatives. However, eleven (21.6%) of them contacted their relatives frequently while eight (15.7%) sometimes did so.

TABLE 1.6 : DISTRIBUTION OF RESPONDENTS BY GENERAL FAMILY RELATIONSHIP, ATTITUDE AND SUPPORT

	Frequency (n)	Percentage (%)
<u>Family's concerned, helpful or supportive of each other</u>		
Very much	40	78.4
Somewhat	9	17.7
Very little	2	3.9
Not at all	0	0.0
<u>Family's attitude towards drug use</u>		
Very much opposed	45	88.2
Somewhat opposed	5	9.8
Approved drug use	0	0.0
Not aware	0	0.0
Didn't care one way or another	1	2.0
<u>Family's support against drug use</u>		
Frequently	40	78.4
Sometimes	10	19.6
Rarely	1	2.0
Never	0	0.0

In the addicts' opinions, generally their families were concerned, helpful or supportive of each other, having negative attitude towards drug use and supportive against drug use. 78.4% of the addicts felt that their families were very much concerned, helpful or supportive of each other while 9 (17.7%) felt somewhat concerned, helpful or supportive of each other (Table 1.6). 88.2% felt that their families were very much opposed to drug use while 78.4% of the families of addicts frequently against drug use.

TABLE 1.7 : DISTRIBUTION OF RESPONDENTS BY CURRENT FAMILY SUPPORT

Frequency of help or encouragement from family	Frequency (n)	Percentage (%)
Frequently	9	19.1
Sometimes	13	27.7
Rarely	7	14.9
Never	18	38.3
Total	47*	100.0

* 4 (7.8%) cases have no information.

The addicts were also asked on the family support in the last 30 days. Their opinions were quite different from those on their family support generally. Currently, a large number (18; 38.3%) never received any help or encouragement from family and 14.9% rarely received family support. However, there were 13 (27.7%) addicts who received family support sometimes while 9 (19.1%) frequently (Please refer to Table 1.7).

TABLE 1.8 : DISTRIBUTION OF RESPONDENTS BY LEISURE TIME SPENT WITH FAMILY CURRENTLY

Amount of time spent	Frequency (n)	Percentage (%)
A lot	22	45.8
Some	6	12.5
Little	3	6.3
None	17	35.4
Total	48*	100.0

* 3 (5.9%) cases have no information

Table 1.8 reveals the distribution of respondents by leisure time spent with family currently. Twenty-two (45.8%) of the addicts spent a lot of leisure time with their families. On the other hand, 17 (35.4%) never spent any time with their families in last 30 days. Six (12.5%) of them spent sometime while three (6.3%) little time with their families.

TABLE 1.9 : DISTRIBUTION OF RESPONDENTS BY DRUG-RELATED CHARACTERISTICS OF THEIR CURRENT CLOSE SOCIAL ASSOCIATES

Drug related characteristics	Frequency and Percentage			Total
	Yes	No	Don't know	
Drink alcohol on a daily regular basis	15(31.2)	33(68.8)	0(0.0)	48*
Use ganja or marijuana	14(29.2)	34(70.8)	0(0.0)	48*
Use heroin/other opiates for non-medical purposes	19(38.0)	31(62.0)	0(0.0)	49**
Quit using heroin or other opiates	5(26.3)	13(68.4)	1(5.3)	19***
Use any other drugs for non-medical purposes	5(10.4)	42(87.5)	1(2.1)	48*
Use another person's prescription drugs	0(0.0)	44(91.7)	4(8.3)	48*
Enter treatment for drug use	2(4.2)	46(95.8)	0(0.0)	48*
Successfully completed a treatment programme	3(6.3)	43(89.5)	2(4.2)	48*
Drop-out of drug treatment programme	0(0.0)	44(91.7)	4(8.3)	48*
Get arrested for drinking and reckless driving	5(10.4)	40(83.3)	3(6.3)	48*
Get arrested for other reason except traffic violations	9(18.8)	37(77.0)	2(4.2)	48*
Become seriously ill or die	7(14.6)	41(85.4)	0(0.0)	48*
Seriously ill or die because of drugs or alcohol	4(57.1)	3(42.9)	0(0.0)	7***

* 3(5.9%) cases have no information
 ** 2(3.9%) cases have no information
 *** The total number of respondents for this question are those who answer "yes" to the previous question.

Table 1.9 reveals the type of close social associates the respondents had at the time of interview. About 30% of the respondents had friends who drink regularly and/or used marijuana (31.2% and 29.2% respectively) while 38.0% have friends who used heroin or other opiates.

TABLE 1.10: DISTRIBUTION OF RESPONDENTS BY LEISURE TIME SPENT WITH SOCIAL ASSOCIATES CURRENTLY

Amount of time	Frequency (n)*	Percentage (%)
<u>Friends who use illegal drugs</u>		
A lot	15	31.3
Some	5	10.4
Little	11	22.9
None	17	35.4
<u>Friends who do not use illegal drugs</u>		
A lot	11	22.9
Some	12	25.0
Little	22	45.8
None	3	6.3
<u>Alone</u>		
A lot	23	47.9
Some	7	14.6
Little	12	25.0
None	6	12.5

* The total number responded to this position is 48. 3(5.9%) cases have no information.

4.2 DRUG USE PATTERNS

In surveying the drug use patterns of the respondents in last ten years, the types of drug ever used were enquired. For each type of drug ever used, the age at first use, reason for initiation, the major route of administration and the source of introduction of each drug were examined. Other than the drug ever used, the types of drugs used in the last 12 months and last 30 days preceding the interview were surveyed. For the drugs used in the last 30 days, the frequency of use and the route of administration were surveyed. Since the study examines retrospectively the drug use patterns of respondents for at least the last 10 years, the examination on the primary drug used during the period of time under survey is vital.

4.2.1 DRUGS EVER USED

Table 2.1 reveals the history of the drugs ever used for the respondents in the study. A wide range of drugs were ever used by the respondents : tobacco, alcohol, tranquillisers, barbiturates, mandrax pills, LSD, cannabis, opium, heroin and morphine. However, some drugs were more commonly abused than the others. Among the types of drugs ever used, tobacco, alcohol, cannabis and heroin were more commonly used. Tobacco and heroin were used by all the respondents while more than three quarter of the respondents had ever used alcohol (86.3%) and cannabis (78.4%). Opium and tranquillisers were used by about half of the respondents (51.0% and 46.0% respectively). Barbiturates (11.8%), morphine (17.6%) methaqualone (7.5%) and LSD (2.0%) were used by relatively small numbers of respondents.

The average age at first use for each type of the drugs ever used is presented in Table 2.1. Comparatively, among the four more commonly ever used drugs, the age of initiation of tobacco use is lowest at 15.25 years old, followed by alcohol (17.77 years), cannabis (19.15 years) and heroin (21.37 years). The results indicate a developmental trend in drug use from a less chronic drug to more chronic drug use over time. Tobacco and cannabis were found to be the "teenage drugs" and the "gate-way" drugs to heroin. The average age of initiation for tranquillisers is 24.04 years and 23.54 years for opium. For those drugs ever used by a small number of the respondents, the average age of first use were 23.0 years for barbiturates, 20.50 years for methaqualone, 24.89 years for morphine and 15.00 years for LSD.

TABLE 2.1: DISTRIBUTION OF RESPONDENTS BY THEIR EVER DRUG-USE HISTORY

Type of drug ever used	Frequency N (%)	Age at first use (years)		Drug first introduced by	Main reasons for initiation	The major route of administration
		Mean	S.D.			
Tobacco	51 (100.0)	15.25	2.34	Friends (100.0)	Curiosity (35.3) Have fun/be sociable (64.7)	Oral - smoke (100.0)
Alcohol	44 (86.3)	17.77	3.73	Friends (95.5) Family members (2.3)	Have fun/be sociable (70.5) Curiosity (20.5) Relief of psychological stress or health disorder (9.0)	Oral - drink (100.0)
Tranquilliser	23 (46.0)	24.04	6.91	Friends (91.3) Drug pusher (8.7)	Relief of psychological stress (27.3) Reaction of health disorder (22.7) Curiosity (18.2) Be sociable/have fun (18.2) Others (9.0) Enhance sex (4.6)	Oral - eat (100.0)
Barbiturates	6 (11.8)	23.0	10.14	Friends (83.3) Drug pusher (16.7)	Curiosity (50.0) Relief of psychological stress (33.3) Reaction of health disorder (16.7)	Oral - eat (100.0)
Methaqualone	4 (7.8)	20.50	6.14	Friends (100.0)	Be sociable/have fun (50.0) Curiosity (25.0) Reaction of health disorder (25.0)	Oral - eat (100.0)

TABLE 2.1 : DISTRIBUTION OF RESPONDENTS BY THEIR EVER DRUG-USE HISTORY (Continuation)

Type of drug ever used	Frequency (n) (%)	Age at first use (years)		Drug first introduced by	Main reasons for initiation	The major route of administration
		Mean	S.D.			
LSD	1 (2.0)	15.00		Friends (100.0)	Be sociable/have fun (100.0)	Oral (100.0)
Cannabis	40 (78.4)	19.15	5.09	Friends (97.5) Drug pusher (2.5)	Be sociable/have fun (55.0) Curiosity (25.0) To enhance sexual pleasure (12.5) Reaction of health disorder (5.0) Relief of psychological stress (2.5)	Oral/ -smoke (100.0)
Opium	26 (51.0)	23.54	5.52	Friends (100.0)	Be sociable/have fun (42.3) To enhance sexual pleasure (19.2) Others (19.2) Curiosity (7.8) Relief of psychological stress (11.5)	Oral - eat (42.3) - smoke (57.7)
Heroin	51 (100.0)	21.37	5.28	Friends (96.0) Drug pusher (2.0) Family member (2.0)	Be sociable/have fun (62.7) To enhance sexual pleasure (15.7) Relief of psycho-logical stress (15.7) Reaction of health disorder (3.9) Curiosity (2.0)	Oral smoke (14.0) Inject (14.0) Chase the dragon (72.0)
Morphine	9 (17.6)	24.89	6.29	Friends (100.0)	Be sociable/have fun (44.4) To enhance sexual pleasure (11.1) Relief of psycho-logical stress (11.1) others (33.3)	Inject (75.0) Chase the dragon (12.5) Smoke (12.5)

Friends was the major source that introduced the first use for all the types of drugs ever used. Except for barbiturates, more than 90% of the respondents were introduced to the use of each type of the drugs ever used by friends. The result indicates the strong influence of negative peer pressure to use drugs. A relatively small number of respondents were introduced to the use of barbiturates, tranquillisers, cannabis and heroin by drug pushers. Family member was found to be the source that introduced the use of alcohol (mainly through social drinking) and the use of heroin for a very small number of respondents.

Other than tranquillisers, the main reasons for initiation of use were to have fun/be sociable and curiosity. The main reasons for initiation of tranquillisers use were to relief psychological stress and for treatment of health disorder. For a small number of respondents, the main reason for initiation of use of cannabis, opium and heroin was to enhance sexual pleasure.

The major route of administration for the drugs ever used was surveyed. Tobacco, alcohol, tranquillisers, barbiturates, methaqualone, LSD, cannabis and opium were administered orally; either smoked, drunk or eaten by the respondents. A large number (72.0%) of the respondents "chased" heroin while some 14.0% injected and another 14.0% spiked. 75.0% of those who ever used morphine injected the drug into their bodies. Some 10.5% "chased" morphine while another 12.5% spiked.

4.2.2 DRUGS CURRENTLY USED

Table 2.2 reveals the types of drugs currently used, the frequency of use and the route of administration.

When the types of drugs used in the last 12 months (from the point of interview) were examined, majority (90.2%) of the respondents were smoking and 43.1% of them were using heroin. Some 23.5% were using alcohol while 15.7% were using cannabis. Only a very small number of them were using tranquillisers, opium and morphine. None of the respondents were found using barbiturates, methaqualone or LSD in the last 12 months.

To gain insight on the current drug use pattern, the types of drugs used in the last 30 days prior to the interview were surveyed. Out of the 51 respondents in the study, 35 (68.6%) were not using heroin in the last 30 days. Most of these respondents claimed to have given up the habit and were free from heroin use. For the other 16 who still used

TABLE 2.2: DISTRIBUTION OF RESPONDENTS BY THEIR CURRENT DRUG USE FREQUENCY AND ROUTE OF ADMINISTRATION

Types of drugs	Recent Use (in last 12 months)	Current Frequency (in last 30 days)					Route of Administration			
		No Use	Less than once weekly	Once to 3 times weekly	Once daily	2/3 times daily	4/5 times daily	Oral	Inject	Chase the dragon
Tobacco	46 (90.2)	9 (17.6)	-	1 (2.0)	-	7 (13.7)	34 (66.7)	42 (100.0)	-	-
Alcohol	12 (23.5)	41 (80.5)	2 (3.9)	2 (3.9)	2 (3.9)	2 (3.9)	2 (3.9)	10 (100.0)	-	-
Tranquilliser	5 (9.8)	48 (94.1)	2 (3.9)	-	1 (2.0)	-	-	3 (100.0)	-	-
Cannabis	8 (15.7)	47 (92.2)	1 (2.0)	1 (2.0)	2 (3.9)	-	-	4 (100.0)	-	-
Opium	4 (7.8)	51 (100.0)	-	-	-	-	-	-	-	-
Heroin	22 (43.1)	35 (68.6)	1 (2.0)	-	1 (2.0)	13 (25.5)	1 (2.0)	-	3 (18.8)	13 (81.2)
Morphine	1 (2.0)	51 (100.0)	-	-	-	-	-	-	-	-

heroin, 13 of them were using it at the frequency of two to three times a day, one at four to five times a day, another one at once daily and the last one at the frequency of less than once weekly. Currently, chasing the dragon is still the most common route of administration for heroin. 13 out of the 16 respondents (81.2%) who used heroin in the last 30 days chased heroin while the remainder 3 (18.8%) injected.

None of the respondents were found using opium or morphine in the last 30 days. However, a small number of them were using tranquillisers and/or cannabis. Out of the 3 respondents who used tranquillisers currently, 2 used them less than once weekly while the other once daily. Tranquillisers were taken orally by these respondents. Four respondents smoked cannabis in the last 30 days with 2 of them used once daily, 1 one to three times weekly and another one less than once in a week.

Tobacco smoking was common in the last 30 days with 42 (82.4%) of the respondents found smoking cigarettes currently. Most of them (81.0%) who used tobacco smoked four-to-five times daily while another 16.7% smoked two-to-three times a day. There was one respondent who smoked one-to-three times weekly.

Compared to tobacco, alcohol was less commonly used by these respondents. Ten (19.6%) respondents were found drinking alcohol in the last 30 days with a wide range of frequency of use. Two drank less than once weekly, 2 one-to-three times weekly, 2 once daily, 2 two-to-three times a day and another 2 drank four-to-five times daily.

4.2.3 PRIMARY DRUG CAREER

To study the drug use pattern of the respondents in greater details, an investigation into the primary drug career was carried out.

Table 2.3 summarizes the findings on the primary drug career. For all the respondents surveyed, the primary drug used in the last 10 years or more was heroin.

TABLE 2.3 : PRIMARY DRUG CAREER

Types of drug	Age at first use (years)		Age at regular use (years)		Age when first contacted by police after regular use (years)		Route of administration		Frequency during regular drug use		Drug used in combination	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	(%)	(%)	(%)	(%)	(%)	(%)
Heroin	21.39	5.27	22.33	5.14	25.27	5.56	Smoke (6.0) Inject (20.0)	Once daily (2.0) 2/3 times Daily (60.0)	Tobacco (58.8) Tranquillisers (15.7) Barbiturates (3.9) Alcohol (2.0)			

The average age at first use was 21.39 years with a standard deviation of 5.27 years indicating that some respondents started use of heroin as early as in their mid-teens. To further examine this phenomenon, the distribution of the respondents by their age at first use of heroin is presented in Table 2.4. 7 (13.7%) respondents initiated use of heroin at the age of 15 years and below while 18 (35.3%) of them at the age between 16 and 20 years. The results reveal that half of the respondents initiated their first use before becoming an adult or during their adolescence. Some 31.4% started their first use between 21 and 25 years old while 7 (13.7%) between 26 and 30 years old. These results indicate that a large number (45.1%) started their first use in early adulthood, that is in their twenties. Only 3 (5.9%) respondents initiated heroin use at the age of 31 years and above.

TABLE 2.4: DISTRIBUTION OF RESPONDENTS BY THEIR AGE AT FIRST USE FOR PRIMARY DRUG

Age at first use (years)	Frequency (n)	Percentage (%)
15 and below	7	13.7
16 - 20	18	35.3
21 - 25	16	31.4
26 - 30	7	13.7
31 and above	3	5.9
Total	51	100.0

As indicated in Table 2.3, on average, it is about a year after initiating heroin use that the respondents became chronically addicted and began their use at least once daily. The average age at first use was 21.39 years while the average age at regular use was 22.33 years. The standard deviation for the average age at regular use was 5.14 years and it is very close to that for the average age at first use. Probably this indicates that those respondents who started first use earlier might have become chronically addicted earlier, and similarly for those who started later, giving an average of about a year between the age at first use and the age at regular use.

The indepth survey on this phenomenon shows that the earlier suggestion was true. The breakdown of the respondents by their age at regular use is presented in Table 2.5. Most of them (70.6%) began their regular use of heroin at the age between 16 and 25 years. Nine (17.6%) began at the age between 26 and 30 years while only three (5.9%) began at the age of 31 years and above. There were 3 (5.9%) who became chronically addicted and began their regular use at the age as early as 15 years and below.

For the primary drug used by the respondents, the most common route of administration was by the method "chase the dragon" used by 74.0% of the respondents. 20.0% of them employed the method of intravenous injection while 6.0% spiked the heroin with tobacco (please refer to Table 2.3).

A large number (60.0%) of the respondents used heroin at the frequency of two-to-three times a day while some 38.0% used four-or-more times daily during the period of regular use. Only one of them (2.0%) used once daily during regular use. The types of drugs used in combination with heroin were surveyed.

TABLE 2.5 : DISTRIBUTION OF RESPONDENTS BY THEIR AGE STARTED REGULAR USE FOR PRIMARY DRUG

Age started regular use (years)	Frequency (n)	Percentage (%)
15 and below	3	5.9
16 - 20	17	33.3
21 - 25	19	37.3
26 - 30	9	17.6
31 and above	3	5.9
Total	51	100.0

The age when the respondents were first contacted by police after regular use was surveyed. The intention was to find out for how long the respondents were chronically addicted in the community before being arrested by the police.

As indicated in Table 2.3, the average age when the respondents were contacted by police after regular use was 25.27 years. On average, it is after about 3 years of regular use of heroin that the respondents were contacted by the police. The standard deviation of 5.56 years for the average age at first police contact indicates that there were some respondents who were contacted by police in their late teens while others in their early thirties. The detail breakdown of the respondents by age at first police contact could be referred to in Table 2.6.

TABLE 2.6 : DISTRIBUTION OF RESPONDENTS BY THEIR AGE FIRST CONTACTED BY POLICE FOR REGULAR DRUG USE

Age contacted use (years)	Frequency (n)	Percentage (%)
20 and below	10	19.6
21 - 25	21	41.2
26 - 30	9	17.6
31 - 35	8	15.7
36 and above	3	5.9
Total	51	100.0

4.3 ADDICTION HISTORY OVER THE FIRST TEN YEARS OF ADDICTION

The results on the study on the addiction history of the addicts over the first ten years of addiction are reported here. In examining the life history of addicts over relatively long periods of time retrospectively, it is possible to study many aspects of their social adjustment after becoming addicts. In this study, however, the aspects of the addicts' history which are of particular interest are their involvement in illegal activities, institutionalization, legitimate employment and voluntary abstinence. Data on such events as involvement in illegal activities, drug-related crimes and institutionalization indicate the degree to which an addict has become a more or less permanent problem to society and the extent to which he is a continuing problem to his society. On the other hand, the information on his voluntary abstinence and legitimate employment provide inferences concerning his acceptable social adjustment and possible return to drug free behaviour.

4.3.1 ADDICT CAREER PROFILES

For the purpose of examining the addict careers, the amount of time in the 10 years under survey devoted to the events of particular interest in this study is estimated for each of the addicts contacted for interview. Specifically, the addicts were asked the number of times ever hospitalised, treated in treatment centre, voluntarily abstained from drug use and incarcerated, and how long was the period of each of these events occurred during the first ten years of addiction.

The allocation of time to voluntary abstinence, hospitalization, treatment and incarceration of the addicts characterised their careers in the 10 years under survey. The amount of time devoted to voluntary abstinence is the amount of time spent in the community but not addicted to drugs. The amount of time allocated to hospitalization, treatment and incarceration is the amount of time spent in hospital, in treatment centre and in prison respectively.

4.3.2 PERIOD OF ADDICTION IN COMMUNITY

In this section, the focus is on the general pattern of addiction for the respondents in this study. The amount of time devoted to addiction, the number of times addicted and the average duration for period of addiction were examined.

TABLE 3.1 : DISTRIBUTION OF RESPONDENTS BY AMOUNT OF TIME DEVOTED TO ADDICTION, NUMBER OF TIMES ADDICTED AND AVERAGE DURATION FOR PERIOD OF ADDICTION

	Frequency (n)	Percentage (%)
<u>Amount of time devoted to Addiction (Years)</u>		
Less than 3.00	3	5.9
3.00 - 4.99	3	5.9
5.00 - 6.99	10	19.6
7.00 - 8.99	23	45.1
9.00 - 10.00	12	23.5
Mean :	7.45	
S.D. :	2.02	
<u>Number of Times Addicted</u>		
1	3	5.9
2	13	25.5
3	16	31.4
4	15	29.4
5	2	3.9
6	2	3.9
Mean :	3.12	
S.D. :	1.13	
<u>Average Duration for period of addiction (Years)</u>		
Less than 1	2	3.9
1.00 - 1.99	15	29.4
2.00 - 2.99	15	29.4
3.00 - 3.99	9	17.7
4.00 - 4.99	7	13.7
5.00 and above	3	5.9
Mean :	2.86	
S.D. :	1.73	

Table 3.1 reveals the distribution of the respondents by amount of time devoted to addiction during the first ten years of addiction, the number of times addicted and the average duration for period of addiction. On average, the amount of time devoted to addiction is 7.45 years. This shows that generally out of the ten years under survey, the respondents spent 74.5% of these ten years addicted to heroin in the community. A more detailed breakdown on the amount of time devoted to addiction shows that only 6 (11.8%) respondents spent less than 5 years addicted while 19.6% were addicted for five to seven years. A larger number of them (45.1%) spent between 7 to 9 years addicted to heroin use and about a quarter (23.5%) were addicted for a very long period of 9 to 10 years.

Most of the respondents have two (25.5%), three (31.4%) or four (29.4%) separate periods of addiction during the first ten years of addiction. The average number of times addicted was 3.12. Only 3 (5.9%) have one period of addiction in the ten years while another 4 (7.8%) have more than 4 separate periods of addiction (Please refer to Table 3.1).

The general average duration for period of addiction was 2.86 years (See Table 3.1). A larger number (58.8%) of the respondents have an average duration of 1.00 to 2.99 years. 17.7% have average duration of 3.00 to 3.99 years while 13.7% have an average duration of 4.00 to 4.99 years. Only 3.9% have an average duration for addiction of less than one year, and on the other hand, 5.9% have an average duration of 5 years or more.

4.3.3 PERIOD OF NON-ADDICTION IN INSTITUTION

The period of non-addiction in institution refers to the period of time when the respondents were forced to abstain from drug-use while they were in prison, treatment centre or hospital. Hence, the study on the period of non-addiction in institutions includes the amount of time spent non-addicted in the institution in the first ten years of addiction, the number of times institutionalised and the average duration for the institutionalization.

Table 3.2 reveals the distribution of respondents by total amount of time spent incarcerated, number of times incarcerated and average duration of incarceration. About half (49.0%) of the respondents spent one to 2.99 years in the prison. 15.7% of them spent 3 years or more in prison while 35.3% of them spent less than a year in prison in the first ten years under survey. The average amount of time spent incarcerated in prison for these respondents was 1.96 years with a standard deviation of 2.03 years.

TABLE 3.2 : DISTRIBUTION OF RESPONDENTS BY AMOUNT OF TIME SPENT INCARCERATED, NUMBER OF TIMES INCARCERATED AND AVERAGE DURATION FOR PERIOD OF INCARCERATION

	Frequency (n)	Percentage (%)
<u>Amount of time Spent Incarcerated</u>		
Less than 0.50	8	15.7
0.50 - 0.99	10	19.6
1.00 - 1.99	12	23.5
2.00 - 2.99	13	25.5
3.00 - 3.99	1	2.0
4.00 - 4.99	6	11.7
5 and more	1	2.0
Mean : 1.96		
S.D. : 2.03		
<u>Number of times</u>		
0	4	7.9
1	16	31.4
2	17	33.3
3	7	13.7
4	5	9.8
5	2	3.9
Mean : 1.98		
S.D. : 1.23		
<u>Average duration for period of Incarceration (mths)</u>		
Less than 4.0	7	13.7
4.00 - 5.99	6	11.8
6.00 - 8.99	10	19.6
9.00 - 11.99	10	19.6
12.00 - 17.99	13	25.5
18 and above	5	9.8
Mean : 9.90		
S.D. : 7.78		

The number of times incarcerated was surveyed and as indicated in Table 3.2. The results show that a large number (64.7%) of the respondents were incarcerated once or twice. 13.7% of them were incarcerated three times while 11.8% were incarcerated four or five times. However, there were 4 (7.8%) respondents who were never incarcerated in the period of study interest. On average, the number of times incarcerated was 1.98.

The general average duration for period of incarceration was found to be 9.90 months. A high standard deviation of 7.78 indicates a great variation in the average duration for period of incarceration and thus the mean might not show a good general pattern for the whole group. More than one third (39.2%) of the respondents have an average duration of 6 months to one year while about a quarter (25.5%) have an average duration of incarceration of one to one and a half years. Only five (9.8%) of the respondents have an average duration of one and a half years or more, and on the other hand 25.5% have an average duration of less than half a year (Please refer to Table 3.2).

The results of the survey on the period of non-addiction in treatment centre are summarised in Table 3.3.

As indicated in Table 3.3, the average amount of time spent in treatment for drug addiction was 1.56 months (mean). The mean might not be a good average since the standard deviation is extremely high at 6.61 months. More than three-quarters (76.4%) of the respondents had never undergone any treatment in the ten years. Among those who sought treatment, 7 of them spent less than 3 months in treatment, one spent 3.0 - 5.9 months, two spent 6.0 - 11.9 months, another one spent 12.0 - 23.9 months and there was one who spent three to four years in treatment.

In studying the number of times treated, majority of the respondents (76.5%) were found to have never undergone treatment. Nine of them (17.6%) had undergone treatment once while 3 of them (5.9) treated twice (Please refer to Table 3.3).

Out of those respondents who had undergone treatment in the first ten years of addiction, seven of them (58.3%) have average duration for period of treatment of less than 3 months. Three of them (25.0%) have average treatment period of 6 months to a year. One of them (8.3%) have average period of treatment 3 months to half a year while another one a year to two years (Please refer to Table 3.3).

TABLE 3.3 : DISTRIBUTION OF RESPONDENTS BY AMOUNT OF TIME SPENT IN TREATMENT, NUMBER OF TIMES TREATED AND AVERAGE DURATION FOR PERIOD OF TREATMENT

	Frequency(n)	Percentage (%)
<u>Amount of time spent in treatment</u>		
0	39	76.4
Less than 3.0	7	13.7
3.0 - 5.9	1	2.0
6.0 - 11.9	2	3.9
12.0 - 23.9	1	2.0
24.0 - 35.9	0	0.0
36.0 - 47.9	1	2.0
Mean :	1.56	
S.D. :	6.61	
<u>Number of times Treated</u>		
0	39	76.5
1	9	17.6
2	3	5.9
Mean :	0.29	
S.D. :	0.57	
<u>Average duration for period of treatment</u>		
0	39	76.4
Less than 3	7	13.7
3.0 - 5.9	1	2.0
6.0 - 11.9	3	5.9
12.0 - 23.9	1	2.0
Mean :	0.97	
S.D. :	3.44	

Table 3.4 summarizes the results of the study on the period of non-addiction in hospital. A large number of the respondents (60.8%) had never been hospitalised in the ten years of study interest. 27.5% of them were hospitalised for two weeks or less. Only 2 (3.9%) spent 15 to 30 days hospitalised while 4 (7.8%) spent more than one month hospitalised. The mean for amount of time spent hospitalised is 7.12 days while the mode is 0 day.

Since a large number (60.8%) of the respondents had never been hospitalised, these respondents reports "0" number of times hospitalised in Table 3.4. 27.4% of the respondents were hospitalised once while the other 11.8% were hospitalised twice in the ten years of study interest. The average number of times hospitalised is 0.53 (mean) and the mode is 0.

Out of those respondents who had ever been hospitalised, 10 (50.0%) of them have average duration of a week or less for each period of hospitalization while another 6 (30.0%) have an average duration of one to two weeks. Three (15.0%) have an average duration of two weeks to one month for each period of hospitalization while only 1(5.0%) have average duration of more than a month. The general average duration for period of hospitalization of these respondents was 5.42 days (mean) and the mode is 0 day.

4.3.4 PERIOD OF NON-ADDICTION IN THE COMMUNITY (VOLUNTARY ABSTINENCE)

In this section, the results of the study on the period of non-addiction in the community are presented. Non-addiction in the community refers to the time periods where the respondents had abstained from drug use on their own willingness after using drug regularly. In other words, these time periods could be referred to as the period of voluntary abstinence. For all the respondents in the study, the amount of time devoted to voluntary abstinence, the number of times voluntarily abstaining from drug use and the average duration for each period of voluntary abstinence were enquired.

Table 3.5 reveals the distribution of respondents by the characteristics of voluntary abstinence. With reference to the duration of voluntary abstinence the data show that a large number (68.6%) of the respondents had never abstained from drug use voluntarily in their first ten years of addiction. Six of them (11.8%) abstained from drug use for less than half a year while 4 (7.8%) of them abstained for one to three years.

Only 2 (3.9%) abstained voluntarily for 5 years and more while the remaining 4 (7.8%) abstained for three to five years. The average amount of time devoted to voluntary abstinence was 0.64 years (mean) and the mode is 0 year.

Out of the 16 respondents who had ever abstained voluntarily from drug use, 14 (87.5%) of them abstained once, while 2 (12.5%) abstained twice in the 10 years under survey (Please refer to Table 3.5). The average number of times abstained from drug use for the respondents was 0.35 times (mean) and the mode is 0 time.

Since most of the respondents who had ever abstained voluntarily from drug use abstained once in ten years, the patterns of distribution for period of voluntary abstinence was the same as the patterns of distribution by amount of time devoted to voluntary abstinence (Please refer to Table 3.5).

TABLE 3.4 : DISTRIBUTION OF RESPONDENTS BY TOTAL AMOUNT OF TIME HOSPITALISED, NUMBER OF TIMES HOSPITALISED AND AVERAGE DURATION FOR PERIOD OF HOSPITALIZATION

	Frequency (n)	Percentage (%)
<u>Average time spent hospitalised</u>		
0	31	60.8
1 - 7	8	15.7
8 - 14	6	11.8
15 - 30	2	3.9
More than 30	4	7.8
Mean : 7.12		
S.D. : 13.91		
Mode : 0		
<u>Average time of times Hospitalised</u>		
0	31	60.8
1	14	27.4
2	6	11.8
Mean : 0.53		
S.D. : 0.69		
Mode : 0		
<u>Average duration for Period of Hospitalization</u>		
0	31	60.8
1 - 7	10	19.6
8 - 14	6	11.7
15 - 30	3	5.9
More than 30	1	2.0
Mean : 5.42		
S.D. : 10.65		
Mode : 0		

TABLE 3.5 : DISTRIBUTION OF RESPONDENTS BY AMOUNT OF TIME DEVOTED TO VOLUNTARY ABSTINENCE, NUMBER OF TIMES ABSTAINED FROM DRUG USE, AND AVERAGE DURATION OF VOLUNTARY ABSTINENCE

	Frequency (n)	Percentage (%)
<u>Amount of time devoted to voluntary abstinence</u>		
0	25	68.6
Less than 0.50	6	11.8
0.50 - 0.99	0	0.0
1.00 - 1.99	2	3.9
2.00 - 2.99	2	3.9
3.00 - 3.99	2	3.9
4.00 - 4.99	2	3.9
5.00 and more	2	3.9
Mean : 0.64		
S.D. : 1.41		
Mode : 0		
<u>Number of Times Abstained from Drug Use</u>		
0	35	68.6
1	14	27.5
2	2	3.9
Mean : 0.35		
S.D. : 0.55		
Mode : 0		
<u>Average duration for Period of Voluntary Abstinence</u>		
0	35	68.6
Less than 0.50	6	11.8
0.50 - 0.99	0	0.0
1.00 - 1.99	2	3.9
2.00 - 2.99	2	3.9
3.00 - 3.99	2	3.9
4.00 - 4.99	2	3.9
5.00 and more	2	3.9
Mean : 0.64		
S.D. : 1.61		
Mode : 0		

4.4 TYPOLOGY FOR ADDICT CAREER

In the last section, individual profiles of the addicts interviewed in this study are presented. The involvement of these addicts in addiction over the first decade of their drug use were documented. The amount of time stayed voluntarily abstained from drugs were also reported. In addition, the amount of time spent on incarceration, treatment and hospitalisation were also surveyed. Results presented in Tables 3.1 to 3.5 show great variations in the degree of involvement in addiction, voluntary abstinence, incarceration, treatment and hospitalisation for these addicts. The addicts are indeed very heterogenous along these dimensions.

4.4.1 THE PRESENT TYPOLOGY

In this section, a typology for classifying the addicts according to their careers in the first decade of addiction is proposed. Even though a period of ten years is a span of experience sufficiently long for characterisation of addicts with different addiction pattern, it should be recognized that the picture is not complete since in theory, an addict career once begun is not over until the addict dies.

The present typology of addict careers is built upon the concepts of the degree to which drug-taking is the central life interest and the willingness to abstain from drug voluntarily. In this regard, the classification approach for this typology is based on the degree of involvement of the addicts in heroin addiction and their degree of abstinence from drug over first ten years of addiction. Specifically, the typology takes into account the amount of time spent in each of the following status:-

- a. Addicted in the community;
- b. In the community and not addicted (voluntary abstinence);
- c. Incarcerated/Hospitalised/In treatment (involuntary abstinence).

The amount of time spent addicted in the community indicates the degree of involvement in addiction and the extent to which drug-taking was invested as a central life interest. In this dimension, the degree of involvement is measured by proportion of time, out of the first ten years of addiction during which the addict were using heroin regularly (at least once daily) in the community. For classifying the addicts along this dimension, four

categories were proposed: low involvement, medium involvement, high involvement and very high involvement. Low involvement denotes the involvement in drug use for less than 50% of the first ten years career while medium involvement denotes 50%-75% involvement in addiction. High involvement denotes 75% - 87.5% involvement and very high involvement denotes the involvement in drug use for more than 87.5% of the first decade of addiction.

After knowing the degree of involvement of the addicts in addiction in the community, the next thing is to find out the drug-taking behaviour of the addicts during the period of non-involvement in addiction. In addiction theory, the period of non-involvement in addiction in an addict career is termed as abstinence from drug use.

The second dimension for classification in this typology is the abstinence from drug use. Two types of abstinence are proposed here : voluntary abstinence and involuntary (forced) abstinence. Voluntary abstinence refers to the event where the addict stops using drug on his own will in the community eventhough drug is available and the opportunity for drug taking exists. The amount of time devoted to voluntary abstinence indicates the degree of willingness to abstain from drugs voluntarily. The involuntary abstinence refers to the event where the subject is forced to stop using drugs due to incarceration, hospitalization or treatment and where drugs are not available. Treatment is considered as forced or involuntary abstinence in this dimension due to the fact that all the addicts in this study relapsed shortly after treatment indicating unwillingness to stay drug free. Therefore, the type of abstinence while in treatment is considered as involuntary abstinence.

The consideration of the second dimension in the classification of the addicts by this typology is explained in the method of classifying the addicts using the present typology as follows. To classify the addicts using the present typology, firstly, the degree of involvement in addiction for each of the addicts is determined. This will give rise to four categories of addicts with different degree of involvement. Next, for categories : low involvement, medium involvement and high involvement, the type of abstinence (either voluntary or involuntary abstinence) practiced by the addict which dominates the whole abstinence period is referred as high abstinence. Each of these categories is then sub-divided into two categories of high voluntary abstinence/low involuntary abstinence and low voluntary abstinence/high involuntary

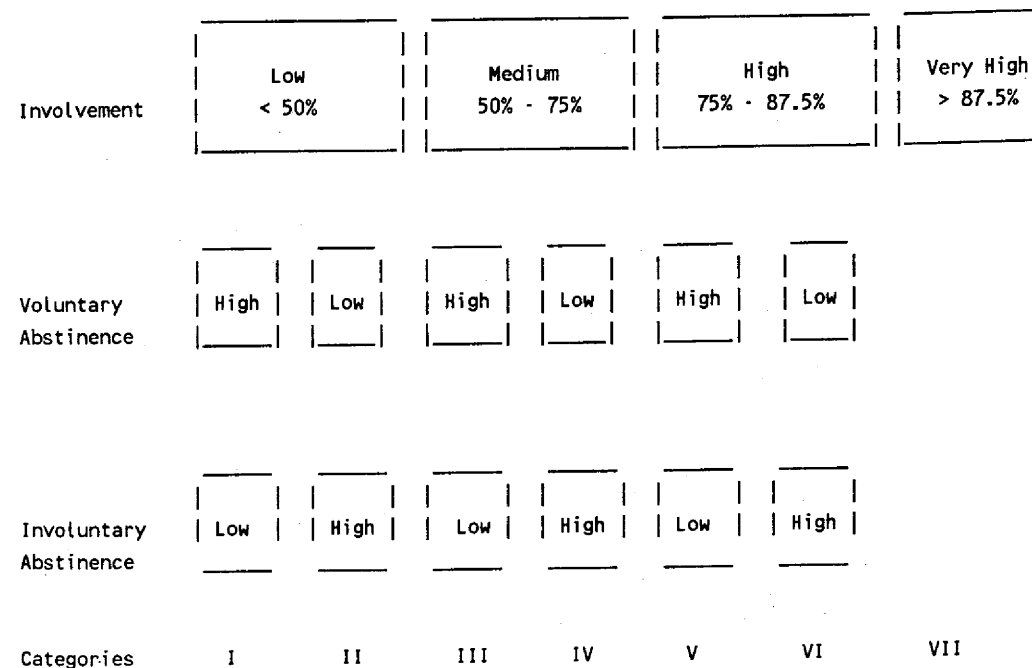
abstinence. For the very high involvement category, no attempt was made to decide which type of abstinence dominates the whole abstinence period since practically the amount of time devoted to abstinence is very short and insignificant in this typology. The above method of classification will give rise to seven categories of addicts as shown in Figure 1.

The typology proposed is applied on the 51 addicts in this study. The distribution of addicts by category is presented in Table 4.1.

TABLE 4.1 : DISTRIBUTION OF RESPONDENTS BY CATEGORY

Categories	Frequency (n)	Percentage (%)
I	3	5.9
II	4	7.8
III	3	5.9
IV	7	13.7
V	0	0
VI	19	37.3
VII	15	29.4
Total	51	100.0

FIGURE 1
TYPOLOGY OF ADDICT CAREERS



As indicated in Table 4.1, a majority of the addicts (66.7%) were categorised in the high/very high involvement in addiction. None of the addict falls into category V. All the addicts who devoted 75% to 87.5% of the first ten years of career had never abstained from drugs voluntarily. Their abstinence was involuntarily and mainly due to incarceration.

Clearly, application of the concepts on which the typology was built to the data of the present study yield six clearly distinguishable types of addicts.

- a. Type I (in Category I; n = 3)
Low Involvement with narcotic drugs as demonstrated by regular use for less than 5 years of the time period studied.

High Voluntary Abstinence and Low Involuntary Abstinence displayed by the fact that the voluntary abstinence dominates in the period of abstinence.
- b. Type II (in Category II; n = 4)
Low Involvement

Low Voluntary Abstinence and High Involuntary Abstinence demonstrated by the fact that the involuntary abstinence dominates in the period of abstinence.
- c. Type III (in Category III; n = 3)
Medium Involvement demonstrated by regular drug use of narcotic drugs for 5 to 7 1/2 years.

High Voluntary Abstinence and Low Involuntary Abstinence.
- d. Type IV (in Category IV; n = 7)
Medium Involvement

Low Voluntary Abstinence and High Involuntary Abstinence.
- e. Type V (in Category VI; n = 19)
High Involvement displayed by regular use of narcotics for 7.5 years to 8.75 years.

Low Voluntary Abstinence and High Involuntary Abstinence.
- f. Type VI (in Category VII; n = 15)
Very High Involvement demonstrates by regular use of narcotic drugs for more than 8.75 years.

4.4.2 THE TYPOLOGICAL CHARACTERISTICS OF DIFFERENT TYPES OF ADDICTS

In the last section, brief descriptions was given for each of the six types of addicts categorised by the proposed typology. In order to have a better understanding on the characteristics of these different types of addicts, indepth examination was executed on each of the following status:-

- a. Addicted in the community;
- b. In the community and not addicted (voluntary abstinence);
- c. Incarcerated, Hospitalised and In treatment (involuntary abstinence).

For each of the above status, the amount of time devoted to the number of times involved and the average period of involvement were surveyed for each of the six types of addicts and the results are presented in Table 4.2 to Table 4.16.

- a. Addiction

Table 4.2 reveals the amount of time devoted to addiction by type.

TABLE 4.2 : AMOUNT OF TIME DEVOTED TO ADDICTION BY TYPE

Amount of time devoted (years)	ALL Types (N = 51)		Type I (N = 3)		Type II (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 15)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Less than 3	3	5.9	2	66.7	1	25.0	0	0.0	0	0.0	0	0.0	0	0.0
3.00 - 4.99	3	5.9	1	33.3	2	50.0	0	0.0	0	0.0	0	0.0	0	0.0
5.00 - 6.99	10	19.6	0	0.0	1	25.0	3	100.0	6	85.7	0	0.0	0	0.0
7.00 - 8.99	23	45.1	0	0.0	0	0.0	0	0.0	1	14.3	19	100.0	3	20.0
9.00 - 10.00	12	23.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	12	80.0
(Mean) [S.D.]	(7.45)	[2.02]	(2.94)	[1.35]	(4.21)	[1.00]	(5.81)	[0.42]	(5.96)	[0.57]	(8.18)	[0.38]	(9.33)	[0.43]

Relatively, Type I has lowest average (2.94 years) on the amount of time devoted to addiction. Type II has the average at 4.21 years while the average amount of time devoted to addiction for Type III and Type IV were quite close at 5.81 years and 5.96 years respectively.

Type V, on average, spent 8.18 years addicted to narcotics during their first ten years of career. Type VI spent more than 90% (9.33 years) of their career first decade on addiction indicating extremely high involvement.

Table 4.3 reveals the number of times addicted by type. The number of times for the different types of addicts addicted to drug use in the community was quite similar during the first ten years of addiction. On average, irrespective of type, the addicts addicted to drug use for three times in the period of time surveyed.

The average duration for period of addiction by type is presented in Table 4.4. The average duration for period of addiction is shortest for Type I (1.19 years) and the longest (4.18 years) for Type VI. The average duration for Type II, Type III, Type IV and Type V are quite close ranging from 2.07 years to 2.56 years.

Table 4.5 reveals the amount of time spent incarcerated by type. Type II spent the longest time incarcerated (5.00 years). Since it comprised of addicts with low involvement in addiction but high involuntary abstinence. Type VI spent the shortest time incarcerated (0.51 year) since most of the time was devoted to addiction by these addicts. Type III spent less than a year (0.78 year) incarcerated while Type IV, with high involuntary abstinence spent 3.18 years incarcerated.

Type I and Type V spent roughly two years in prison for their first ten years of career.

Number of times incarcerated by type is presented in Table 4.6. On average, Type II addicts were incarcerated for 4.25 times over the ten years. Type III (with medium involvement in addiction and low involuntary abstinence) and Type VI (with very high involvement) were incarcerated once on average. Generally, addicts from Type I, Type IV and Type V were incarcerated twice and slightly more.

As indicated in Table 4.7 the average duration for period of incarceration for Type IV (18.10 months) is higher than that for Type II (14.63 months) even though, the addicts from Type IV were with medium involvement and high involuntary abstinence while Type II addicts were with low involvement and high involuntary abstinence. This is due to the greater number of times incarcerated for Type II compared to that for Type IV.

TABLE 4.3 : NUMBER OF TIMES ADDICTED BY TYPE

Number of times	All Types (N = 51)		Type I (N = 3)		Type II (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 11)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
1	3	5.9	0	0.0	1	25.0	0	0.0	0	0.0	0	0.0	2	18.2
2	13	25.5	1	33.3	1	25.0	2	66.7	2	28.6	3	15.8	4	36.4
3	16	31.4	1	33.3	0	0.0	0	0.0	2	28.6	7	36.8	2	18.2
4	15	29.4	1	33.3	1	25.0	1	33.3	3	42.8	7	36.8	2	18.2
5	2	3.9	0	0.0	1	25.0	0	0.0	0	0.0	1	5.3	0	0.0
6	2	3.9	0	0.0	0	0.0	0	0.0	0	0.0	1	5.3	1	9.0
(Mean) [S.D.]	(3.12)	[1.13]	(3.0)	[0.82]	(3.0)	[1.58]	(2.67)	[0.94]	(3.14)	[0.83]	(3.47)	[0.99]	(2.80)	[1.22]

TABLE 4.4 : AVERAGE DURATION FOR PERIOD OF ADDICTION BY TYPE

Average duration (yrs)	All Types (N = 51)		Type I (N = 3)		Type II (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 15)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Less than 1	2	3.9	2	66.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
1.00 - 1.99	15	29.4	0	0.0	3	75.0	1	33.3	4	57.1	6	31.6	1	6.7
2.00 - 2.99	15	29.4	1	33.3	0	0.0	1	33.3	1	14.3	10	52.6	2	13.3
3.00 - 3.99	9	17.7	0	0.0	0	0.0	1	33.3	2	28.6	0	0.0	6	40.0
4.00 - 4.99	7	13.7	0	0.0	0	0.0	0	0.0	0	0.0	3	15.8	4	26.7
5.00 and above	3	5.9	0	0.0	1	25.0	0	0.0	0	0.0	0	0.0	2	13.3
(Mean) [S.D.]	(2.86)	[1.73]	(1.19)	[0.87]	(2.24)	[1.60]	(2.47)	[0.82]	(2.07)	[0.67]	(2.56)	[0.77]	(4.18)	[2.32]

b. Incarceration

TABLE 4.5 : AMOUNT OF TIME SPENT INCARCERATED BY TYPE

Amount of time spent (years)	All Types (N = 51)		Type I (N = 3)		Type II (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 15)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Less than 0.50	8	15.7	1	33.3	0	0.0	0	0.0	0	0.0	0	0.0	7	46.6
0.50 - 0.99	10	19.6	0	0.0	0	0.0	2	66.7	1	14.3	3	15.8	4	26.7
1.00 - 1.99	12	23.5	0	0.0	0	0.0	1	33.3	0	0.0	7	36.8	4	26.7
2.00 - 2.99	13	25.5	1	33.3	1	25.0	0	0.0	2	28.6	9	47.4	0	0.0
3.00 - 3.99	1	2.0	1	33.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
4.00 - 4.99	6	11.7	0	0.0	2	50.0	0	0.0	4	57.1	0	0.0	0	0.0
5 and more	1	2.0	0	0.0	1	25.0	0	0.0	0	0.0	0	0.0	0	0.0
(Mean) [S.D.]	(1.96)	[2.03]	(2.06)	[1.47]	(5.00)	[0.51]	(0.78)	[0.24]	(3.18)	[1.19]	(2.18)	[2.37]	(0.51)	[0.43]

Relatively, Type VI and Type III have shorter average duration for period incarceration (4.71 months and 7.17 months respectively). Type V has an average duration 10.56 months while Type I has an average duration of 8.92 months.

Table 4.8 reveals the amount of time spent in treatment by type. Generally, the amount of time spent in treatment for addicts of all types were very little (1.56 months). Eventhough an average of 6.62 months is reported by Type IV addicts, the very high standard deviation at 16.08 months indicates that the mean may not be a good average. The mode maybe a better average to refer to.

Due to the very small amount of time spent in treatment, the number of times treated is found to be very negligible. As indicated in Table 4.9, addicts from Type I and Type II had never been in treatment before, while the average number of times treated for Type V and Type III were 0.26 and 0.33 respectively. Type IV and Type VI on average were treated 0.43 and 0.40 times respectively.

As indicated in Table 4.10, the average duration for period of treatment was less than a month for all the addicts of different types. For Type IV addicts, a better average for the average duration for period of treatment is the mode taking into consideration the very high standard deviation for the mean.

Table 4.11 reveals the amount of time spent hospitalised by type. Eventhough the amount of time spent hospitalised for addicts of different types was very little, the incidence of hospitalization is more common than the treatment among different types of addict. Every addict type was found to have addicts with incidence of hospitalisation. On average, Type I, Type VI and Type V had spent 10.0 days, 9.90 days and 8.42 days in the hospitals during first decade of their career respectively. Comparatively, Type II, Type III and Type IV had spent less time in the hospitals with average amount of time spent of 1.75 days, 2.33 days and 1.71 days respectively.

The number of times hospitalised by type is presented in Table 4.12. On average Type I hospitalised once while Type III and Type VI were hospitalised for 0.67 times and 0.60 times on average respectively. Type V hospitalised 0.53 times while Type II and Type IV hospitalised for only 0.25 and 0.29 times respectively.

TABLE 4.6 : NUMBER OF TIMES INCARCERATED BY TYPE

Number of Times	All Types (N = 51)		Type I (N = 3)		Type II (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 15)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
0	4	7.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	26.7
1	16	31.4	1	33.3	0	0.0	2	66.7	2	28.6	3	15.8	8	53.3
2	17	33.3	1	33.3	0	0.0	1	33.3	1	14.2	12	63.2	2	13.3
3	7	13.7	0	0.0	1	25.0	0	0.0	2	28.6	3	15.8	1	6.7
4	5	9.8	1	33.3	1	25.0	0	0.0	2	28.6	1	5.2	0	0.0
5	2	3.9	0	0.0	2	50.0	0	0.0	0	0.0	0	0.0	0	0.0
(Mean) [S.D.]	(1.98)	[1.23] (2.33)	[1.25] (4.25)	[0.83] (1.33)	[0.47] (2.57)	[1.18] (2.11)	[0.72] (1.00)	[0.82]						

TABLE 4.7 : AVERAGE DURATION FOR PERIOD OF INCARCERATION BY TYPE

Average duration(mths)	All Types (N = 51)		Type I (N = 3)		Type II (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 15)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Less than 4.0	7	13.7	1	33.3	0	0.0	0	0.0	0	0.0	1	5.3	5	33.3
4.00 - 5.99	6	11.8	0	0.0	0	0.0	0	0.0	0	0.0	2	10.5	4	26.7
6.00 - 8.99	10	19.6	0	0.0	0	0.0	2	66.7	0	0.0	5	26.3	3	20.0
9.00 - 11.99	10	19.6	1	33.3	0	0.0	1	33.3	3	42.8	4	21.1	1	6.7
12.00 - 17.99	13	25.5	1	33.3	3	75.0	0	0.0	2	28.6	5	26.3	2	13.3
18 and above	5	9.8	0	0.0	1	25.0	0	0.0	2	28.6	2	10.5	0	0.0
(Mean) [S.D.]	(9.90)	[7.78] (8.92)	[4.98] (14.63)	[3.11] (7.17)	[1.31] (18.10)	[12.07] (10.56)	[5.32] (4.71)	[3.96]						

c. Treatment

TABLE 4.8 : AMOUNT OF TIME SPENT IN TREATMENT BY TYPE

Amount of time spent (months)	All Types (N = 51)		Type I (N = 3)		Type II (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 15)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
0	39	76.4	3	100.0	4	100.0	2	66.7	5	71.4	14	73.7	11	73.3
Less than 3	7	13.7	0	0.0	0	0.0	0	0.0	1	14.3	4	21.0	2	13.3
3 - 5.9	1	2.0	0	0.0	0	0.0	1	33.3	0	0.0	0	0.0	0	0.0
6 - 11.9	2	3.9	0	0.0	0	0.0	0	0.0	0	0.0	1	5.3	1	6.7
12 - 23.9	1	2.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	6.7
24 - 35.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
36 - 47.9	1	2.0	0	0.0	0	0.0	0	0.0	1	14.3	0	0.0	0	0.0
(Mean) [S.D.]	(1.56)	[6.61]	(0.00)	[0.00]	(0.00)	[0.00]	(1.00)	[1.41]	(6.62)	[16.08]	(0.5)	[1.36]	(1.37)	[3.23]

TABLE 4.9 : NUMBER OF TIMES TREATED BY TYPE

Number of time	All Types (N = 51)		Type I (N = 3)		Type II (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 15)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
0	39	76.5	3	100.0	4	100.0	2	66.7	5	71.4	14	73.7	11	73.3
1	9	17.6	0	0.0	0	0.0	1	33.3	1	14.3	5	26.3	2	13.3
2	3	5.9	0	0.0	0	0.0	0	0.0	1	14.3	0	0.0	2	13.3
(Mean) [S.D.]	(0.29)	[0.57]	(0.0)	[0.0]	(0.0)	[0.0]	(0.33)	[0.47]	(0.43)	[0.73]	(0.26)	[0.44]	(0.40)	[0.71]

TABLE 4.10 : AVERAGE DURATION FOR PERIOD OF TREATMENT BY TYPE

Average duration (mths)	All Types (N = 51)		Type I (N = 3)		Type II (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 15)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
0	39	76.4	3	100.0	4	100.0	2	66.7	5	71.4	14	73.7	11	73.3
Less than 3	7	13.7	0	0.0	0	0.0	0	0.0	1	14.3	4	21.0	2	13.3
3 - 5.9	1	2.0	0	0.0	0	0.0	1	33.3	0	0.0	0	0.0	0	0.0
6 - 11.9	3	5.9	0	0.0	0	0.0	0	0.0	0	0.0	1	5.3	2	13.3
12 - 23.9	1	2.0	0	0.0	0	0.0	0	0.0	1	14.3	0	0.0	0	0.0
(Mean) [S.D.]	(0.97)	[3.44] (0.0)	[0.0] (0.0)	[0.0]	(1.0)	[1.4] (3.33)	(0.5)	[1.36] (0.9)	[2.02]					

d. Hospitalisation

TABLE 4.11 : AMOUNT OF TIME SPENT HOSPITALISED BY TYPE

Average Time (days)	All Types (N = 51)		Type I (N = 3)		Type II (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 15)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
0	31	60.8	1	33.3	3	75.0	2	66.7	5	71.4	12	63.1	8	53.3
1 - 7	8	15.7	1	33.3	1	25.0	1	33.3	2	28.6	1	5.3	2	13.3
8 - 14	6	11.8	0	0.0	0	0.0	0	0.0	0	0.0	3	15.8	3	20.0
15 - 30	2	3.9	1	33.3	0	0.0	0	0.0	0	0.0	1	5.3	0	0.0
More than 30	4	7.8	0	0.0	0	0.0	0	0.0	0	0.0	2	10.5	2	13.3
(Mean) [S.D.]	(7.12)	[13.91] (10.0)	[9.63] (1.75)	[3.03] (2.33)	(1.71)	[2.76] (8.42)	[15.35] (9.80)	[17.19]						

TABLE 4.12 : NUMBER OF TIMES HOSPITALISED BY TYPE

Average Times	ALL Types (N = 51)		Type I (N = 3)		Type II (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 15)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
0	30	58.8	1	33.3	3	75.0	1	33.3	5	71.4	12	63.1	8	53.3
1	15	29.4	1	33.3	1	25.0	2	66.6	2	28.6	4	21.1	5	33.3
2	6	11.8	1	33.3	0	0.0	0	0.0	0	0.0	3	15.8	2	13.3
(Mean) [S.D.]	(0.53)	[0.69]	(1.00)	[0.82]	(0.25)	[0.43]	(0.67)	[0.47]	(0.29)	[0.45]	(0.53)	[0.75]	(0.60)	[0.71]

TABLE 4.13 : AVERAGE DURATION FOR PERIOD OF HOSPITALISATION BY TYPE

Average duration (days)	ALL Types (N = 51)		Type I (N = 3)		Type II (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 15)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
0	31	60.8	1	33.3	3	75.0	2	66.7	5	71.4	12	63.2	8	53.3
1 - 7	10	19.6	1	33.3	1	25.0	1	33.3	2	28.6	2	10.5	2	20.0
8 - 14	6	11.7	1	33.3	0	0.0	0	0.0	0	0.0	3	15.8	2	13.3
15 - 30	3	5.9	0	0.0	0	0.0	0	0.0	0	0.0	2	10.5	1	6.7
More than 30	1	2.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	6.7
(Mean) [S.D.]	(5.42)	[10.65]	(6.17)	[4.73]	(1.75)	[3.03]	(2.33)	[3.30]	(1.71)	[2.76]	(5.79)	[9.73]	(8.13)	[15.30]

Table 4.13 reveals the average duration for period of hospitalisation by type. Type VI has the longest average duration for period of hospitalisation of 8.13 days. Type I, on average, hospitalised for a duration of 6.17 days while Type V 5.79 days. The average duration for period of hospitalisation for Type II, Type III and Type IV were short at 1.75 days, 2.33 days and 1.71 days respectively.

e. Voluntary Abstinence

Voluntary abstinence is an important dimension in the proposed typology to gain insight on the strength of will-power of addicts to free themselves from drugs. Results of the survey on the voluntary abstinence are summarised in Table 4.14, Table 4.15 and Table 4.16.

Table 4.14 reveals the amount of time devoted to voluntary abstinence by type. On average, Type I has the greatest amount of time devoted to voluntary abstinence at 5.0 years. This indicates that the addicts from Type I, on average, spent 50% of their first ten years of career staying drug free in the community. Type III with medium involvement and high voluntary abstinence spent an average of 3.33 years drug-free in the community indicating moderate high degree of voluntary abstinence. Other than for Type I and Type III, the average amount of time devoted to voluntary abstinence for other types was comparatively short. Type II and Type IV spent 0.79 year and 0.70 year respectively on voluntary abstinence.

Types V and VI with high and very high involvement in addiction abstained from drug-use for 0.11 year (one month and 10 days) and 0.02 year (7 days) respectively out of ten years under survey. For the addicts from Type VI, 13 (86.7%) out of 15 of them had never voluntarily abstained from drug.

e. Voluntary Abstinence

TABLE 4.14 : AMOUNT OF TIME DEVOTED TO VOLUNTARY ABSTINENCE BY TYPE

Amount of time devoted (year)	ALL Types (N = 51)		Type I (N = 3)		Type II (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 15)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
0	35	68.6	0	0.0	1	25.0	0	0.0	5	71.4	16	84.2	13	86.7
Less than 0.50	6	11.8	0	0.0	1	25.0	0	0.0	1	14.3	1	5.3	2	13.3
0.50 - 0.99	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	5.3	0	0.0
1.00 - 1.99	2	3.9	0	0.0	1	25.0	0	0.0	0	0.0	1	5.3	0	0.0
2.00 - 2.99	2	3.9	0	0.0	1	25.0	0	0.0	1	14.3	0	0.0	0	0.0
3.00 - 3.99	2	3.9	0	0.0	0	0.0	2	66.7	0	0.0	0	0.0	0	0.0
4.00 - 4.99	2	3.9	1	33.3	0	0.0	1	33.3	0	0.0	0	0.0	0	0.0
5.00 and more	2	3.9	2	66.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
(Mean) [S.D.]	(0.64)	[1.41]	(5.0)	[0.82]	(0.79)	[0.79]	(3.33)	[0.47]	(0.70)	[1.08]	(0.11)	[0.30]	(0.02)	[0.06]

TABLE 4.15 : NUMBER OF TIMES ABSTAINED FROM DRUG USE BY TYPE

Number of times	ALL Types (N = 51)		Type I (N = 3)		Type II (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 15)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
0	35	68.6	0	0.0	1	25.0	0	0.0	5	71.4	16	84.2	13	86.6
1	14	27.5	3	100.0	3	75.0	3	100.0	2	28.6	2	10.5	1	6.7
2	2	3.9	0	0.0	0	0.0	0	0.0	0	0.0	1	5.3	1	6.7
(Mean) (S.D.)	(0.35)	[0.55]	(1.00)	[0.0]	(0.75)	[0.43]	(1.00)	[0.00]	(0.29)	[0.45]	(0.21)	[0.52]	(0.20)	[0.54]

Table 4.15 reveals the number of times abstained from drug use by type. On average, Type I and Type III abstained from drug use. Once while Type II abstained for 0.75 time in the ten years under survey. Majority of the addicts from Type IV, Type V and Type VI had never abstained from drug voluntarily and the average number of time abstained from drug use was low at 0.29, 0.21 and 0.20 respectively.

As indicated in Table 4.16, the average durations for period voluntary abstinence for the addicts of different types were quite similar to that of the amount of time devoted to voluntary abstinence since the number of times abstained from drug use for the majority of those abstained was one.

4.4.3 THE DRUG-TAKING BEHAVIOURAL CHARACTERISTICS OF DIFFERENT TYPES OF ADDICTS

Results presented in Tables 4.2 to 4.16 show that the typology proposed in this study has abled to impose a simple set of rules that provides us with a systematic summary of drug-using behaviour pertaining to the degree to which drug-taking is the central life interest and the willingness to abstain from drugs voluntarily. The study on the characteristics of the distinguishable types of addicts categorised by this typology has led us to a better understanding on the identification of the types of addict who has become more-or-less a permanent problem to the society and possibly a continuing problem to his society, and the addict who has made acceptable social adjustment and possible return to conventional behaviour or recovery.

TABLE 4.16 : AVERAGE DURATION FOR PERIOD OF VOLUNTARY ABSTINENCE BY TYPE

Average duration (year)	All Types (N = 51)		Type I (N = 3)		Type II (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 15)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
0	35	68.6	0	0.0	1	25.0	0	0.0	5	71.4	16	84.1	13	86.7
Less than 0.50	6	11.8	0	0.0	1	25.0	0	0.0	1	14.3	1	5.3	2	13.3
0.50 - 0.99	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
1.00 - 1.99	2	3.9	0	0.0	1	25.0	0	0.0	0	0.0	1	5.3	0	0.0
2.00 - 2.99	2	3.9	0	0.0	1	25.0	0	0.0	1	14.3	1	5.3	0	0.0
3.00 - 3.99	2	3.9	0	0.0	0	0.0	2	66.7	0	0.0	0	0.0	0	0.0
4.00 - 4.99	2	3.9	1	33.3	0	0.0	1	33.3	0	0.0	0	0.0	0	0.0
5 and more	2	3.9	2	66.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
(Mean) [S.D.]	(0.69)	[1.41]	(5.00)	[0.82]	(0.79)	[0.79]	(3.33)	[0.47]	(0.70)	[1.08]	(0.10)	[0.29]	(0.02)	[0.05]

The information are vital from the standpoint of etiology, psychopathology, prognosis, human behavioural science and potential for recovery in order to have effective approaches for treatment and rehabilitation of these addicts. The descriptions on the drug-taking behavioural characteristics from these aspects for different types of addicts categorised using the present typology are as follows:-

Type I: Addicts in this category are found to be the type of addicts in the community who have made some acceptable social adjustment to abstain from drug use. They might pose problems to society but most probably they would not be a continuing problem with receipt of treatment programme. The possibility of treating these addicts is high since their will-power to stay free from drug exist. To a certain extent, they have committed some crimes mainly that of the use and possession of narcotics and controlled substances.

Type II: Addicts in this category are found to be the type of addicts who gave numerous problems to the community and are a nuisance to society. Their criminal record is bad, with frequent high rate of crime-commitment. Most probably these addicts will continue to be the problems in society, particularly the law enforcement agencies. These addicts can be categorised as criminally deviant individuals for whom the central life interest or major social role was to pursue means necessary to sustain their deviancy. Despite the incarceration in prisons and correctional centres, little or no acceptable social adjustment was demonstrated. In addition, the will-power to stay drug-free was low implying the very rare possibility of recovery from drug taking behaviour and criminal deviancy.

Type III: These addicts, similarly to those in Type I, have made some acceptable social adjustments in their drug-taking behaviours to return to conventional behaviour (free of drug use). However, compared to Type I, the degree to which they invest drug-taking as central life interest is greater. The criminal deviancy is low as indicated by their criminal record, hence they are not much of the "big" problems to the society. Whether these addicts will continue to be the problems of the society will very much depend on the community and family support and encouragement to seek treatment. Since there existed some extent of own willingness to give up drug use, the

potential for recovery will be great with treatment and rehabilitation programme which meets the needs they searched for through drug-taking.

Type IV: These addicts, other than moderate involvement in drug-taking, are giving problems to the community by committing crimes during the period of involuntary abstinence. Their will-power to abstain from drugs was low and very little adjustments were made in their drug-taking behaviour to be more accepted by the society. The central life interest of these addicts is comprised mainly of drug-taking and criminal committment. Incarceration has very little effect on their drug taking behaviour and criminal deviancy.

The potential for recovery is pessimistic and the tendency to continue as problems to the society is great.

Type V: Addicts in this category are found to have devoted their career to drug addiction in the community. The central life interest is mainly drug taking with occassional involvement in crime due to possession or the use of narcotics or controlled substances. These addicts are not crime prone hence not causing much problem in the society.

Their own willingness to give up drug taking is minimal. The tendency for these addicts to continue behaving in this manner is great. However, the potential for recovery is not pessimistic if a great deal of effort are taken to treat and rehabilitate them with appropriate programme.

Type VI: Addicts in this category are sporadical and have their own world of addiction. They have invested, almost totally, in drug taking as their central life interest and drug-taking has become an integral part of their lives. For them, drug-taking is the main concern and it dominates their other life activities. Criminal involvement is low and the willingness to abstain from drug-use is almost nil. They are causing much trouble to the community and are passive in crime scene. The possibility to treat these addicts is small. However, treatment/rehabilitation programme which emphasis on treating the addicts psychological dependence

will be the type of programme which might help them to return to their conventional non-drug-taking behaviour which they might have long forgotten.

4.5 THE COMPARISON ON THE SELECTED SOCIO-DEMOGRAPHIC CHARACTERISTICS

The purpose of this section is to describe the socio-demographic characteristics of the different types of addicts classified by the typology. The central concern here is with the correlates of the typology rather than the proportion of persons who fell into each specific type. The differences among the types of addicts with regards to antecedent correlates-factors that may predict the type of career that emerges is the major focus of this section of the study.

Discrepancies in the total number of responses to certain variables found in the table are due to missing information.

4.5.1 YEAR OF EDUCATION

Table 5.1 reveals the distribution of the addicts of different types by the number of years of education.

There are indications that addicts from Type I and Type II have slightly higher number of years of education while addicts from Type V have lowest number of years of education.

4.5.2 CURRENT MARITAL STATUS

As indicated in Table 5.2, a larger proportion of Type IV addicts remain single at the time of interview while larger proportion of Type III were married.

4.5.3 EMPLOYMENT STATUS

Employment status of addicts of different types were surveyed with reference to the periods before regular drug use, during regular drug use, during voluntary abstinence and currently. The results are presented in Table 5.3

TABLE 5.1 : THE NUMBER OF YEARS OF EDUCATION BY TYPE

Years of Education	All Types (N = 3)		Type I (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 1)	
	n	%	n	%	n	%	n	%	n	%	n	%
0	4	7.8	-	-	-	-	1	14.3	3	15.8	-	-
1 - 6	24	47.1	2	50.0	2	66.7	2	28.6	7	36.8	9	50.0
7 - 10	21	41.2	1	50.0	1	33.3	4	57.1	8	42.1	5	33.3
11 - 12	2	3.9	-	-	-	-	-	-	1	5.3	1	6.7
(Mean) [S.D.]	(6.53)	[2.83]	(7.00)	[1.41]	(7.75)	[1.79]	(6.67)	[1.70]	(6.05)	[3.56]	(6.73)	[1.17]

4.5.4 SOURCE OF INCOME

Some differences in the pattern of distribution of the addicts of different types on source of income. As inferred from Table 5.4, the source of income for Type I and Type III addicts currently, before and during regular drug use was salary/wages from a legitimate job. Half of the addicts from Type II and Type IV addicts have illegal income during their regular drug use. Even though majority of the Type V and Type VI addicts have source of income from legitimate jobs, a fraction of them have illegal income before and during regular drug use.

4.5.5 LIVING PLACE

Before regular drug use, majority of the addicts stayed in apartment/family dwelling. However, a small number of addicts from Type V and Type VI were found to be staying in the hotel or boarding house. During regular drug use, majority of the addicts stayed in apartment/family dwelling. A fraction of Type II and Type IV addicts were found to stay in jail. Currently, a large proportion (71.4%) of the Type IV addicts and some addicts from Type II (50.0%), Type V (26.3%) and Type VI (33.3%) were found staying in the jail (Please refer to Table 5.5).

4.5.6 PEOPLE LIVING WITH

According to the results presented in Table 5.6, the patterns of people living with changes over the periods before use, during use and currently for Type II and Type IV addicts. For these addicts, all of them were living with their spouse/family members before regular use. However, a portion of them live with friends or members of the same institution (due to incarceration) during regular or current use.

Majority of the addicts from Type V and Type VI were living with their spouse/family members. In contrast to the other

TABLE 5.2 : CURRENT MARITAL STATUS BY TYPE

Marital Status	All Types		Type I (N = 3)		Type II (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 15)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Single	29	56.9	2	66.7	2	50.0	1	33.3	5	71.4	11	57.9	8	53.3
Married	17	33.3	1	33.3	1	25.0	2	66.7	1	14.3	7	36.8	5	33.3
Separated	2	3.9	0	0.0	0	0.0	0	0.0	1	14.3	1	5.3	0	0.0
Divorced	3	5.9	0	0.0	1	25.0	0	0.0	0	0.0	0	0.0	2	13.3

TABLE 5.3 : THE EMPLOYMENT STATUS BY TYPE

Employment Status	All Types (N = 51)		Type I (N = 3)		Type II (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 15)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
<u>Current Status</u>														
Employed full time	16	31.4	2	66.7	1	25.0	1	33.3	-	-	5	26.3	7	46.7
Employed part time	12	23.6	1	33.3	-	-	2	66.7	1	14.3	5	26.3	3	20.0
Institutionalised	17	33.3	-	-	2	50.0	-	-	5	71.4	5	26.3	5	33.3
Unemployed	5	9.8	-	-	1	25.0	-	-	1	14.3	3	15.8	-	-
Others	1	1.9	-	-	-	-	-	-	-	-	1	5.3	-	-
<u>Before Regular Use</u>														
Employed full time	28	54.9	2	66.7	1	25.0	1	33.3	3	42.8	12	63.2	9	60.0
Employed part time	16	31.4	1	33.3	2	50.0	2	66.7	2	28.6	6	31.6	3	20.0
Student/trainee	2	3.9	-	-	1	25.0	-	-	1	14.3	-	-	-	-
Unemployed	4	7.8	-	-	-	-	-	-	1	14.3	-	-	3	20.0
Others	1	2.0	-	-	-	-	-	-	-	-	1	5.2	-	-

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TABLE 5.3 : THE EMPLOYMENT STATUS BY TYPE - (Continuation)

Employment Status	All Types (N = 51)		Type I (N = 3)		Type II (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 15)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
<u>During Regular Use</u>														
Employed full time	21	41.2	1	33.3	-	-	2	66.7	2	28.6	8	42.1	8	53.3
Employed part time	22	43.1	2	66.7	2	50.0	1	33.3	2	28.6	10	52.6	5	33.3
Institutionalised	1	2.0	-	-	-	-	-	-	1	14.3	-	-	-	-
Unemployed	3	5.9	-	-	-	-	-	-	2	28.6	-	-	1	6.7
Others	4	7.8	-	-	2	50.0	-	-	-	-	1	5.3	1	6.7
<u>During Voluntary Abstinence</u>														
Employed full time	10	58.8	3	100.0	1	33.3	2	66.7	1	50.0	2	50.0	1	50.0
Employed part time	5	29.4	-	-	2	66.7	1	33.3	-	-	1	25.0	1	50.0
Unemployed	2	11.8	-	-	-	-	-	-	1	50.0	1	25.0	-	-

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TABLE 5.4 : THE SOURCE OF INCOME BY TYPE

Source of Income	All Types (N = 51)		Type I (N = 3)		Type II (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 15)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
<u>Current source</u>														
Salary/wages from a legitimate job	32	62.8	3	100.0	2	50.0	3	100.0	1	14.3	12	63.2	11	73.3
Spouse or family	4	7.8	-	-	1	25.0	-	-	1	14.3	2	10.5	-	-
Illegal income	2	3.9	-	-	-	-	-	-	-	-	2	10.5	-	-
Not sure	13	25.5	-	-	1	25.0	-	-	5	71.4	3	15.8	4	26.7
<u>Before Regular Use</u>														
Salary/wages from a legitimate job	42	84.0	3	100.0	3	75.0	3	100.0	5	71.4	16	88.9	12	80.0
Spouse or family	3	6.0	-	-	1	25.0	-	-	1	14.3	-	-	1	6.7
Friend	1	2.0	-	-	-	-	-	-	-	-	-	-	1	6.7
Illegal income	4	8.0	-	-	-	-	-	-	1	14.3	2	11.1	1	6.7
<u>During Regular Use</u>														
Salary and wages from legitimate job	40	80.0	3	100.0	2	50.0	3	100.0	2	33.3	18	94.7	12	80.0
Illegal income	9	18.0	-	-	2	50.0	-	-	3	50.0	1	5.3	3	20.0
Not sure	1	2.0	-	-	-	-	-	-	1	16.7	-	-	-	-

types of addicts, a fraction of them live with friends before drug use, during drug use and currently. All the Type I and Type III addicts live with their spouse/family members during drug use and currently.

4.5.7 Family Support

Results for survey on the family support for the addicts before and during regular drug use are presented in Table 5.7. For Type I and Type IV, there were indications of a decrease in the family support from before drug use to during drug use. The opposite trend was observed for type III and Type VI addicts.

4.5.8 Current Family Contact

To compare the extent of family contact for the addicts, the frequencies of family contact were scored as indicated in the Table 5.8. The average score was calculated for each type of addict. Type I and Type III addicts were found to have best family contact (with mother/father, brother(s)/sister(s) and other relatives) currently. Type V and Type VI addicts have moderately good family contact while Type II and Type IV have poor family contact in the last 30 days from the point of interview.

4.5.9 Family Contact Before Regular Use

Before regular drug use, addicts of all types have good contact with the father/mother and brother(s)/sister(s). Relatively, Type I has slightly better contact with the father/mother while Type III has slightly better contact with the brother(s)/sister(s) (Please refer to Table 5.9).

4.5.10 Family Contact During Regular Use

During regular drug use, the contact with parents was good for Type I, Type V and Type VI addicts. The rest of the addicts have moderate contact with parents. Compared to the contact with father/mother before regular drug use, there is a decrease in the parental contact during regular drug use for Type II, Type III, Type IV and Type VI (Please refer to Table 5.10).

The contact with the brother(s)/sister(s) was good for Type III, Type V and Type VI while the contact was moderate for the rest of the addicts. Compared to the contact with brother(s)/sister(s) before regular drug use, there was a decrease in the contact during regular drug use for Type II, Type III, Type IV and Type VI addicts. The trend was also found for the contact with other relatives for all the addicts of different types.

TABLE 5.5 : LIVING PLACE BY TYPE

Living Place	All Types (N = 51)		Type I (N = 3)		Type II (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 15)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
<u>Currently</u>														
Apartment/family dwelling	32	62.7	3	100.0	2	50.0	3	100.0	2	28.6	12	63.1	10	66.7
Hotel or boarding house	1	2.0	-	-	-	-	-	-	-	-	1	5.3	-	-
Jail	17	33.3	-	-	2	50.0	-	-	5	71.4	5	26.3	5	33.3
Others	1	2.0	-	-	-	-	-	-	-	-	1	5.3	-	-
<u>Before Regular Use</u>														
Apartment/family dwelling	45	88.2	2	66.7	4	100.0	3	100.0	7	100.0	16	84.2	13	86.6
Hotel or boarding house	3	5.9	-	-	-	-	-	-	-	-	2	10.5	1	6.7
Others	3	5.9	1	33.3	-	-	-	-	-	-	1	5.3	1	6.7
<u>During Regular Use</u>														
Apartment/family dwelling	47	92.1	3	100.0	3	75.0	3	100.0	5	71.4	18	94.7	15	100.0
Hotel or boarding house	1	2.0	-	-	-	-	-	-	-	-	1	5.3	-	-
Jail	2	3.9	-	-	1	25.0	-	-	1	14.3	-	-	-	-
Others	1	2.0	-	-	-	-	-	-	1	14.3	-	-	-	-

TABLE 5.6 : PEOPLE LIVING WITH BY TYPE

Living with	All Types (N = 51)		Type I (N = 3)		Type II (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 15)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
<u>Currently</u>														
Spouse/family members	31	60.8	3	100.0	2	50.0	3	100.0	2	28.6	12	63.2	9	60.0
Friends	1	2.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	6.7
Members of the same institution	17	33.3	0	0.0	2	50.0	0	0.0	5	71.4	5	26.3	5	33.3
Alone	2	3.9	0	0.0	0	0.0	0	0.0	0	0.0	2	10.5	0	0.0
<u>Before Regular Use</u>														
Spouse/Family members	43	84.3	2	66.7	4	100.0	3	100.0	7	100.0	14	73.7	13	86.7
Friends	6	11.7	0	0.0	0	0.0	0	0.0	0	0.0	4	21.0	2	13.3
Alone	1	2.0	1	33.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Others	1	2.0	0	0.0	0	0.0	0	0.0	0	0.0	1	5.3	0	0.0
<u>During Regular Use</u>														
Spouse/Family members	40	80.0	2	100.0	3	75.0	3	100.0	3	42.9	16	84.2	13	86.7
Friends	7	14.0	0	0.0	0	0.0	0	0.0	3	42.8	2	10.5	2	13.3
Members	2	4.0	0	0.0	1	25.0	0	0.0	1	14.3	0	0.0	0	0.0
Others	1	2.0	0	0.0	0	0.0	0	0.0	0	0.0	1	5.3	0	0.0

TABLE 5.7 : FAMILY SUPPORT BY TYPE

Frequency of family support	All Types (N = 51)		Type I (N = 3)		Type II (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 15)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
<u>Current</u>														
Frequently	9	19.1	-	-	1	25.0	1	33.3	1	14.3	3	20.0	3	20.0
Sometimes	13	27.7	-	-	-	-	1	33.3	1	14.3	5	33.3	6	40.0
Rarely	7	14.9	-	-	1	25.0	-	-	2	28.5	2	13.3	2	13.3
Never	18	38.3	3	100.0	2	50.0	1	33.3	3	42.9	5	33.3	4	26.7
<u>Before Regular Use</u>														
Frequently	23	46.0	1	33.3	2	50.0	2	66.7	5	71.4	7	38.9	6	40.0
Sometimes	13	26.0	-	-	1	25.0	1	33.3	1	14.3	5	27.8	5	33.3
Rarely	9	18.0	-	-	1	25.0	-	-	1	14.3	5	27.8	2	13.3
Never	5	10.0	2	66.7	-	-	-	-	-	-	1	5.5	2	13.3
<u>During Regular Use</u>														
Frequently	25	50.0	-	-	2	50.0	3	100.0	3	42.8	7	36.8	10	66.7
Sometimes	12	24.0	-	-	1	25.0	-	-	2	28.6	7	36.8	2	13.3
Rarely	9	18.0	-	-	1	25.0	-	-	1	14.3	5	26.4	2	13.3
Never	4	8.0	2	100.0	-	-	-	-	1	14.3	-	-	1	6.7

TABLE 5.8 : CURRENT FAMILY CONTACT BY TYPE

Frequency of family contact	All Types (N = 51)		Type I (N = 3)		Type II (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 15)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
<u>Mother/Father</u>														
Not living	12	23.5	2	66.7	-	-	1	33.3	2	28.6	4	21.1	3	20.0
Never (1)	9	17.6	-	-	1	25.0	-	-	3	42.8	2	10.5	3	20.0
Rarely (2)	3	5.9	-	-	1	25.0	-	-	-	-	1	5.2	1	6.7
Sometimes (3)	6	11.8	-	-	-	-	-	-	1	14.3	4	21.1	1	6.7
Often (4)	21	41.2	1	33.3	2	50.0	2	66.7	1	14.3	8	42.1	7	46.6
(Mean) [S.D.]	(3.0)	[1.24]	(4)	(-)	(2.75)	[1.30]	(4)	(-)	(2.0)	[1.26]	(3.2)	[1.05]	(3.0)	[1.29]
<u>Brother(s)/Sister(s)</u>														
Not living	2	3.9	-	-	-	-	-	-	-	-	-	-	2	13.3
Never (1)	9	17.7	-	-	1	25.0	-	-	2	28.6	4	21.0	2	13.3
Rarely (2)	9	17.7	1	33.3	1	25.0	-	-	2	28.6	3	15.8	2	13.3
Sometimes (3)	12	23.5	-	-	-	-	-	-	2	28.6	6	31.6	4	26.7
Often (4)	19	37.2	2	66.7	2	50.0	3	100.0	1	14.2	6	31.6	5	33.3
(Mean) [S.D.]	(2.84)	[1.13]	(3.33)	[0.94]	(2.75)	[1.30]	(4)	(-)	(2.29)	[1.03]	(2.73)	[1.12]	(2.92)	[1.07]
<u>Other Relatives</u>														
Never (1)	20	39.2	1	33.3	3	75.0	-	-	4	57.1	7	36.8	5	33.3
Rarely (2)	12	23.5	-	-	-	-	-	-	1	14.3	6	31.6	5	33.3
Sometimes (3)	8	15.7	-	-	-	-	1	33.3	1	14.3	5	26.3	1	6.7
Often (4)	11	21.6	2	66.7	1	25.0	2	66.7	1	14.3	1	5.3	4	26.7
(Mean) [S.D.]	(2.20)	[1.17]	(3)	(1.41)	(1.75)	[1.30]	(3.67)	[0.47]	(1.86)	[1.12]	(2.00)	[0.92]	(2.27)	[1.18]

TABLE 5.9 : FAMILY CONTACT BEFORE REGULAR USE BY TYPE

Frequency of family contact	All Types (N = 51)		Type I (N = 3)		Type II (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 15)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
<u>Father/Mother</u>														
Not Living	5	9.8	2	66.7	-	-	-	-	-	-	3	15.8	-	-
Never	1	2.0	-	-	-	-	-	-	-	-	-	-	1	6.7
Rarely	2	3.9	-	-	-	-	-	-	1	14.3	1	5.3	-	-
Sometimes	18	35.3	-	-	2	50.0	1	33.3	2	28.6	8	42.1	5	33.3
Often	25	49.0	1	33.3	2	50.0	2	66.7	4	57.1	7	36.8	9	60.0
(Mean) [S.D.]	(3.46)	[0.68]	(4.0)	[0.00]	(3.50)	[0.50]	(3.67)	[0.47]	(3.43)	[0.73]	(3.38)	[0.60]	(3.47)	[0.81]
<u>Brother(s)/Sister(s)</u>														
Not Living	2	3.9	-	-	-	-	-	-	-	-	-	-	2	13.3
Never	1	2.0	1	33.3	-	-	-	-	-	-	-	-	-	-
Rarely	8	15.7	-	-	-	-	-	-	1	14.3	5	26.3	2	13.3
Sometimes	18	35.3	-	-	3	75.0	-	-	2	28.6	8	42.1	5	33.3
Often	22	43.1	2	66.7	1	25.0	3	100.0	4	57.1	6	31.6	6	40.0
(Mean) [S.D.]	(3.24)	[0.80]	(3.00)	[1.41]	(3.25)	[0.43]	(4.00)	[0.00]	(3.43)	[0.73]	(3.05)	[0.76]	(3.31)	[0.72]
<u>Other Relatives</u>														
Not Living	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Never	12	23.5	2	66.7	2	50.0	-	-	2	28.6	3	15.8	3	20.0
Rarely	11	21.5	-	-	1	25.0	1	33.3	-	-	7	36.8	2	13.3
Sometimes	14	27.5	-	-	-	-	1	33.3	1	14.3	6	31.6	6	40.0
Often	14	27.5	1	33.3	1	25.0	1	33.3	4	57.1	3	15.8	4	26.7
(Mean) [S.D.]	(2.59)	[1.12]	(2.00)	[1.41]	(2.00)	[1.22]	(3.00)	[0.82]	(3.00)	[1.31]	(2.47)	[0.94]	(2.73)	[1.06]

TABLE 5.10 : FAMILY CONTACT DURING REGULAR USE BY TYPE

Frequency of family contact	All Types (N = 51)		Type I (N = 3)		Type II (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 15)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
<u>Father/Mother</u>														
Not Living	5	10.0	1	50.0	-	-	1	33.3	-	-	2	10.5	1	6.7
Never	1	2.0	-	-	-	-	-	1	14.3	-	-	-	-	-
Rarely	6	12.0	-	-	1	25.0	1	33.3	2	28.6	1	5.3	1	6.7
Sometimes	20	40.0	-	-	3	75.0	-	-	3	42.8	7	36.8	7	46.6
Often	18	36.0	1	50.0	-	-	1	33.3	1	14.3	9	47.4	6	40.0
(Mean) [S.D.]	(3.22)	[0.76]	(4.0)	[0.0]	(2.75)	[0.43]	(3.0)	[1.00]	(2.57)	[0.90]	(3.47)	[0.61]	(3.36)	[0.61]
<u>Brother(s)/Sister(s)</u>														
Not Living	2	4.0	-	-	-	-	-	-	-	-	-	-	2	13.3
Never	2	4.0	-	-	-	-	-	-	1	14.3	1	5.2	-	-
Rarely	10	20.0	1	50.0	1	25.0	1	33.3	2	28.6	3	15.8	2	13.3
Sometimes	22	44.0	-	-	3	75.0	-	-	3	42.8	9	47.4	7	46.7
Often	14	28.0	1	50.0	-	-	2	66.7	1	14.3	6	31.6	4	26.7
(Mean) [S.D.]	(3.00)	[0.82]	(3.00)	[1.00]	(2.75)	[0.43]	(3.33)	[0.94]	(2.57)	[0.90]	(3.05)	[0.83]	(3.15)	[0.66]
<u>Other Relatives</u>														
Not Living	13	26.0	1	50.0	1	25.0	2	66.7	3	42.8	3	15.8	3	20.0
Rarely	21	42.0	1	50.0	2	50.0	-	-	2	28.6	10	52.6	6	40.0
Sometimes	13	26.0	-	-	1	25.0	1	33.3	2	28.6	3	15.8	6	40.0
Often	3	6.0	-	-	-	-	-	-	-	-	3	15.8	-	-
(Mean) [S.D.]	(2.12)	[0.86]	(1.50)	[0.5]	(2.0)	[0.71]	(1.67)	[0.94]	(1.86)	[0.83]	(2.32)	[0.92]	(2.20)	[0.75]

4.5.11 Leisure Time Spent With Family By Type

The amount of leisure time spent with the family currently, before and during regular drug use were surveyed and the results are summarised in Table 5.11. The amount of time spent with the family were scored according to the score given in Table 5.11. The mean score for each type of addicts was calculated. Addicts from Type I, Type III and Type IV were found spending less leisure time with the family during regular drug use compared to before regular use. The trend was the opposite for Type V and Type VI addicts. Comparatively, no major differences were found in the amount of leisure time spent with the family between types of addicts before and during regular use. However, there were indications that the amount of time spent with family for Type I and Type III was slightly less.

4.5.12 Leisure Time Spent With Friends (Non-User)

A similar survey was done on the amount of leisure time spent with friends who do not use drugs. As indicated in Table 5.12, except for addicts of Type I, other addicts were found to spend lesser time with their friends during regular drug use compared to the time before regular drug use. The trend for Type I addicts was the converse of this. Before regular drug use, the amount of time spent with friends who did not use drugs were quite similar among addicts of different types. However, during regular drug use, Type I addicts were found to spend much more time with these friends compared to the addicts of other types. Currently, very much time was spent with friends for Type I and Type III while Type II and Type VI spent some time. Type IV and Type V addicts were found to spend little time currently with friends who do not use drugs.

TABLE 5.11 : LEISURE TIME SPENT WITH FAMILY BY TYPE

Amount of time spent	All Types (N = 51)		Type I (N = 3)		Type II (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 15)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Currently														
A lot (4)	22	45.8	3	100.0	3	75.0	2	66.7	-	-	7	43.8	7	46.7
Some (3)	6	12.5	-	-	-	-	-	-	1	14.3	3	18.7	2	13.3
Little(2)	3	6.3	-	-	-	-	1	33.3	1	14.3	-	-	1	6.7
None (1)	17	35.4	-	-	1	25.0	-	-	5	71.4	6	37.5	5	33.3
(Mean)(s.d.)	(2.69)	[1.36]	(4.00)	[0.00]	(3.25)	[1.30]	(3.33)	[0.94]	(1.43)	[0.73]	(2.69)	[1.36]	(2.73)	[1.34]
Before Regular Use														
A lot (4)	11	21.6	1	33.3	1	25.0	-	-	-	-	4	21.0	5	33.3
Some (3)	11	21.6	-	-	1	25.0	1	33.3	3	42.9	5	26.3	1	6.7
Little(2)	23	45.1	1	33.3	1	25.0	1	33.3	4	57.1	8	42.1	8	53.3
None (1)	6	11.7	1	33.3	1	25.0	1	33.3	-	-	2	10.5	1	6.7
(Mean)(s.d.)	(2.53)	[0.96]	(2.33)	[1.25]	(2.50)	[1.12]	(2.00)	[0.82]	(2.43)	[0.49]	(2.58)	[0.94]	(2.67)	[1.01]
During Regular Use														
A lot (4)	9	18.0	-	-	1	25.0	-	-	-	-	4	21.0	4	26.7
Some (3)	17	34.0	1	50.0	1	25.0	-	-	3	42.8	8	42.1	4	26.7
Little(2)	18	36.0	-	-	1	25.0	2	66.7	2	28.6	6	31.6	7	46.6
None (1)	6	12.0	1	50.0	1	25.0	1	33.3	2	28.6	1	5.3	-	-
(Mean)(s.d.)	(2.58)	[0.92]	(2.00)	[1.00]	(2.50)	[1.12]	(1.67)	[0.47]	(2.14)	[0.83]	(2.79)	[0.83]	(2.80)	[0.85]

TABLE 5.12: LEISURE TIME SPENT WITH FRIENDS (NON-USER) BY TYPE

Amount of time spent	All Types (N = 51)		Type I (N = 3)		Type II (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 15)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Currently														
A lot (4)	11	22.9	2	66.7	1	25.0	2	66.7	-	-	1	6.3	5	33.3
Some (3)	12	25.0	1	33.3	2	50.0	1	33.3	2	28.6	3	18.7	3	20.0
Little(2)	22	45.8	-	-	1	25.0	-	-	5	71.4	10	62.5	6	40.0
None (1)	3	6.3	-	-	-	-	-	-	-	-	2	12.5	1	6.7
(Mean)[S.D.]	(2.65)	[0.90]	(3.66)	[0.47]	(3.00)	[0.71]	(3.66)	[0.47]	(2.29)	[0.45]	(2.19)	[0.73]	(2.80)	[0.98]
Before Regular Use														
A lot (4)	6	11.8	-	-	1	25.0	-	-	-	-	3	15.8	2	13.3
Some (3)	25	49.0	1	33.3	1	25.0	2	66.7	4	57.1	7	36.8	10	66.7
Little(2)	19	37.2	2	66.7	1	25.0	1	33.3	3	42.9	9	47.4	3	20.0
None (1)	1	2.0	-	-	1	25.0	-	-	-	-	-	-	-	-
(Mean)[S.D.]	(2.71)	[0.69]	(2.33)	[0.47]	(2.50)	[1.11]	(2.66)	[0.47]	(2.57)	[0.49]	(2.68)	[0.73]	(2.93)	[0.57]
During Regular Use														
A lot (4)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Some (3)	17	34.0	2	100.0	1	25.0	1	33.3	1	14.3	6	31.6	6	40.0
Little(2)	25	50.0	-	-	2	50.0	1	33.3	4	57.1	13	68.4	5	33.3
None (1)	8	16.0	-	-	1	25.0	1	33.3	2	28.6	-	-	4	26.7
(Mean)[S.D.]	(2.18)	[0.68]	(3.00)	[0.00]	(2.00)	[0.71]	(2.00)	[0.82]	(1.86)	[0.64]	(2.32)	[0.46]	(2.13)	[0.81]

4.5.13 Leisure Time Spent Alone

Currently, addicts from Type II, Type VI Type IV and Type V were found to spent a lot/some of the time on their own while Type I and Type III spent little on their own. Before and during regular drug use, no major differences were found in the amount of time spent alone by addicts of different types. However, there were indications that addicts from Type II and Type III spent lesser time alone. For Type V and Type VI, the amount of time spent alone "during regular drug use" were greater than "before regular drug use". For Types I, II, III and IV, no difference was observed in the amount of time spent alone before and during regular drug use (Please refer to Table 5.13).

4.5.14 Leisure Time Spent with Other Addicts

To gain insight on the influence of other addicts on drug taking behaviour of the different types of addicts in this study, the amount of leisure time spent with other addicts was surveyed and the results are summarised in Table 5.14. Currently, Type III addicts did not spend any time with addicts while Type I and Type VI addicts spent very little time with addict friends. Types II, IV and V were found to spend time with their addict-friends currently.

Before regular drug use, no major difference was found in the amount of time spent with addict-friends for addicts of different types. All addicts, irrespective of types, spent a lot-some time with addict-friends. However, there were indications that Type I and Type III addicts spent slightly more time with addict-friends before regular drug use.

During regular drug use, all the addicts, irrespective of types spent a lot of time with addict-friends during regular drug use.

In comparison on the amount of time spent with addict-friends before and during drug use for different types of addicts, a general overall pattern was found for all types of addicts. A greater amount of time was spent with addict-friends during regular drug use than before regular drug use.

TABLE 5.13 : LEISURE TIME SPENT ALONE BY TYPE

Amount of time spent	All Types (N = 51)			Type I (N = 3)			Type II (N = 4)			Type III (N = 3)			Type IV (N = 7)			Type V (N = 19)			Type VI (N = 15)			
	n	%		n	%		n	%		n	%		n	%		n	%		n	%		
<u>Currently</u>																						
A lot (4)	23	47.9		1	33.3		3	75.0		-	-	4	57.1		7	43.8		8	53.3			
Some (3)	7	14.6		-	-		-	-		-	-	-	-		4	25.0		3	20.0			
Little(2)	12	25.0		1	33.3		1	25.0		1	33.3	3	42.9		3	18.7		3	20.0			
None (1)	6	12.5		1	33.3		-	-		2	66.7	-	-		2	12.5		1	6.7			
(Mean)(S.D.)	(2.98)	[1.11]	(2.33)	[1.25]	(3.50)	[0.87]	(1.33)	[0.47]	(3.14)	[0.99]	(3.13)	[0.96]	(3.20)	[0.98]								
<u>Before Regular Use</u>																						
A lot (4)	5	9.8		1	33.3		-	-		-	-	1	14.3		2	10.5		1	6.7			
Some (3)	14	27.4		-	-		1	25.0		-	-	3	42.8		6	31.6		4	26.7			
Little(2)	14	27.5		1	33.3		1	25.0		1	33.3	1	14.3		7	36.8		3	20.0			
None (1)	18	35.3		1	33.3		2	50.0		2	66.7	2	28.6		4	21.1		7	46.6			
(Mean)(S.D.)	(2.12)	[1.00]	(2.33)	[1.25]	(1.75)	[0.83]	(1.33)	[0.47]	(2.43)	[1.05]	(2.32)	[0.92]	(1.93)	[1.00]								
<u>During Regular Use</u>																						
A lot (4)	9	18.0		1	50.0		-	-		-	-	1	14.3		5	26.3		2	13.3			
Some (3)	14	28.0		-	-		1	25.0		-	-	3	42.8		6	31.6		4	26.7			
Little(2)	14	28.0		-	-		1	25.0		1	33.3	1	14.3		6	31.6		5	33.3			
None (1)	13	26.0		1	50.0		2	50.0		2	66.7	2	28.6		2	10.5		4	26.7			
(Mean)(S.D.)	(2.38)	[1.06]	(2.50)	[1.5]	(1.75)	[0.83]	(1.33)	[0.47]	(2.43)	[1.05]	(2.74)	[0.96]	(2.27)	[1.00]								

TABLE 5.14 : LEISURE TIME SPENT WITH OTHER ADDICTS BY TYPE

Amount of time spent	All Types (N = 51)			Type I (N = 3)			Type II (N = 4)			Type III (N = 3)			Type IV (N = 7)			Type V (N = 19)			Type VI (N = 15)			
	n	%		n	%		n	%		n	%		n	%		n	%		n	%		
<u>Currently</u>																						
A lot (4)	15	31.3		-	-		1	25.0		-	-	4	57.1		7	43.7		3	20.0			
Some (3)	5	10.4		-	-		1	25.0		-	-	-	-		2	12.5		2	13.3			
Little(2)	11	22.9		2	66.7		1	25.0		-	-	1	14.3		5	31.3		2	13.3			
None (1)	17	35.4		1	33.3		1	25.0		3	100.0	2	28.6		2	12.5		8	53.3			
(Mean)(S.D.)	(2.38)	[1.25]	(1.66)	[0.47]	(2.50)	[1.12]	(1.00)	[0.00]	(2.86)	[1.36]	(2.88)	[1.11]	(2.00)	[1.21]								
<u>Before Regular Use</u>																						
A lot (4)	23	45.1		2	66.7		2	50.0		2	66.7	3	42.8		9	47.4		5	33.3			
Some (3)	18	35.3		1	33.3		1	25.0		1	33.3	2	28.6		6	31.6		7	46.7			
Little(2)	7	13.7		-	-		-	-		-	-	2	28.6		3	15.8		2	13.3			
None (1)	3	5.9		-	-		1	25.0		-	-	-	-		1	5.2		1	6.7			
(Mean)(S.D.)	(3.20)	[0.89]	(3.66)	[0.47]	(3.00)	[1.22]	(3.66)	[0.47]	(3.14)	[0.83]	(3.21)	[0.83]	(3.21)	[0.89]								
<u>During Regular Use</u>																						
A lot (4)	32	64.0		1	50.0		3	75.0		3	100.0	4	57.1		12	63.2		9	60.0			
Some (3)	14	28.0		1	50.0		1	25.0		-	-	3	42.9		4	21.0		5	33.3			
Little(2)	4	8.0		-	-		-	-		-	-	-	-		3	15.8		1	6.7			
None (1)	-	-		-	-		-	-		-	-	-	-		-	-		-	-			
(Mean)(S.D.)	(3.56)	[0.64]	(3.50)	[0.50]	(3.75)	[0.43]	(4.00)	[0.00]	(3.57)	[0.49]	(3.47)	[0.75]	(3.53)	[0.62]								

4.5.15 Social Inventory Score

Social Inventory Score (See Appendix A) indicates the extent to which an addict has associates who have negative influence (on them) to drug taking behaviour and the frequency of contact with these associates. As indicated in Table 5.15, except for Type I, there was an increase in the extent of association with friends who used drugs from the period before regular drug use to during regular drug use. The trend for the Type I addicts was the reverse of that for the other addict types. Currently, for all types of addicts, the extent of association with friends who used drugs was lower than before drug use and during regular use.

Before regular drug use, the extent of association for Type I was high and moderately high for Type III while it was moderate for the other types. However, during regular drug use, the extent of association was very high for Type III, high for Type VI and moderately high for Types V, IV and II. The association with friends using drugs was moderate for Type I during regular use.

4.5.16 Involvement in Illegal Activities

Table 5.16 summarises the involvement in illegal activities for different types of addicts in the study. Generally, irrespective of type, all addicts have ever involved in the use and possession of narcotics or controlled substances. Comparatively, illegal activities involved by addicts of Type I and Type III were less severe than those involved by addicts of the other types. Addicts from Type I and Type III involved in illegal activities like sale or manufacture of narcotics/controlled substances, gambling, theft, stolen property/fencing and assault. For the addicts Types II, IV, V and VI, in addition to the illegal activities above, more severe criminal activities like robbery, weapons offence, auto theft and burglary were involved.

4.5.17 Age at First Crime Involvement

For the age at first involvement in crime, the age at first arrest and first incarceration were surveyed. As indicated in Table 5.17, the age at first arrest is the same as the age at first incarceration. Comparatively, addicts of Types I, II and IV were first involved in crimes at a younger age than the addicts of Types III, V and VI.

TABLE 5.15 : SOCIAL INVENTORY SCORE BY TYPE

Amount of time spent	All Types (N = 51)		Type I (N = 3)		Type II (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 15)	
	Mean	(S.D.)	Mean	(S.D.)	Mean	(S.D.)	Mean	(S.D.)	Mean	(S.D.)	Mean	(S.D.)	Mean	(S.D.)
Before regular use	2.77	(1.67)	4.61	(1.72)	2.96	(1.83)	3.53	(1.11)	2.43	(1.19)	2.39	(1.58)	2.84	(1.69)
During regular use	4.00	(1.53)	2.94	(0.79)	3.96	(1.52)	5.92	(0.66)	3.67	(1.21)	3.64	(1.53)	4.44	(1.45)
Currently (in last 30 days)	1.10	(1.39)	0.08	(0.06)	1.50	(1.13)	0.03	(0.04)	1.14	(1.62)	1.85	(1.32)	0.61	(1.19)

Possible score range : 0.00 - 7.50

TABLE 5.16 : INVOLVEMENT IN ILLEGAL ACTIVITIES BY TYPE

Type of illegal activities	All Types (N = 51)		Type I (N = 3)		Type II (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 15)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
a. Use or possession of narcotics/controlled substances	51	100.0	3	100.0	4	100.0	3	100.0	7	100.0	19	100.0	15	100.0
b. Sale or manufacture of narcotics/controlled substances	15	29.4	0	0	0	0	1	33.3	4	57.1	4	21.1	6	40.0
c. Gambling	26	51.0	0	0	2	50.0	2	66.7	5	71.4	10	52.6	7	46.7
d. Theft	19	37.3	1	33.3	3	75.0	0	0	4	57.1	7	36.8	4	26.7
e. Stolen property/fencing	16	31.4	1	33.3	1	25.0	0	0	3	42.9	3	15.8	8	53.3
f. Attack on person	12	23.5	0	0	0	0	1	33.3	3	42.9	4	21.1	4	26.7
g. Robbery	10	19.6	0	0	2	50.0	0	0	3	42.9	2	10.5	3	20.0
h. Weapons offence	6	12.0	0	0	0	0	0	0	2	28.6	1	5.3	3	20.0
i. Auto theft	3	5.9	0	0	0	0	0	0	2	28.6	0	0	1	6.7
j. Burglary	2	3.9	0	0	0	0	0	0	1	14.3	1	5.3	0	0
Incidence rate (%)	31.37		16.67		30.00		23.33		48.57		26.84		34.00	

TABLE 5.17 : AGE AT FIRST CRIME INVOLVEMENT BY TYPE

Type at first involvement	All Types (N = 51)		Type I (N = 3)		Type II (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 15)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
<u>Arrest</u>														
20 and below	12	23.5	2	66.7	1	25.0	0	0.0	2	28.6	4	21.1	3	20.0
21 - 25	20	39.2	0	0.0	2	50.0	1	33.3	3	42.8	8	42.1	6	40.0
26 - 30	9	17.7	1	33.3	1	25.0	0	0.0	2	28.6	3	15.8	2	13.3
31 - 35	6	11.8	0	0.0	0	0.0	1	33.3	0	0.0	2	10.5	3	20.0
36 and above	4	7.8	0	0.0	0	0.0	1	33.3	0	0.0	2	10.5	1	6.7
(Mean) [S.D.]	(24.80) [5.67]	(22.33) [4.03]	(22.00) [2.35]	(30.67) [5.56]	(22.71) [4.20]	(24.89) [5.80]	(25.73) [5.86]							
<u>Incarceration</u>														
20 and below	12	23.5	2	66.7	1	25.0	0	0.0	2	28.6	4	21.1	3	20.0
21 - 25	21	41.2	0	0.0	2	50.0	1	33.3	3	42.8	8	42.1	6	40.0
26 - 30	9	17.6	1	33.3	1	25.0	0	0.0	2	28.6	3	15.8	2	13.3
31 - 35	6	11.8	0	0.0	0	0.0	1	33.3	0	0.0	2	10.5	3	20.0
36 and above	3	5.9	0	0.0	0	0.0	1	33.3	0	0.0	2	10.5	1	6.7
(Mean) [S.D.]	(24.59) [5.44]	(22.33) [4.03]	(22.00) [2.35]	(27.00) [4.32]	(24.89) [5.80]	(25.73) [5.86]								

4.5.18 Age At First Use of Heroin

Age at first use of heroin - the primary drug used in the first decade of addicts career was surveyed and the results are presented in Table 5.18. Addicts of Types I, II, IV and VI were found to initiate heroin use at age before 21 years old while addicts of Type V and Type III initiated use at age 22.26 years and 24.00 years, i.e. after reaching adulthood.

4.5.19 Frequency of Heroin Use During Regular Use

Frequency of heroin use during regular use for addicts of different types were surveyed. In order to compare between types of addicts on this characteristic, scores were given to the categories of frequency of use as indicated in Table 5.19. The mean score for each type is then calculated. Comparatively, the frequency of heroin use for Type III and Type IV is higher than that for the addicts of Type I, Type II Type V and Type VI.

4.5.20 Route of Administration of Heroin

The route of administration of heroin during regular drug use was surveyed and the results are summarised in Table 5.20. Comparatively, Type IV addicts have more chronic route of administration. A larger proportion of them (42.8%) were found injecting heroin. All the addicts in Type I, Type II and Type III "chased" heroin while for addicts from Type V and Type VI, majority of them "chased" heroin and a fraction of them injected.

TABLE 5.18 : AGE AT FIRST USE OF HEROIN BY TYPE

Age of first use	ALL Types (N = 51)		Type I (N = 3)		Type II (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 15)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
15 and below	7	13.7	0	0.0	0	0.0	0	0.0	3	42.8	2	10.5	2	13.3
16 - 20	18	35.3	2	66.7	2	50.0	0	0.0	1	14.3	7	36.8	6	40.0
21 - 25	16	31.4	1	33.3	2	50.0	2	66.7	1	14.3	5	26.3	5	33.3
26 - 30	7	13.7	0	0.0	0	0.0	1	33.3	2	28.6	3	15.8	1	6.67
31 and above	3	5.9	0	0.0	0	0.0	0	0.0	0	0.0	2	10.53	1	6.67
(Mean) [S.D.]	(21.39)	[5.21]	(20.33)	[2.05]	(20.50)	[2.96]	(24.00)	[2.83]	(20.00)	[5.98]	(22.26)	[5.37]	(20.87)	[5.52]

TABLE 5.19 : FREQUENCY OF HEROIN USE DURING REGULAR USE BY TYPE

Frequency	ALL Types (N = 51)		Type I (N = 3)		Type II (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 15)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Once daily (1)	1	2.0	0	0.0	0	0.0	0	0.0	0	0.0	1	5.3	0	0.0
2-3 times daily (2)	30	60.0	2	66.6	3	75.0	1	33.3	3	42.9	11	57.9	10	71.4
4 times or more daily (3)	19	38.0	1	33.3	1	25.0	2	66.7	4	57.1	7	36.8	4	28.6
(Mean)[S.D.]	(2.36)	[0.52]	(2.33)	[0.47]	(2.25)	[0.43]	(2.66)	[0.47]	(2.57)	[0.49]	(2.32)	[0.57]	(2.29)	[0.45]

TABLE 5.20 : ROUTE OF ADMINISTRATION OF HEROIN DURING REGULAR USE BY TYPE

Rate	ALL Types (N = 51)		Type I (N = 3)		Type II (N = 4)		Type III (N = 3)		Type IV (N = 7)		Type V (N = 19)		Type VI (N = 15)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Smoke	3	6.0	0	0.0	0	0.0	0	0.0	1	14.3	0	0.0	2	14.3
Inject	10	20.0	0	0.0	0	0.0	0	0.0	3	42.8	4	21.0	3	21.4
Chase the dragon	37	74.0	3	100.0	4	100.0	3	100.0	3	42.9	15	79.0	9	64.3

TABLE 5.21 : SEVERITY OF HEROIN USE BY TYPE

Types	Score				Mean	S.D.
Type I (N = 3)	4.50	7.50	15.00	-	9.00	4.42
Type II (N = 4)	7.50	15.00	15.00	18.75	14.06	4.09
Type III (N = 3)	22.50	22.50	22.50	-	22.50	0
Type IV (N = 7)	18.75	18.75	24.00	25.00	25.25	5.17
Type V (N = 19)	18.00	22.50	22.50	22.50	25.50	4.30
	22.50	22.50	22.50	22.50		
	22.50	22.50	27.00	27.00		
	27.00	27.00	27.00	30.00		
	30.00	34.50	34.50			
Type VI (N = 15)	19.50	22.50	22.50	22.50	24.80	3.28
	22.50	22.50	22.50	22.50		
	24.00	27.00	27.00	27.00		
	30.00	30.00	30.00			
All types	All the above				23.22	6.16

Possible score range : 2.125 - 34.50

4.5.21 Severity of Heroin Use

The severity of heroin use was measured by a drug use scale proposed in an earlier study on the institutionalised addicts in Malaysia (Dittmar, Ratnasingam and Navaratnam, 1984). The drug use scale is based upon the type of drug use, the frequency of use, the route of administration and the duration/period of use.

Please refer to Appendix B for the detailed description on the drug use scale applied. By referring to the mean score on this scale indicated in Table 5.21, the severity of heroin use for Type IV and Type V was very high while the severity of heroin use was very low for Type I and low for Type II comparatively. The severity of heroin use for Type VI and Type III was high. Generally, the severity of heroin use for Type I and Type II was much lower when compared to addicts of Types III, IV, V and VI.

5.0 DISCUSSION

The data which have been assembled regarding the long-term correlates of narcotic addiction among the 51 addicts in the community can do little more than serve as a basis for hypothesis concerning the effects of addiction on the lives of those who acquire the drug taking habit. However, in this seemingly homogeneous group, several distinct types of pre-addiction and post-addiction life patterns are discernible. In-depth examination on the long-term social adjustments of these addicts revealed that the addicts were indeed heterogenous along the dimensions like involvement in addiction and criminal deviancy. In this report, a typology for the first 10 years of the careers of 51 narcotic addicts is presented. In constructing this typology, the amount of time spent in each of the following activities are taken into account:-

- a. Addicted in the community;
- b. In the community and not addicted (voluntary abstinence);
- c. Incarcerated/Hospitalised/in treatment (involuntary abstinence).

In all, six types of addicts were identified from the 51 narcotic addicts in this study.

In working with the typology used in this report, the classification of addicts into different types could well be affected not only by their personal and social characteristics but also by social forces and pressures that changed over time. Over the span of the study, from the aspect of supply reduction, the law and enforcement governing the availability and distribution of narcotic drugs have changed considerably. This led to changes in the economic social climate surrounding the heroin addicts. The problem of drug abuse was announced as the security problem of the country in Malaysia in 1983, and since then the law enforcement and the judicial processing of narcotic offences has become more vigorous. Certainly when this happened, the expectation is that there will be a decrease in the number of addicts who can/able to maintain their addiction over as much as 75% of a ten year period. On the other hand, an increase in the number of addicts who abstained from drugs or incarcerated is expected. The above phenomena may have influenced the addict careers of these respondents and thus the outcome of the assignment of addicts to types using the present typology. Secondly, under stringent law enforcement, it is hypothesized that those addicts who could remain addicted with little or no interruption would be more homogeneous and were purer representatives of the "highly" and "very highly" involved

addicts (Type V and Type VI). Conversely, those whose type classification depended mainly on voluntary and involuntary abstinence (abstained from drugs voluntarily, incarcerated, hospitalized and in treatment) would become a more heterogeneous group.

However, should law enforcement become less vigorous, it would be easier to maintain an uninterrupted narcotic career and the type representing those who had such a career of addiction would be less homogeneous with respect to factors associated with maintenance of the narcotic habit.

From the other aspects on demand reduction, the change in the extent of implementation of relapse prevention programmes/activities over time will have effect on the maintenance of uninterrupted voluntary abstinence during the addiction career. Effective relapse prevention programmes/activities implemented during the course of the study might make it easier for addicts to maintain an uninterrupted voluntary abstinence. Certainly, this will have influence on the homogeneity of the addicts whose type classification depended mainly on voluntary abstinence (Type I and Type III) to become a less homogeneous group.

The fluctuations and variations in the economic climate and social climate surrounding the heroin addicts due to the change in the vigorosity of the law enforcement governing the availability and distribution of narcotic drugs are by no means quantifiable.

As a result, the degree to which these fluctuations and variations have affected the outcome of the assignment of addicts to types using the typology is unknown.

In view of the difficulties which arose as a result of these fluctuations and variations, the extent to which personal and social characteristics could be found to differentiate among the addict types were examined in a systematic manner.

Overall, the personal and social characteristics such as employment status, source of income, relationship with family, leisure time spent with social associates, leisure time spent alone, social associate inventory score, involvement in illegal activities and the drug use pattern such as age of initiation, frequency and route of administration of heroin and the severity of heroin use were found to be the differentiable characteristics between the types of addicts.

One of the dimensions examined in this typology is the social adjustment of these addicts in the community. Effectiveness of the social adjustment made will reflect the social competencies of these addicts in survival. In this respect, two distinct

types of social competencies among these addicts were observed in the study. On one hand, the competent addict is described as one in sufficient control of his addiction to be able to quit and remain voluntarily abstinent for a long period of time. On the other hand, an addict who can manage his addiction without any interruption for a long period of time is regarded as socially competent. In both cases, the addicts had successfully avoided incarceration or getting into trouble with law and enforcement over a long period of time.

On the dimension of criminality, a group of addicts who were criminally deviant individuals and their central life interest or major social role was to pursue means necessary to contain their deviancies is observed. For these addicts, their addiction career is usually interrupted by incarceration (involuntary abstinence) when narcotics is not available in the institution. The high frequency of incarceration during the ten-year period (average of 4.25 times) indicates the incompetency of these addicts in avoiding the negative consequence (incarceration) during their addiction career. "Favourable" social adjustment to maintain and manage their addiction without any interruption was weak even though they were incarcerated for a number of times.

6.0 CONCLUSION

In studying the 51 addicts who are in the drug scene for at least a period of ten years, it is found that the population studied are heterogenous and clearly contains several different types of addicts. Obviously, with a more general population of addicts which include those in treatment centre and in other social-cultural settings, a much greater heterogeneity will be observed. Current approach which involves a typology of addict careers built upon the concepts of the degree to which drug-taking is the central life interest and the willingness to abstain from drug voluntarily, has successfully classified these addicts into six different groups. The implications from the heterogeneity of the addicts and the possibility to classify addicts into different types is that: current programmes on prevention, treatment and rehabilitation, and relapse prevention should take into account the heterogeneity of addicts and their personal and social characteristics to achieve better results.

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APPENDIX A

Social Association Inventory

A. In the last 30 days/before regular drug use/during regular drug use did everyone living with you or anyone you know well.

	<u>Answer</u>	<u>Score</u>
a. Drink alcohol on a daily regular basis.	Yes No	1 0
b. Use ganja or marijuana	Yes No	3 0
c. Use heroin or other opiates for non-medical use	Yes No	10 0
d. Use any other drugs for non-medical use	Yes No	6 0
e. Use another persons prescription drugs	Yes No	4 0
f. Get arrested for any other reason except traffic violations	Yes No	6 0

B. In the last 30 days/before regular drug use/during regular drug use, how much of your free time did you usually spend with friends who use illegal drugs.

	<u>Index</u>
a. A lot	1.50
b. Some	1.00
c. Little	0.75
d. None	0.50

Method of Scoring

To get the score for the Social Association Inventory, firstly, the total score for section A is calculated by adding up individual score for each sub-section (a. to f.). The total score obtained for section A is the Lifestyle Score (abbreviated as L.S.).

Next, the index for the amount of leisure time spent with friends who use illegal (abbreviated as LTS) is decided with reference to the response given in Section (B).

To get the overall total score for the Social Association Inventory, the following formula is applied:-

$$\frac{1}{6} \times 2LS \times LTS$$

The range of the score on Social Association Inventory is from 0 to 7.5. High Score indicates frequent association with friends who use illegal drug while low score indicates less association with these associates.

APPENDIX B

DRUG USE SCALE

A drug use scale was developed by Dr. V. Navaratnam at National Drug Research Centre. Numerical values were assigned to various drugs, methods of ingestion, amount ingested and duration of use based on the pharmacology, pharmacokinetic and pharmacodynamic behaviour of the different drugs. The values assigned were as follows:-

Drug Type	Method of Ingestion
Ganja (cannabis) - 1	eat or drink - 1
barbiturates - 2	(heroin) spiked cigarette - 3
tranquillisers - 2	pipe - 3
amphetamines - 2	(ganja) cigarette - 2
hallucinogens - 2	chase the dragon - 5
opium - 3	injection - 10
morphine - 5	
heroin - 5	

Amount Ingested

less than once per week	0.5
one-three times per week	1
four-seven times per week (daily)	2
eight-thirteen times per week	3
fourteen-twenty times per week (twice daily)	4
twenty-one - twenty-seven times per week (three times daily)	6
twenty-eight or more times per week (four times daily)	8

Duration

less than one year	- 0.13
one year	- 0.25
two years	- 0.50
three years	- 0.75
four years	- 1.0
five years	- 1.25
six or more years	- 1.50

Data was taken from the Drug Use History Form filled out by residents of Bukit Mertajam and Batu Gajah. It was analysed and assigned numerical values according to the scales. For each individual, the following formula was then applied to produce a single number, the Drug Use Score:

Formula was = (Drug + Method + Amount) x Duration

So, for example, a subject reporting daily use of ganja by smoking in a water pipe for three pipes for three years would receive a score of:

$$[1 (\text{ganja}) + 3 (\text{pipe}) + 2 (\text{Daily})] \times 0.75 (\text{three years}) = 4.5$$

A subject reporting once-weekly use of barbiturates for one year and additionally, twice daily use of heroin using the chase method for one year would receive a score of:

$$[[2 (\text{barbiturates}) + 1 (\text{eat})] 1 (\text{once weekly})] \times 0.25 (\text{one year}) = 1$$

$$[[5 (\text{heroin}) + (\text{chase}) + 4 (\text{twice daily})] \times 0.25 (\text{one year}) = 3.5$$

In case of multiple drug use, the scores would be added in this case $1 + 3.5 = 4.5$ for the total drug score.

APPENDIX C

SOCIAL ASSOCIATION INVENTORY

Scores on Social Association Inventory for the addicts:-

Case No	Period	Lifestyle Score (LS)	Leisure Time Spent Score (LTS)	Social Association Inventory Score (Formula = 1/6 x LS x LTS)
0001	Current	20	0.75	2.50
	Before	14	1.50	3.50
	During	14	1.50	3.50
0002	Current	0	1.00	0
	Before	17	1.00	2.83
	During	20	0.75	2.50
0003	Current	0	0.50	0
	Before	20	1.00	3.33
	During	26	1.50	6.50
0004	Current	0	0.50	0
	Before	0	1.50	0
	During	20	1.50	5.00
0005	Current	0	0.50	0
	Before	20	1.50	5.00
	During	25	1.50	6.25
0006	Current	4	1.00	0.67
	Before	4	1.50	1.00
	During	14	1.50	3.50
0007	Current	10	1.50	2.50
	Before	0	0.50	0
	During	10	1.50	2.50
0008*	Current			
	Before	4	1.50	1.00
	During	14	1.50	3.50
0009	Current	14	1.50	3.50
	Before	5	0.75	0.625
	During	26	1.50	6.50
0010	Current	0	1.50	0
	Before	14	1.50	3.50
	During	10	1.50	2.50
0011	Current	16	1.50	4.00
	Before	14	1.00	2.33
	During	20	1.00	3.33

Case No	Period	Lifestyle Score (LS)	Leisure Time Spent Score (LTS)	Social Association Inventory Score (Formula = 1/6 x LS x LTS)
0012	Current	14	0.75	1.75
	Before	4	0.75	0.50
	During	20	0.75	2.50
0013	Current	1	0.75	0.125
	Before	20	1.50	5.00
	During	14	1.50	3.50
0014	Current	0	0.50	0
	Before	19	1.00	3.17
	During	16	1.50	4.00
0015	Current	13	0.75	1.625
	Before	20	0.75	2.50
	During	14	1.00	2.33
0016	Current	0	1.50	0
	Before	19	0.75	2.375
	During	20	1.00	3.33
0017	Current	16	1.00	2.67
	Before	20	1.00	3.33
	During	20	1.00	3.33
0018	Current	0	0.50	0
	Before	13	1.50	3.25
	During	26	1.50	6.50
0019	Current	6	1.50	1.50
	Before	17	1.00	2.83
	During	26	1.50	6.50
0020	Current	14	1.50	3.50
	Before	20	1.50	5.00
	During	26	1.50	6.50
0021	Current	0	1.50	0
	Before	4	1.50	1.00
	During	20	1.50	5.00
0022	Current	4	0.75	0.50
	Before	20	1.00	3.33
	During	14	1.00	2.33
0023	Current	0	1.50	0
	Before	11	0.75	1.375
	During	11	1.50	2.75

Case No	Period	Lifestyle Score (LS)	Leisure Time Spent Score (LTS)	Social Association Inventory Score (Formula = 1/6 x LS x LTS)
0024	Current	9	1.50	2.25
	Before	20	1.50	5.00
	During	20	1.50	5.00
0025	Current	14	1.00	2.33
	Before	11	0.75	1.375
	During	14	1.50	3.50
0026	Current	0	0.50	0
	Before	19	1.00	3.17
	During	25	1.50	6.25
0027	Current	0	0.50	0
	Before	21	1.50	5.25
	During	24	1.50	6.00
0028	Current	19	1.00	3.17
	Before	0	1.50	0
	During	0	0.75	0
0029*	Current			
	Before	20	0.50	1.67
	During	20	0.75	2.50
0030	Current	0	0.50	0
	Before	0	0.50	0
	During	20	1.00	5.00
0031	Current	1	0.75	0.125
	Before	14	1.00	2.33
	During	14	1.50	3.50
0032	Current	14	1.50	3.50
	Before	11	1.00	1.83
	During	14	1.50	3.50
0033	Current	0	0.50	0
	Before	26	1.50	6.50
	During	11	1.00	1.83
0034	Current	1	0.50	0.08
	Before	14	1.00	2.33
	During	20	1.50	5.00

Case No	Period	Lifestyle Score (LS)	Leisure Time Spent Score (LTS)	Social Association Inventory Score (Formula = 1/6 x LS x LTS)
0035	Current	0	0.50	0
	Before	4	1.00	0.67
	During	14	1.00	2.33
0036	Current	0	0.50	0
	Before	3	1.00	0.50
	During	13	1.00	2.17
0037	Current	10	0.50	0.83
	Before	20	1.50	5.00
	During	26	1.50	6.50
0038	Current	0	0.50	0
	Before	10	1.50	2.50
	During	20	1.50	5.00
0039	Current	19	1.50	4.75
	Before	26	1.00	4.33
	During	20	1.50	5.00
0040	Current	0	1.50	0
	Before	14	1.50	3.50
	During	14	1.50	3.50
0041	Current	0	0.50	0
	Before	20	1.50	5.00
	During	20	1.50	5.00
0042	Current	6	1.50	1.50
	Before	20	0.75	2.50
	During	14	1.00	2.33
0043	Current	1	0.50	0.08
	Before	4	1.00	0.67
	During	14	1.50	3.50
0044	Current	13	1.50	3.25
	Before	18	1.00	3.00
	During	14	1.50	3.50
0045*	Current	-	-	-
	Before	20	1.00	3.33
	During	20	1.00	3.33
0046	Current	0	0.75	0
	Before	19	1.50	4.75
	During	26	1.50	6.50

Case No	Period	Lifestyle Score (LS)	Leisure Time Spent Score (LTS)	Social Association Inventory Score (Formula = 1/6 x LS x LTS)
0047	Current	17	0.75	2.125
	Before	14	1.50	3.50
	During	26	1.00	4.33
0048	Current	16	0.75	2.00
	Before	14	1.00	2.33
	During	26	1.00	4.33
0049	Current	0	0.50	0
	Before	20	1.50	5.00
	During	14	1.50	3.50
0050	Current	0	1.50	0
	Before	14	1.50	3.50
	During	14	1.50	3.50
0051	Current	17	0.75	2.125
	Before	20	1.50	5.00
	During	13	1.50	3.25

Cases : 0008, 0029 and 0045 - No information sheet on current lifestyle and leisure time spent.

List of publications for the Centre for Drug Research, Universiti Sains Malaysia.

MONOGRAPH SERIES

1. The Misuse of Drugs Among Secondary School Children in the State of Penang and Selangor.
Monograph Series No. 1.
2. Drug Abuse Among Malaysian Youths - Originally Published as "A Study of the Misuse of Drugs Among Secondary School Children in the States of Penang and Selangor".
Monograph Series No. 2.
3. Opiate Consumption Pattern in Asia.
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4. A Survey of Drug Abuse Prevention Strategies.
Monograph Series No. 4.
5. Assessment of Drug Dependence in Malaysia - A Trend Analysis.
Monograph Series No. 5.
6. Assessment of Drug Dependence in Malaysia - An Update Analysis 1985 and 1986.
Monograph Series No. 6.
7. Abuse of Volatile Solvents and Inhalants: Papers Presented at W.H.O. Advisory Meeting.
International Monograph Series No. 1.

RESEARCH REPORT SERIES

1. A Study on the Misuse of Drugs Among Secondary School Children in the State of Kelantan.
Research Report No. 1.

2. A General Overview on the Practices Relating to the Traditional Treatment of Drug Dependence in Malaysia. Research Report No. 2.
3. A Comparative Analysis of the Psychological Profile of Drug Using And Non-Drug Using Population. Research Report No. 3.
4. An Overview of Dadah Use in a high Risk Area - Rifle Range Flats. Research Report No. 4.
5. Impact of Scheduling Drugs Under the 1971 Convention on Psychotropic Substances - The Benzodiazepines Reappraised. Research Report No. 5.
6. A Study on Comparative Study of EMIT vs GC-MS In the Determination of Cannabis in Urine.
7. An Evaluating Study of the Waters QA-1 Quality Analyser Liquid Chromatograph. Research Report No. 7.
8. Impact of Scheduling Drugs under the 1971 Convention on Psychotropic Substances - A Follow-up Study. Research Report No. 8.
9. A Study Into Certain Aspects of Drug Education Programmes in Malaysian Schools. Research Report No. 9.
10. A Study of Opinions Regarding Selected Posters on Drug Education. Research Report No. 10.
11. A Comparative Analysis of the Psychological Profile of Institutionalised Drug Using Population. Research Report No. 11.
12. Analytical Methods for the Identification And Confirmation of the Principal Cannabinoid Metabolite In Urine. Research Report No. 12.
13. A Comparative Study of the Psychosocial Profile of Drug Using and Non-Drug Using School Children. Research Report No. 13.
14. Women Involved in Drug Dependence in Malaysia - A Preliminary Study. Research Report No. 14.
15. Laporan Awal Penilaian Keberkesanan Rancangan-Rancangan Seliaan PEMADAM. Siri Laporan Penyelidikan No. 15.
16. Natural History of Heroin Addiction and Adjunctive Drug Use. Research Report No. 16.
17. Determination of Naltrexone Dosage for Narcotic Against Blockade in Detoxified Asian Addicts. Research Report No. 17.
18. Kajian Tentang Ilmu Pengetahuan Kesihatan Pelajar-Pelajar Sekolah Rendah. Siri Laporan Penyelidikan No. 18.
19. Kajian Tentang Ilmu Pengetahuan Kesihatan Dan Sikap Terhadap Penggunaan Dadah Pelajar-Pelajar Sekolah Menengah. Siri Laporan Penyelidikan No. 19.
20. Kajian Tentang Ilmu Pengetahuan Kesihatan Dan Sikap Terhadap Penggunaan Dadah Guru-Guru Pelatih. Siri Laporan Penyelidikan No. 20.
21. Women Involved in Drug Dependence in Malaysia An In-Depth Study. Research Report No. 21.
22. An Evaluation and Development of Chromatographic Methods for The Study of Chemical Profiles of Illicit Heroin Samples. Research Report No. 22.

SIRI LAPORAN TERHAD

1. Dokumentasi Rancangan Pemulihan Pusat Serenti Tampin.
2. Penilaian Rancangan Pemulihan Pusat Serenti Tampin.

NDRC/0567/B-MONOG