BARBADOS
INTERNATIONAL ARRESTEE DRUG ABUSE MONITORING PROGRAMME

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Prepared for the The National Council on Substance Abuse (NCSA), in association with the National Task Force on Crime Prevention (NTFCP)

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FORWARD

The National Council on Substance Abuse (NCSA), in collaboration with the National Task Force on Crime Prevention (NTFCP), has completed its first ever International Arrestee Drug Abuse Monitoring (I-ADAM) programme. The I-ADAM programme is a research tool that combines survey methodology with direct biological sampling to produce information on substance use among arrestees. The study used a questionnaire to collect self-reported information on drug use and related issues. It also collected voluntary urine samples from respondents which were analyzed to identify any drug(s) the respondents had recently used.

The I-ADAM was conducted at the Central Police Station and was based on completed interviews of approximately 436 persons who were arrested and charged between November 22nd 2002 and February 1st 2003.

The goal is to develop a standardized drug surveillance system that will provide for comparison of drug prevalence among arrestees within and across the national boundaries. The purpose of this survey was to   collect empirical evidence of patterns of drug abuse and provide an effective vehicle for understanding the changing nature of the drug problem as well as providing the context for developing enforcement, treatment, and prevention strategies that are attuned to local drug problems.

ACKNOWLEDGMENTS

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Executive Summary

The extent to which individuals who are detained by the police are drug users is a matter of policy significance as drug-using offenders commits disproportionately more crimes than their non-drug using colleagues.

In this study the level and type of drug use among a sample of arrestees from the central booking facility in Barbados were examined using the I-ADAM methodology – a programme designed to measure the extent of drug use in the high-risk population of people who have been arrested. The purpose of the study was to collect empirical evidence of patterns of drug abuse and provide an effective vehicle for understanding the changing nature of the drug problem as well as providing the context for developing enforcement, treatment, and prevention strategies that are attuned to local drug problems

Self-report data indicated that marijuana was the most used illicit substance. Its use was high with 69.5% of arrestees having used it in their lifetime and half of the arrested (50.2%) having used it in the 30-day period prior to the survey. The next most used illicit substance was crack cocaine. Lifetime use was 17.2% or about one in every six arrested. Annual prevalence fell to 11.2% and current prevalence to 10.1% or one in every ten arrested. The urinalysis results indicate that cannabis and cocaine (un-differentiated from cocaine powder and crack cocaine) were the most commonly used drugs with 48.4% testing positive for cannabis and 15% for cocaine. It must be borne in mind that only 35.1% of the arrestees provided a urine sample so the urinalysis denominator relates only to 153 arrestees. In total 58% of arrestees were positive to at least one illicit drug.

Some 9.9% (43/436) of arrestees were charged with multiple offences, but of those participants, who supplied a urine sample, 90.8% had only one charge and 9.2% or (14/153) had a multiple offence charge against them. Assault offences were the most commonly charged offence among detainees (27.1%). Drug offences (17%) and theft (14.2%) were the most common charges followed by weapons offences (5.4%) and burglary (5%).

Among the assault offenders (the dominant charge in this study) who gave a urine sample, (n=43), 41.9% tested positive for cannabis while 7% were positive for cocaine. Among those charged with drug offences (n=27), 55.6% were positive for cannabis and 25.9% for cocaine. Theft offenders were 33.3% positive for cannabis and 28.6% for cocaine. For those charged with weapon offences (n=7), cannabis use was very high (85.7%) as well as 100% positive for cocaine use. A little more than half (55.6%) of burglary offenders (n=9) were positive for cannabis but only 22% were positive for cocaine. All persons charged with robbery were positive for both cannabis and cocaine and this was the case for the one person charged with violence.

Some 24.5% (107/436) arrestees said yes drug was connected in some way to their criminal activity while 1.6% were unsure. In relation to alcohol, 11.2% (49/436) said yes alcohol was a factor while six others (1.4%) were unsure. For arrestees who indicated drugs as a factor, most (7.4%) or 34 persons said it was "through being involved with the drug trade". A further 7.3% (32 persons) said it was "through the effect of drugs on judgment", while 6% (6 persons) said it was "through the need to buy drugs". The perceived influence of alcohol use and criminal activity showed that almost all persons (46 of 49) said it was "through the effects of alcohol on judgment". The other 3 persons said it was "through the need for money to buy alcohol".

A little more than a third (35.3%) of all arrestees reported that they had purchased drugs in the last month and about four of every ten or 40.6% in the last year. Of those persons who purchase drugs in the last year, 83.6% had purchased marijuana (148/177) while 16.4% (29/177) had purchased cocaine. 79.7% (122/154) of purchase in the last month was for marijuana and 19.6% (30/154) was for cocaine.

Since this study is the only programme to date that have used urinalysis methods for determining accurately the recent substance use in this at-risk population one can now use this evidence to shape policies and effect targeted programmes for this population. It should serve as an effective contribution to the body of knowledge and the ongoing collecting and exchange of information on the crime-related aspects of drug abuse and crime and on strategies for its control and prevention. This contribution would be useful to the work of not only the National Council on Substance Abuse by also for the Justice System, the National Task Force on Crime Prevention

and the many government and interested organizations in strengthening and supplementing their work in the field.

The two main recommendations would be for the local criminal justice agencies and the national council on substance abuse to use this now scientifically sound evidence about the nature and extent of drug use among the arrestee population to develop drug-control strategies and related interventions. Furthermore, attempts should be made to do further analyses of the data base in relation to mapping the geographic concentrations of drug/crime related activities with a view to implementing community actions or inter-agency collaboration towards prevention and or treatment for the at-risk/high-risk population.

SNAP-SHOT OF FINDINGS

- Marijuana was the most used illicit substance. Its use was high with seven of every ten arrested (69.5%) having used it in their lifetime and half of the arrested (50.2%) having used it in the 30-day period prior to the survey

- The next most used illicit substance was crack cocaine. Lifetime use was 17.2% or about one in every six arrested. Annual prevalence fell to 11.2% and current prevalence to 10.1% or one in every ten arrested

- In relation to cocaine powder, use was low overall, twenty-one persons (4.8%) indicated using cocaine powder in their lifetime

- Heroin, ecstasy and LSD use was very low (2.1, 0.9 and 1.6% lifetime use respectively)

- Of the four drugs analysed by urinalysis in this study, (cocaine, cannabis, amphetamine and opiates), two drugs - cannabis (marijuana) and cocaine (both crack cocaine and cocaine powder) were used most often by arrestees

- Urinalysis revealed that 48.4% of arrestees had used marijuana recently. Interview-based information confirms the ever-present pattern of high marijuana use (some 47.7% of arrestees who gave a urine sample said they had used marijuana in the last 30 days

- Urinalysis revealed that 15% or about one in every seven had used cocaine (undistinguished here between crack and powder). In view of the fact that only six persons overall indicated using powdered cocaine in the last month and three in the 30-day period before the interview, one can reasonable conclude that most if not all cocaine positive revealed by urinalysis indicated the use of crack.

- There were strong indications that employment status was a factor in the use of various types of drugs. For all substances unemployed arrestees were more likely than employed arrestees to test positive for cocaine, cannabis and alcohol

- The size of the effect for unemployment was especially large for cocaine. More than twice as many unemployed arrestees as employed arrestees (27.3% in contrast to 13%) tested positive for cocaine. Six times more unemployed than employed tested positive for multiple drugs (18.2% in contrast to 3.1%)

- Overall, the analysis revealed that a substantial proportion of detained arrestees were treated for drug abuse in the past (10.1%)

- Overall 18.1% of arrestees indicated they needed treatment with 2.3% or 10 persons saying they were unsure. The vast majority of those who said they needed treatment were males, 96.2% (76/79) – 18.8% of all males compared to only 8% of females

- Of those who gave a urine sample, some 79.3% of persons, (23/29) who indicated they needed treatment also had a positive urine sample for an illicit drug

- The percentage of arrestees who had used alcohol in the year before they were interviewed and who were treated was very low (only 7% - 24/343). 20.1% of arrestees said they needed treatment for drug or alcohol use

- About 18% (79/436) indicated they had used some type of prescription drug in the last three days. A greater proportion of females reported this use (36% of females compared to 17.3% of males)

- 9.9% (43/436) were charged with multiple offences, but of those participants who supplied a urine sample (n=153), 90.8% had only one charge and 9.2% or (14/153) had a multiple offence charge against them

- Assault offences were the most commonly charged offence among detainees (27.1%). Drug offences (17%) and theft (14.2%) were the most common charges followed by weapons offences (5.4%) and burglary (5%).

- Among the assault offenders (the dominant charge in this study) who gave a urine sample (n=43), 41.9% tested positive for cannabis while 7% were positive for cocaine. Among those charged with drug offences (n=27), 55.6% were positive for cannabis and 25.9% for cocaine. Theft offenders were 33.3% positive for cannabis and 28.6% for cocaine. For those charged with weapon offences (n=7), cannabis use was very high (85.7%) as well as 100% positive for cocaine use. A little more than half (55.6%) of burglary offenders (n=9) were positive for cannabis but only 22% were positive for cocaine. All persons charged with robbery were positive for both cannabis and cocaine and this was the case for the one person charged with violence

- Some 32.6% had a prior charge during that period. However, 67.4% indicated that they were not charged with any offence during that period. Most prior offences were: assault (8.9%); drugs (7.6%); theft (4.6%); and robbery (3%). Arrestees also indicated burglary (2.1%), weapon offences (2.1%), property offences by five persons and violence by three persons

- Prior to this arrest, 48.6% of current arrestees had served a prison term, been fined, or was placed on probation - (16% of females and 51.1% of males; 49.1% of Barbadian nationals compared to 43.9% of other nationals). The dominant prior offence, for which arrestees were fined, imprisoned or placed on probation was drug offences (14%), this was followed by assault (9.2%); theft (8.7%); robbery (4.1%); burglary (3.9%); weapon offences (2.5%); violence, property offence and fraud 1.1% or 5 persons each

- Quite a few arrestees indicated that they had committed offences within the last month for which they were not charged. The main offence was drug related, noted by 21 persons or 4.8% of arrestees

- Fifty-six arrestees or 12.8% were currently on bail for a previous offence. Nine (2.1%) were under a probation order; five (1.1%) were on a bond order to keep the peace; two were on conditional discharge and three on some other type of court order

- Some 24.5% (107/436) arrestees said yes drugs were connected in some way to their criminal activity while 1.6% was unsure. In relation to alcohol, 11.2% (49/436) said yes alcohol was a factor while six others (1.4%) were unsure

- For drugs as a factor, most (7.4%) or 34 persons said it was "through being involved with the drug trade". A further 7.3% (32 persons) said it was "through the effect of drugs on judgment", while 6% (6 persons) said it was "through the need to buy drugs"

- The perceived influence of alcohol use and criminal activity showed that almost all persons (46 of 49) said it was "through the effects of alcohol on judgment". The other 3 persons said it was "through the need for money to buy alcohol"

- Twice as many males compared to females said drugs were connected with their offending in contrast to alcohol (25.4% for drugs in contrast to 11.6% for alcohol). For females the difference was less marked (12% for drugs and 8% for alcohol)

- A higher proportion of arrestees of other nationality said drugs were a factor in their present or past criminal offending when compared to Barbadian nationals (29.3% in contrast to 24.1%). However a smaller proportion of Barbadian nationals compared to "other nationals" said alcohol was a factor in their offending (4.9% in contrast to 11.9%)

- A little more than a third (35.3%) of all arrestees reported that they had purchased drugs in the last month and about four of every ten or 40.6% in the last year.

- Of those persons who purchased drugs in the last year, 83.6% had purchased marijuana (148/177) while 16.4% (29/177) had purchased cocaine. 79.7% (122/154) of purchase in the last month was for marijuana and 19.6% (30/154) was for cocaine

- 96.7% of purchases were cash purchases, and four (3.3%) were non-cash purchases. Crack cocaine was the substance for which cash-only transactions were highest

- The street was the most frequent location where arrestees reported last purchase for drugs overall (22.2% of the times). 'on the block' (13.1%). More than half of the drugs purchased overall in the last 30 days by arrestees was done in a district other than their own, 52.6% were purchased outside their own district in contrast to 47.2% in own district

- With only 68 episodes of failure to complete a drug transaction reported, it would appear that for the most part, most arrestees had no difficulty in completing a drug transaction. The reasons for transaction failure varied to some extent by type of drug (marijuana compared to crack cocaine)

- The reason most commonly reported was "poor quality", indicated for 20 of the 68 episodes (29.4%), this was followed by "insufficient cash" (12/68 or 17.6%), and police activity (9/68 or 13.2%). Lack of availability overall was only cited for four episodes and drug shipment seizure for six episodes

- Of those deterred by police activity, 69.2% of the times the purchase was for marijuana and 30.8% of the times for crack. Two-thirds of the transactions deterred because of "insufficient cash", "lack of availability" and "drug shipment seizure" was also for marijuana. The largest proportion of failure for any of the drug types purchase was in the case of marijuana, deterred because of "poor quality" (90.9% of the episodes reported)

- Some 7.4% of arrestees had sold an illegal drug in the last year and 5% in the last month. Of those arrestees who sold illegal drugs in the last year (n=32), 81.3% had sold marijuana and 18.7% crack cocaine. Of those who sold drugs in the last month (n=22), 85.7% had sold marijuana and 14.3% crack cocaine

- The usual method of payment when selling an illegal drug was cash. 95.5% of payment in the last 30 days was for cash and 4.5% by some other method. Crack cocaine was the substance for which another method of payment was used at the last payment

- Only 11 episodes of failure to complete a drug sale were reported. The reasons for transaction failure were all related to the sale of marijuana except for one mention of failure in relation to the sale of cocaine. The reason most commonly reported was "poor quality" and "drug not available", indicated for 3 of the 11 episodes (27.3%) each. This was followed by "police activity" (2/11) and "drug shipment seizure" also 2/11 episodes

- A small proportions of arrestees indicated that they owned a gun (2.6% or 11/436) – all males, all Barbadian nationals and in relation to age groupings, 45% were in the 20-29 yrs age group and 27.3% in the 30-39 yrs age group. All 11 arrestees reported that the gun they owned was an un-licensed firearm

- Some 9.6% (41/436) of arrestees said they had access to a gun – one female and 40 males

- 6.8% (29 arrestees) indicated that they had used a gun when committing a crime. A large proportion (69.3%) had not used any weapon in committing crimes but some 44 episodes (10.1%) were connected to the use of machete; 35 episodes (8%) to the use of knives; 12 episodes (2.8%) to the use of club sticks and another 42 episodes (9.6%) to the use of some other weapon

SECTION 1

INTRODUCTION

Background

I-ADAM is a component of the ADAM program, established by the National Institute of Justice (NIJ), the research arm of the U.S. Department of Justice, to monitor drug abuse among detained arrestees in urban jurisdictions throughout the United States. The forerunner of ADAM was the Drug Use Forecasting (DUF) program. Launched in 1987 by NIJ, DUF demonstrated the feasibility of urinalysis as an effective means of measuring drug abuse by arrestees. By focusing on arrestees, NIJ created in the ADAM program an effective method of studying hardcore drug use. Because they often do not reside in households stable enough to be included in broad community household surveys, hardcore drug users are often not counted in those surveys (for example, in National Household Survey on Drug Abuse), and they often drop out of school and thus are not included in periodical surveys of drug use by high school students. Interviewing arrestees in detention facilities is also more cost-effective than interviewing hardcore drug users at the street level using ethnographic sampling strategies.

The International Arrestee Drug Abuse Monitoring programme measures the extent of drug use in the high-risk population of people who have been arrested. I-ADAM **aims** to integrate the process of monitoring drug abuse by arrestees at the international level and the research related to that process. I-ADAM will be the first international drug prevalence program to generate standardized data on drug abuse among the high-risk population of detained arrestees. It will serve as a base for coordinating drug-related research and drug control policies within and among participating countries. The goal is to develop a standardized drug surveillance system that will provide for comparison of drug prevalence among arrestees within and across the national boundaries.

Purpose
To collect empirical evidence of patterns of drug abuse and provide an effective vehicle for understanding the changing nature of the drug problem as well as providing the context for developing enforcement, treatment, and prevention strategies that are attuned to local drug problems.

Objectives
1. To analyse the association between drug use and criminal activity (drugs and crime; sources of illegal income for arrestees, drug dependency; use of substance abuse treatment, drug market dynamics; etc.)
2. To provide information for criminal justice policy
3. To establish a standardized surveillance system for monitoring arrestee drug use rates

Programme Methodology

Catchment Area
The entire country was used as the catchment area for this study due to the fact that all arrested persons are processed at one central location, the Central Police Station in Bridgetown.

Sampling

The overriding data collection objective under I-ADAM is to obtain a probability sample that allows each site to estimate both the proportion of arrestees in the country testing positive for drugs and to determine the number of arrestees who would test positive for drugs had all been interviewed. The study was conducted at the Central Police Station and was based on completed interviews of approximately 436 persons who were arrested and charged between November 22nd 2002 and February 1st 2003. These volunteers were arrested no more than 48 hours prior to the time of data collection. The sampling method attempts to select cases systematically to sample arrestees during the period of the day with the highest arrestee volume as well as randomly selected arrestees over the remainder of each 24-hour period to sample those booked when interviewers are not on site.

Probability Sampling

Arrestees are sampled proportionally from the stock and flow to represent the distribution of all arrests throughout the day. The probability of selection and assignment of case weight are calculated from an examination of data on all arrestees who were booked at the facility during the period interviewers were on site.

Data Collection

Voluntary and confidential interviews were administered to detainees who had been at the facility for less than 48 hours. Interviews were conducted during three 8-hour shifts every day for the first week and then changed to two shifts per day for the remaining duration of the study except for Christmas and Boxing Day and New Year Day.

The I-ADAM protocol requires that the following be present at each site:
- access to the facility so that every booked arrestee has some probability of being interviewed and urine tested
- access to booking data so that an information sheet can be completed prior to the interview
- interview rooms or setting where voluntary and confidential interviews can take place
- access to facility so that urine sample can be collected
- trained interviewers who are not law-enforcement officials
- proper security for interview staff if needed

Interviewing Process

At the data-collection site, trained interviewers conducted one-on-one interviews with male and female detained arrestees and took voluntary urine specimens from those who volunteered. The interview took approximately 20 minutes to administer and was delivered under terms of strict confidentiality following the protocol. The interview process cannot be linked to the person's name and cannot be used for or against the person during booking or adjudication. While name or other personal data are not collected, a common ID number was attached to both the interview form and the specimen container so that these data can be linked.

Questionnaire

The interview is at the core of the I-ADAM programme. Information that cannot be obtained from records and urinalysis comes from this portion of the protocol. The data collection instrument used covered the following topics: (1) types of drugs used by arrestees, (2) self-reported patterns of drugs use (lifetime, past year and past 30 days, (3) self report participation in drug treatment, (4) the relationship between drug use and offences, (5) information on prior arrest history, (6) section on drug acquisition and recent use pattern that provide insight into the dynamics of not only drug markets but also on drug using and sharing. Other demographic and related data were also collected. In all there are about 300 variables in the data set for analysis.

Drug Testing Overview - Bioassays

Drug testing by urinalysis is one unique and important component of the I-ADAM programme. The Forensic Sciences Centre, Office of the Attorney General, Barbados provided testing for the study. Urine specimens were self administered and collected daily from the facility. Collection of these specimen enabled study of the relationship between self-reported indicators of drug use and the indicators of drug use based on urinalysis. At the conclusion of the interview, arrestees were asked to provide a urine sample. Of the 436 who agreed to the interview, only 35.1% (153/436) agree to give a sample. There were therefore only 153 persons who both completed an interview and provided a urine sample.

Urinalysis Versus Self-Reports

Both methods of measuring drug use have advantages and disadvantages. In combination, the two can provide a fuller picture of drug use than either would separately. The advantage of urinalysis is that it is an objective measure and does not rely on respondent recall or honesty. However, it typically measures drug use only in a period of 48 to 72 hours after consumption (with the exception of marijuana, which may be detected in heavy users as late as a month after consumption). It is unable to detect drugs used for longer periods, and it cannot detect how often a drug was used.

Self-Reports

This measure, obtained from interviews, has the advantage of being able to measure drug use in different periods--whatever period of time the interviewer asks about. The disadvantage is that self-reports depend on respondents' ability to accurately and truthfully recall their use of drugs.

Testing Methodology

A positive result from the EMIT assay indicates that the specific drug tested-for is present in the urine sample at a level above or equal to a specified cutoff point. A negative result means that there is either no drug present in the urine sample or the level is below that of the cutoff.

The central laboratory screened all urine samples by EMIT kits for a panel of up to four drugs (cocaine, cannabinoids, opiates and amphetamines) and including ethanol. In this report, the rates for "any drug" referred to "drug positives for any of the four drugs in the panel and including alcohol". Rates for "multiple drug" referred to "drug positives for more than one drug" in the four-drug panel and not including ethanol.

The EMIT assay is a homogenous enzyme immunoassay technique used for the analysis of specific compounds in urine. The assay is based on competition between drug in the sample and drug labeled with the enzyme glucose-6-phosphate dehydrogenase for antibody binding sites. The reagent packs supplied contain Reagent A (antibody, substrate and co-enzyme) and Reagent B (enzyme-labeled drug) that are added with a buffer to produce a reaction solution. If drug is present in the sample, competition for the antibody binding sites occurs between the drug and the enzyme-labeled drug. The higher the concentration of drug present in the sample, the more the antibody will bind the drug, the more enzyme will remain unbound or free and the more NADH will be produced, thus increasing the absorbance of the reaction solution. A person was tested positive based on the interpretation of the summary show in table 1a supplied by the Forensic Science Centre.

Table 1a: Interpretation of the EMIT test results

	Negative sample	**Positive sample**
Reaction solution	Reagent A Reagent B Sample (no drug)	Reagent A Buffer Sample (drug)
Enzyme Activity	Low	High
Amount of NADH produced	Low	High
Absorbance (Rate)	Low	High

Source: Documentation supplied by the National Forensic Centre, 2004

The following outline highlights the specific drugs or metabolites the EMIT process detects. Amphetamines - a positive EMIT screen result indicates the presence of one or more drugs in the amphetamine group. Any screen positive for amphetamines is subjected to GC/MS confirmation for methamphetamine. Urinalysis, used to confirm the information self-reported in the interviews, offered an objective assessment of recent drug use. Cocaine, methamphetamines and opiates can be detected in the urine for up to 2 to 3 days after ingestion. Marijuana can remain in the body as long as 30 days after use, so it is more likely than the other drugs to be detected at the time of urine specimen is collected. There is however limitation about what urinalysis can tell us about drug use. For instance, it cannot determine long-term patterns or frequency of drug use by arrestees. Screening tests only indicate the class of drug the person has been using but not the specific metabolite. For example, the opiates screen does not distinguish between codeine and morphine. Thus, it is possible for a person to test positive for opiates after consuming over the counter cough medication that contain codeine or morphine.

Urine and Alcohol Testing
When urine is used as a specimen for alcohol testing the following points must be considered:
- When a person uses alcohol, the alcohol level in the bloodstream rises during the absorptive phase (the period in which alcohol is being absorbed from the intestine), plateaus during the distribution phase (during which ethanol is equilibrating with tissues), and falls during the elimination phase (the time in which the kidneys are excreting ethanol in the urine).
- When in the elimination phase, the average person eliminates about 0.015 – 0.02 g/100mL
- When the person is in the elimination phase, the urine alcohol level is about 1.3 times the corresponding blood alcohol level. So if one can firmly establish that the person has stopped drinking and was in the elimination phase at the time the urine sample was collected, it may be possible to use a urine alcohol level to calculate the corresponding blood alcohol level and the degree of intoxication. At other times it is impossible to correlate the urine alcohol concentration with the blood concentration.
- Regardless of which phase the person is in, the blood alcohol level is considered by the legal system and by the scientific community to be an indicator of the degree of impairment or intoxication at the time the specimen was obtained.
- **A random urine specimen (such as those collected for arrestees' drug testing) reflects the average alcohol concentration for the time period during which the urine collects in the subject's bladder. Therefore, even if the person is in the elimination phase, the ethanol concentration in a random urine specimen does not always reflect the subject's blood alcohol concentration.**
- A drawback to urine alcohol testing is that it is possible to have production of ethanol in the specimen form a person who did not consume ethanol. This phenomenon is uncommon, but it can happen if (a) the subject is a diabetic; (b) if the urine is infected

with certain microorganisms; and (c) if the urine is stored at room temperature without a preservative for one day or more prior to analysis.

- One can conclude that:
  - o Random urine specimens do not always indicate the corresponding blood alcohol level and therefore cannot be use to indicate unequivocally whether the person was impaired or intoxicated at the time the specimen was taken
  - o If the urine ethanol result is positive, one must always check whether the person is diabetic, or has a vaginal or urinary tract infection
  - o Assuming that the person is not a diabetic and does not have a vaginal or urinary tract infection, a positive urine ethanol result (>0.02 g/100mL or 20mg/dL) on a random specimen indicated that the subject consumed alcohol in the time period prior to giving the specimen, but does not prove that the person was impaired or intoxicated

SECTION 2

RESULTS- OVERALL FINDINGS

Sample Characteristics

Date and Time Of Arrest And Interviews [Tables 1b Thru 1c]

Records of detainees indicated that arrests were done on all days of the week with most arrested taking place on Fridays (18.3%) and Wednesdays (16%). Other notable days were Mondays and Tuesdays (14.2% each day). Most interviews were done on Fridays (17.4%), Mondays and Wednesday (17% each). The lowest day for arrests was Sundays and for interviews, Saturdays (see table 1b). Slightly more arrests were made in the afternoon and evening period ("PM"), 46.8% than in the morning or ("AM") period (45%). The period of arrest was missing for 8.2% of arrestees.

Table 1b: Characteristics Of Arrests And Interviews

Day of Week	Number of Arrests	Number of interviews	Number of interview per month		
			Nov	Dec	Jan
Sunday	48 (11.1)	54 (12.4)	6	21	21
Monday	61 (14.2)	74 (17.0)	11	28	22
Tuesday	61 (14.2)	51 (11.7)	11	21	29
Wednesday	69 (16.0)	74 (17.0)	10	18	41
Thursday	57 (13.2)	65 (14.9)	7	13	37
Friday	79 (18.3)	76 (17.4)	10	25	44
Saturday	56 (13.0)	42 (9.6)	3	23	30
Missing	5 (1.1)	-			
Total	436	436	58	149	224

Source: The National Council on Substance Abuse (NCSA), 2003, Computer Database

Table 1c: Day During The Week Of Arrest By Time Period (AM Vs PM)

Day of Week	Hour of day			Total
	AM	PM	Missing	
Overall	196 (45.0)	204 (46.8)	36 (8.3)	436 (100)
Sunday	19 (39.6)	27 (56.3)	2 (4.2)	48 (11.1)
Monday	24 (39.3)	28 (45.9)	9 (14.8)	61 (14.2)
Tuesday	29 (47.5)	25 (41.0)	7 (11.5)	61 (14.2)
Wednesday	29 (42.0)	37 (53.6)	3 (4.3)	69 (16.0)
Thursday	28 (49.1)	26 (45.6)	3 (5.3)	57 (13.2)
Friday	38 (48.1)	34 (43.0)	3 (8.9)	79 (18.3)
Saturday	29 (51.8)	26 (46.4)	1 (1.8)	56 (13.0)

Source: The National Council on Substance Abuse (NCSA), 2003, Computer Database

Figure 1: Arrests and Interviews by Day of Week
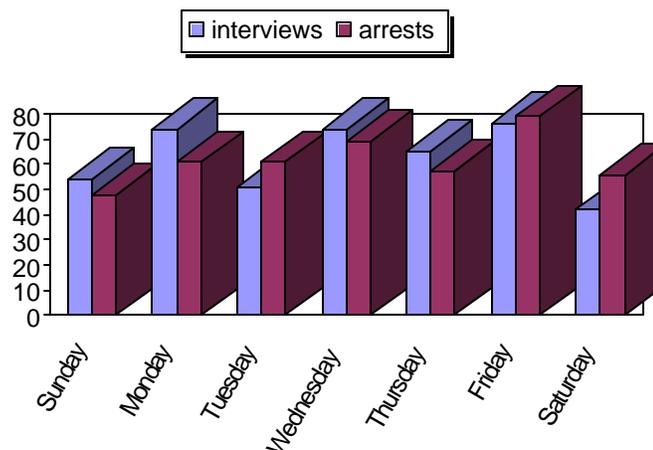
Urine samples (Profile of participants who gave sample) [table 2a]

All interviews and solicitation for urine samples were done at one central facility in the capital where all bookings are made. The total number of bookings for the period was 947. Urine sample refusal rate was the same over the two periods of collection (late 2002 and early 2003).

Only 35.1% (153/436) of interviewed participants gave a urine sample (36.3% of males and 24% of females). About three of every four females and two of every three males refused to provide a urine sample. Of the Barbadian citizens, (90.6% of total arrestees – 395/436), 37.7% provided a sample compared to only 29.2% of the other nationals. Those who gave samples for testing were proportionally more likely to be single (83%), followed by married persons (7.2%); then separated, widowed or divorced combined (6.5%) and common-law (3.3%).

Table 2a: Characteristics of person who gave urine sample

Characteristic	Urine sample	
Subgroups	Yes	No
Overall	153 (35.1)	283 (64.9)
Sex		
Male	147 (36.3)	258 (63.7)
Female	6 (24.0)	19 (76.0)
Nationality		
Barbadian	141 (35.7)	254 (64.3)
Other national	12 (29.3)	29 (70.7)
Age Grouping		
< 17	8 (32.0)	17 (68.0)
17 - 19	17 (26.2)	48 (73.8)
20 - 29	54 (34.2)	104 (65.8)
30 - 39	41 (36.6)	71 (63.4)
40 - 49	26 (51.0)	25 (49.0)
50 plus	7 (38.9)	11 (61.1)
Marital Status		
Single	127 (35.4)	232 (64.6)
Married	11 (40.7)	16 (59.3)
Sep/wid /div	10 (58.8)	7 (41.2)
Common-law	5 (18.5)	22 (81.5)

Source: The National Council on Substance Abuse (NCSA), 2003, Computer Database

To what extent were the arrestees who gave a urine specimen different from those who did not? Comparison revealed some small differences: those who gave were significantly older than those who did not (median age among those who gave was 28 years and among those who refused 26years. Females were significantly less likely than males to give a specimen.

Characteristics of the Participants [table 3a thru 3c]

Four hundred and thirty-six arrestees were interviewed, 35.1% or (153/436) provided a urine sample and 64.9% or 283 of 436 refused to provide a urine sample for drug testing. Equal proportions of interviews and urine samples were done or collected during the period November/December 2002 and January/February 2003, table 3a.

Table 3a: Number of arrestees interviewed and sampled by year of study

Year of study	Provided urine (No. %)	Refused testing (No. %)	Questionnaires completed
2002	73 (35.1)	135 (64.9)	208
2003	80 (35.1)	148 (64.9)	228
Total	153 (35.1)	283 (64.9)	436

Source: The National Council on Substance Abuse (NCSA), 2003, Computer Database

Age, Gender and Nationality

Of those interviewed, 5.7% (25/436) were females, 92.9% (405/436) were males and 1.4% or six person's sex was not recorded.   The mean age overall was 28.9 years. The median age was 27 yrs with a modal age of 19 yrs. The ages ranged from 12 to 62 years. Table 3b shows distribution of age grouping by gender and table 3c shows other demographic characteristics of arrestees.

- Of those interviewed, 395 or 90.6% were Barbadian and 41 (9.4%) were other nationals. Of those whose sex was determined, 6.1% of the Barbadians were females compared to only 2.8% of the other nationals.

Table 3b: Arrestees By Age Grouping, Gender And Nationality

	Sex		Total
	Male	Female	
Age Grouping			
< 17	23 (92.0	2 (8.0)	25 (5.8)
17 - 19	60 (92.3)	5 (7.7)	65 (15.2)
20 - 29	149 (94.9)	8 (5.1)	157 (36.8)
30 - 39	106 (94.6)	6 (5.4)	112 (26.1)
40 - 49	49 (96.1)	2 (3.9)	51 (11.9)
50 plus	16 (88.9)	2 (11.1)	18 (4.2)
Nationality			
Barbadian	370 (93.9)	24 (6.1)	394 (91.6)
Other national	35 (97.2)	1 (2.8)	36 (8.4)

Source: The National Council on Substance Abuse (NCSA), 2003, Computer Database

Other Demographic Characteristics Of Arrestees

- Most respondents were predominantly from the parish of St Michael (50.2%), Christ Church (15.6%) and St James (10%).   The parish of current residence was not determined for 4.2% or 18 persons. This may be because some or all of those persons may have been non-nationals transiting the island at the time of arrest

- A high proportion of arrestees (66.5%) indicated "suitable" recent housing (last 30 days):
  – own home (44.7%); rented private housing (13.3%); rented government housing
  (8.5%). Some 3.7% indicated recent housing as being, shelter, prison, treatment center
  or on the street

- Most arrestees were in full time employment (47.3%), followed by part time employment
  (36%) and those categorized as "not working but looking" (8.9%). A small proportion
  (7.6%) were either unable to work (7 persons), students (11 persons) and "not working
  and not looking" (15 persons). The highest level of education among arrestees was at
  secondary level (54.9%) followed by primary 27.9% and tertiary 9.3%. Eight persons
  indicated no schooling while 6.3% (27 persons) indicated some other level of education

- About half of all arrestees (49.8%) said their usual main source of legal income was from
  full time work. 35.8% had their income from part time work and a further 11% got theirs
  from family or friends. Sixteen persons (3.7%) indicated that they did not have a main
  source of income. 18.8% (83/436) of arrestees indicated that they had an illegal source
  of income. The main illegal source of income reported was gambling (12.2%). This was
  followed by drug dealing (3.9% or 17 persons) and shoplifting (2.5% or 11 persons).
  There was no sex work (prostitution) indicated

Table 3c: Other Demographic Characteristics of Arrestees

	No. (%)		No. (%)
Parish currently living		**Type of housing**	
St Micheal	210 (50.2)	Rented Gov't	37 (8.5)
Christ Church	65 (15.6)	Shelter	3 (0.7)
St Phillip	15 (3.6)	Rented private	58 (13.3)
St George	15 (3.6)	Own home	195 (44.7)
St John	24 (5.7)	Prison	3 (0.7)
St Thomas	14 (3.3)	Street	8 (1.8)
St Joseph	8 (1.9)	Treatment centre	2 (0.5)
St James	42 (10.0)	Other type	123 (28.2)
St Andrew	8 (1.9)		
St Peter	8 (1.9)	**Main income (legal)**	**(%)**
St Lucy	9 (2.2)	Family or friend (n=48)	11.0
Other	18 (4.1)	Welfare (n=9)	2.1
		Full time work (n=217)	49.8
		Part time job (n=156)	35.8
Level of Education		Other sources (n=11)	2.5
None	8 (1.9)	No main source (n=16)	3.7
Primary	120 (27.9)		
Secondary	235 (54.9)		
Tertiary	40 (9.3)	**Types of illegal income**	
Other	27 (6.3)	Sex work -prostitution	-
		Shoplifting	11 (2.5)
Work status		Drug dealing	17 (3.9)
Full time	203 (47.4)	Gambling	53 (12.2)
Part time	154 (36.0)	Other illegal activity	2 (0.5)
Not working and looking	38 (8.9)		
Not working not looking	15 (3.5)	**Race**	
Unable to work	7 (1.6)	Black	420 (96.3)
Student	11 (2.6)	Other	16 (3.7)

Source: The National Council on Substance Abuse (NCSA), 2003, Computer Database

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Figure 2: Highest Level of Education
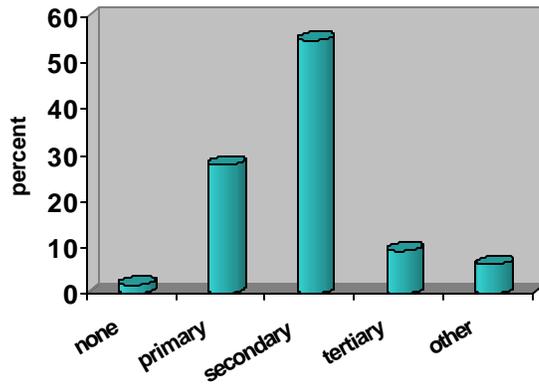
Figure 5: Type of Housing
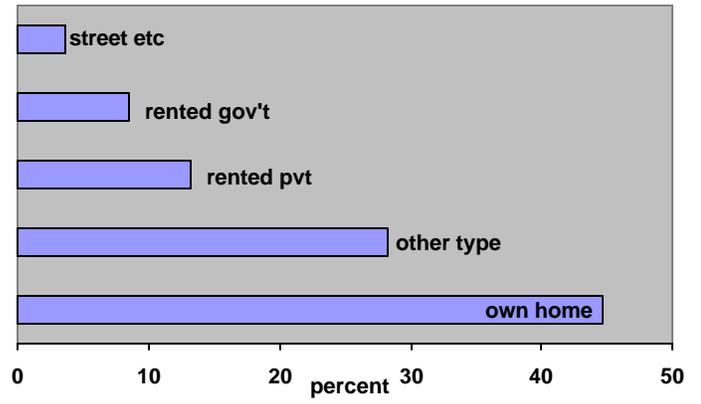
Figure 3: Age Grouping of Arrestees
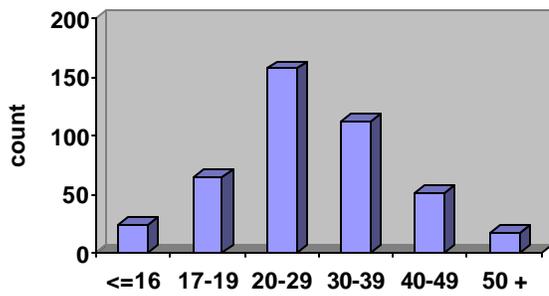
Figure 6: Arrestees Present Work Status
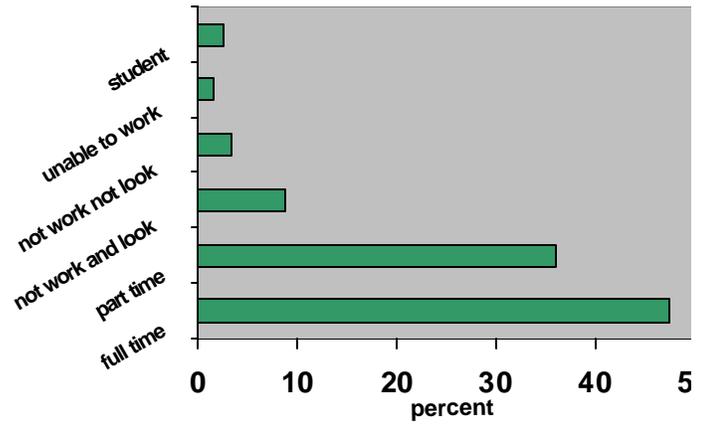
Figure 4: Marital Status of Arrestees
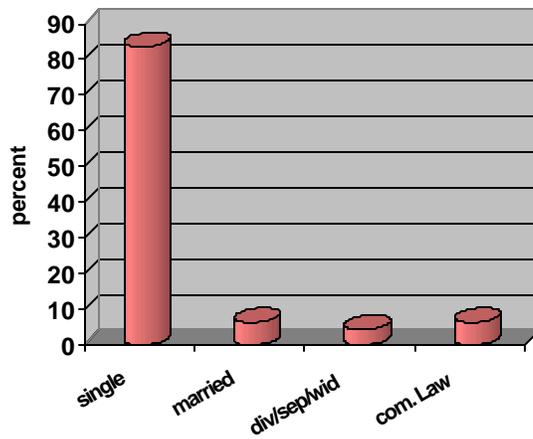
Figure 7: Legal Source of Income
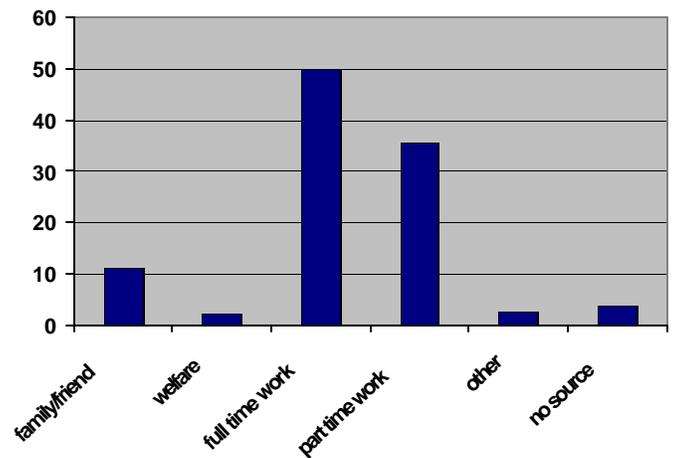
**Table 3d: Self reported income last 12 months
(Legal, Illegal and from Occupation)**

Income ($ Bds)	Sources of Income last 12 months		
	Legal (n=436)	Illegal (n=83)	Occupation (n=436)
Under 15,000	227 (52.1)	24 (28.9)	221 (50.7)
15 to 20,000	54 (12.4)	4 (4.8)	55 (13.3)
21 to 30,000	14 (3.2)	1 (1.2)	15 (3.4)
31 to 40,000	8 (1.8)	2 (2.4)	8 (1.8)
41 to 60,000	7 (1.6)	-	6 (1.4)
Over 60,000	3 (0.7)	2 (2.4)	3 (0.6)
Don't Know/Won't say	123 (28.2)	50 (60.2)	125 (28.7)

Source: The National Council on Substance Abuse (NCSA), 2003, Computer Database

Self-Reported Income

Table 3d shows the distribution of arrestees reported income by income-source (legal, illegal and occupation). Reported legal income (column 1) showed good concordance with reported income from occupation (column 3) as indicated by arrestees.

Legal Income

Some 28% of arrestees did not know or refused to indicate the amounts of money they obtained from their legal source(s) of income. However, about half (52.1%) made fewer than 15,000 dollars and 12.4% made between 15,000 and 20,000 dollars. Less than 1% (three persons) made over 60,000 dollars

Illegal Income

Eighty-three persons (18.8%) indicated an illegal source of income but only about 40% gave an indication of how much was made over the last 12 months. Of those who indicated an illegal income, 73% (24/33) made fewer than 15,000 dollars and 4.8% made between 15,000 and 20,000 dollars. Only two persons indicated an illegal income over 60,000 dollars.

Income from Occupation

About half of all arrestees indicated an income from occupation that was fewer than 15,000 dollars, 13.3% indicated between 15,000 and 20,000 dollars, 3.4% between 21,000 and 30,000, 3.8% (17 persons) indicated over 31,000 dollars. A notable 28.7% did not know or refused to indicate.

Figure 8: Income from Legal Sources
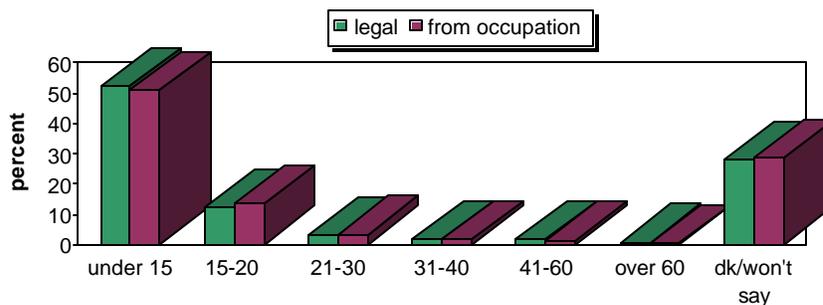
DRUG USE AMONG DETAINEES (SELF REPORT)

Consumption Patterns [table 4a thru 4h]

The **consumption patterns** reflect the level of substance use reported by arrestees in this survey. Prevalence data are included for Lifetime Use (ever used), Annual Use (use in the past 12 months) and 30-Day Use or Current Use (use in the 30 days prior to the survey). **Frequency of use** relates to the mean number of days within the last year and last month that arrestees estimated using the indicated substance. **Age of first use** (use at an earlier age) - these tables give the retrospective age of initiation to drug use as reported by arrestees. The ages were re-coded into five categories (less than 17yrs, 17-19yrs, 20-29yrs, 30yrs and over, and those who did not know or could not recall). The percentages were computed only from arrestees who had reported use of the substance (see appendix 1- definition of terms).

Table 4a shows the number of arrestees who admitted self-reported drug use (including alcohol and tobacco). By self-report, **alcohol** was the most commonly used substance for all three time-periods of use – lifetime, annual and current. Lifetime use was very high at 92.4%, annual and current use fell by only 13.7 and 22.7 percentage points (pp) respectively. **Tobacco** was the next most common used. Lifetime prevalence was 76.1%, annual prevalence (59.2%) and little more than half of all arrestees were using tobacco in the month prior to being interviewed.

Marijuana was the most used illicit substance. This use was also high with seven of every ten arrested (69.5%) having used it in their lifetime. 56% had used it in the last year and half of the arrested (50.2%) had used it in 30-day period prior to the survey. The change between lifetime and annual was 13.5pp and between lifetime and current was 19.3pp. 48% of females and 71% of males reported lifetime use, while for current use it was 28% of females and 52% of males.

Heavy marijuana use is defined as 13 or more days of self-reported use in a 30-day period in the year before the interview (definition of heavy drug use established by the National Household Survey on Drug Abuse (NHSDA), Department of Health and Human Services, USA). By that definition, 70.9% of all arrestees used marijuana heavily. Among those under 20yrs old, 83.3% were heavy users (85.7% of those under 17yrs and 82.9% for those 17-19yrs old). For those 20yrs and over, 66% were heavy users (with percentages ranging from 51.9% to 100% in the different age groupings, (see table 4d).

Table 4a: Prevalence of Self Reported Use
Lifetime, annual and current prevalence; frequency of Use in the last Month and 30 Days

	Consumption Pattern			Mean No. of days used drug	
	Lifetime	Annual	Current	Last month	Last 30 days
Tobacco	332 (76.1)	258 (59.2)	229 (52.5)	275.5	23.4
Alcohol	403 (92.4)	343 (78.7)	304 (69.7)	129.1	11.5
Marijuana	303 (69.5)	244 (56.0)	219 (50.2)	233.2	20.7
Crack cocaine	75 (17.2)	49 (11.2)	44 (10.1)	249.4	24.1
Cocaine powder	21 (4.8)	6 (1.4)	3 (0.7)	-	-
Heroin	9 (2.1)	1 (0.2)	1 (0.2)	-	-
Ecstasy	4 (0.9)	2 (0.5)	1 (0.2)	-	-
LSD	7 (1.6)	-	-	-	-

Source: The National Council on Substance Abuse (NCSA), 2003, Computer Database

The next most used illicit substance was **crack cocaine**. Lifetime use was 17.2% or about one in every six arrested. Annual prevalence fell to 11.2% and current prevalence to 10.1% or one in

every ten arrested. In relation to **cocaine powder**, use was low overall. Twenty-one persons (4.8%) indicated using cocaine powder in their lifetime, six in the last year (1.4%) and only three in the last 30 days. Figure 9a shows presentation of tobacco, alcohol, marijuana and crack cocaine use by prevalence periods.

The interviews revealed compelling evidence to indicate that the most common method of ingesting cocaine (i.e., whether crack or powder) was by smoking crack. Crack stands out since some 44 persons indicated using crack in the last 30 days in contrast to only 3 persons using cocaine powder.

Heroin, ecstasy and LSD use was very low. The reported prevalence indicated to some extent experimentation since nine persons indicated heroin use in their lifetime and only one was using it in the last 30 days. Ecstasy and LSD was even lower with four persons for lifetime ecstasy, and seven for lifetime LSD. There was no report of LSD use in the last year or last month. Two persons reportedly used ecstasy in the last year and one in the last month.

Figure 9a: Self-reported prevalence of Various Substances
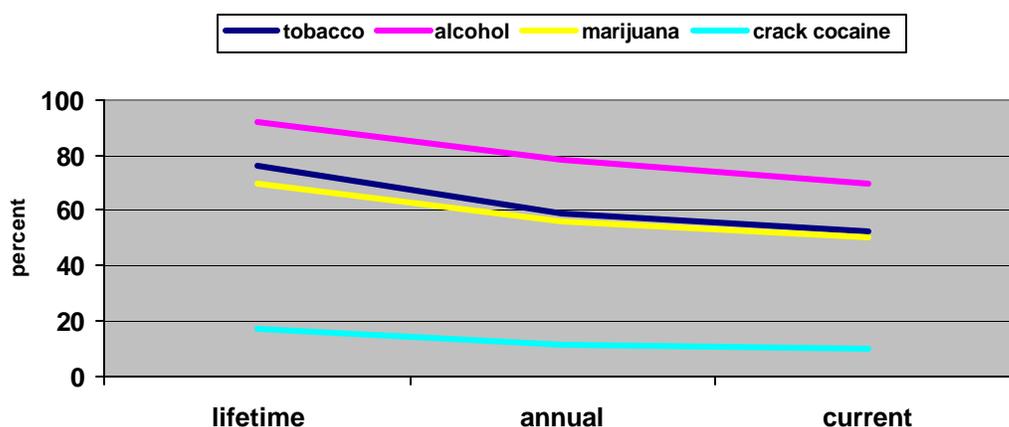
Frequency of Use [table 4a]

Arrestees were asked to estimate as close as possible how many days during the last 12 months and last 30 days they had used each of the substances. Table 4a also shows the mean number of days use was reported and related to this is the percentage who indicated they did not know how many days they had used the substance. In relation to tobacco, 11.2% of those who reported use in the last month could not indicate how many days in the last year they had used tobacco and in the case of use in the last month, 4.8% could not indicate how many days. For alcohol it was 16.9% not knowing for the last year and 9.5% for the last month. Marijuana was 15.2% and 10.5% respectively, while for crack cocaine it was 4.1% and 2.1% respectively. It is interesting to note that for crack cocaine, 70% or current users were doing it every day.

Of the four most commonly used substances (tobacco, alcohol, marijuana and crack cocaine), the mean number of days use was reported in the last year was highest for tobacco (276 days) and lowest for alcohol (129 days). Mean annual use for crack cocaine was 249 days, and for marijuana 233 days. Mean monthly use was however highest for crack cocaine (24 days), and lowest for alcohol (12 days). The next highest was tobacco (23 days) then marijuana (21 days).

Figure 9b: Mean Number of day Substance Used i n last Year and Last Month

legend: ■ tobacco ■ alcohol ■ marijuana ■ crack cocaine
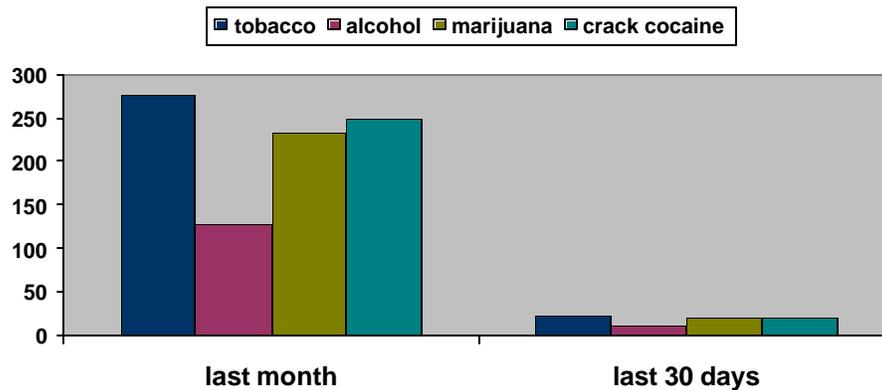
URINALYSIS RESULTS [table 4b]

Of the four drugs analysed in this study, (cocaine, cannabis, amphetamine and opiates), two drugs - cannabis (marijuana) and cocaine (both crack cocaine and cocaine powder) are used most often by arrestees. Ethanol (alcohol) was also analysed for and reported in table 4b. When only the illicit drugs are considered, marijuana was the most commonly used drug by all arrestees who gave a urine sample (n=153). This was followed by cocaine. There were no positive results reported for amphetamines and opiates.

Table 4b: Urinalysis Results Among Arrestees (n=153)

Substances	No	Percent
Cocaine	23	15.0
Cannabis	74	48.4
Alcohol	112	73.2
Amphetamine	-	-
Opiates	-	-
Any illicit drug	89	58.2
Multiple illicit drug	8	5.2

Source: The National Council on Substance Abuse
(NCSA), 2003, Computer Database

Figure 9c: Urine Sample Results

percent

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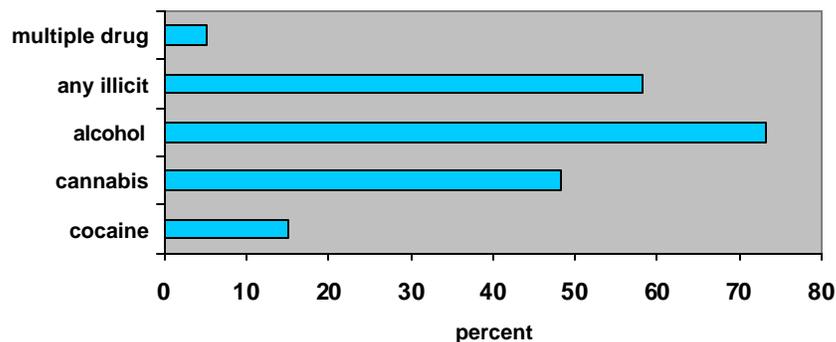
Marijuana (Cannabis)
- Urinalysis revealed that 48.4% of arrestees had used marijuana recently. Interview-based information confirms the ever-present pattern of high marijuana use (some 47.7% of arrestees who gave a urine sample said they had used marijuana in the last 30 days, [see table 4c]

- By the definition for heavy marijuana use, 58.9% of urine-sample arrestees who indicated the number of days marijuana was used in the last 30 days had used marijuana heavily. Among those under 20yrs dd, 70% were heavy users (50% of those under 17yrs and 75% of those 17-19yrs old). For those 20yrs and over, 76.6% were heavy users (with percentages ranging from 62.5% to 100% in the different age groupings, (see table 4d).

Cocaine (crack and powder)
- Urinalysis revealed that 15% or about one in every seven had used cocaine (undistinguished here between crack and powder). In view of the fact that only six persons overall indicated using powdered cocaine in the last month and three in the 30-day period before the interview, one can reasonable conclude that most if not all cocaine positive revealed by urinalysis indicated the use of crack.

- By the definition for heavy drug use, 82.5% of all arrestees who use cocaine in the last 30 days were heavy users. Heavy use related only to those 20yrs and over (with percentages ranging from 43% to 100% in the different age groupings (see table 4e).

Other characteristics
- Urinalysis results determined that 89 of the 153 samples analysed or 58.2% were positive for an illicit drug while 8 of 153 or 5.2% indicated **multiple drug use** (see definition appendix 1). Using marijuana as the reference drug, analysis indicated that among arrestees testing positive for marijuana, 10.8% also tested positive for cocaine and 74.3% had a positive test for alcohol

- Of those who gave a sample, 3.9% of samples were females (6/153) and 96.1% or (147/153) were males. Those positive for cannabis were: one female and 73 males. Therefore, some 49.7% of all males 16.6% of females who gave samples were positive for marijuana. Cocaine positives were all males, so too were all those with multiple drug use.

Table 4c: Comparison between Self Reported Drug Use and Urinalysis (Among Subjects Who Provided Urine Samples: Use in the Last 30 Days)

	Self reported use in the last 30 days			Positive urinalysis results		
	No.	%	Total	No	%	Total
Alcohol	107	69.9	153	112	73.2	153
Marijuana	73	47.7	153	74	48.4	153
Cocaine pwd/crack	19	12.5	153	23	15.0	153
Heroin (Opiates)	-	-	153	-	-	153
Ecstasy (Amphetamines)	1	0.7	153	-	-	153

Source: The National Council on Substance Abuse (NCSA), 2003, Computer Database

Table 4d: Comparison of Heavy Marijuana Use among Arrestees (All arrestees versus those with and without urine sample)

Age Grouping	Percentage of Heavy Marijuana Use		
	All arrestees	With urine sample	No urine sample
Overall	139/196 (70.9)	43/73 (58.9)	95/132 (72.0)
< 17	6/7 (85.7)	1/2 (50.0)	5/5 (100.0)
17 - 19	29/35 (82.9)	6/8 (75.0)	23/27 (85.2)
20 - 29	58/80 (72.5)	20/23 (87.0)	38/57 (95.0)
30 - 39	28/54 (51.9)	10/15 (66.7)	20/33 (60.6)
40 - 49	11/15 (73.3)	5/8 (62.5)	6/7 (85.7)
50 plus	4/4 (100.0)	1/1 (100.0)	3/3 (100.0)

Source: The National Council on Substance Abuse (NCSA), 2003, Computer Database

Figure 9d: Comparison of Heavy Marijuana Use by Age Grouping
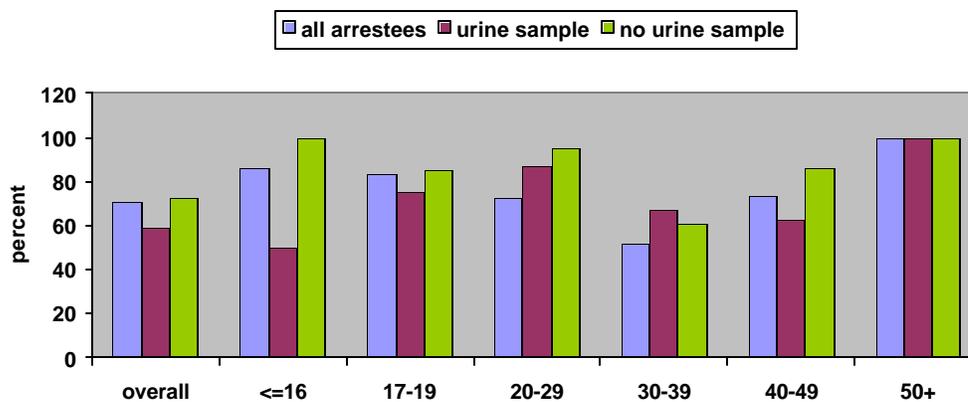
Table 4e: Comparison of Heavy Cocaine Use among Arrestees (All arrestees versus those with and without urine sample)

Age Grouping	Percentage of Heavy Cocaine Use		
	All arrestees	With urine sample	No urine sample
Overall	37/45 (82.2)	13/18 (72.2)	23/26 (88.5)
< 17	-	-	-
17 - 19	-	-	-
20 - 29	5/6 (83.3)	3/4 (75.0)	2/2 (100.0)
30 - 39	27/30 (90.0)	10/10 (100.0)	17/20 (85.0)
40 - 49	3/7 (43.0)	-	3/3 (100.0)
50 plus	1/1 (100.0)	-	1/1 (100.0)

Source: The National Council on Substance Abuse (NCSA), 2003, Computer Database

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Supplemental Table for Self-Reported Drug Use

Table 4f: Percentage of Arrestees Reporting Drug Use by Selected Variables

	Marijuana			Crack Cocaine			Alcohol		
	lifetime	annual	current	lifetime	annual	Current	lifetime	annual	current
Overall	65.9	56.0	50.2	17.2	11.2	10.1	92.4	78.7	69.7
Sex									
Male	48.0	28.0	28.0	17.5	11.9	10.6	92.6	78.8	70.1
Female	71.0	57.8	51.9	12.0	-	-	96.0	80.0	64.0
Age Grouping									
16 and under	60.0	44.0	36.0	-	-	-	80.0	48.0	40.0
17 - 19	78.5	60.0	58.5	1.5	-	-	96.9	83.1	73.8
20 - 29	74.7	63.9	58.9	5.7	3.8	3.8	92.4	76.9	70.9
30 - 39	73.2	59.8	51.8	41.1	28.6	25.9	92.9	81.3	73.0
40 - 49	52.9	35.3	29.4	29.4	17.6	13.7	96.1	80.4	62.7
50 plus	33.3	22.2	22.2	11.1	5.6	5.6	88.9	83.3	83.3
Nationality									
Barbadian	69.4	55.7	50.4	16.7	10.9	9.9	92.9	79.2	69.6
Other national	70.7	58.5	48.8	22.0	14.6	12.2	87.8	73.2	70.7
Marital Status									
Single	71.9	56.5	50.7	16.2	10.9	9.7	92.2	77.2	69.1
Married	37.0	37.0	33.3	11.1	3.7	3.7	96.2	85.2	63.0
Sep/wid /div	64.7	41.2	41.2	47.1	35.3	29.4	100.0	82.4	76.5
Common-law	77.8	77.8	70.4	18.5	7.4	7.4	92.6	92.6	81.5
Education									
None	75.0	62.5	50.0	12.5	-	-	87.5	62.5	50.0
Primary	73.3	63.3	54.2	20.0	15.0	13.3	94.2	77.5	70.8
Secondary	71.1	57.4	52.3	16.2	9.8	9.4	92.8	78.7	68.1
Tertiary	47.5	27.5	27.5	20.0	15.0	10.0	90.0	77.5	77.5
Other	74.1	51.9	51.9	11.1	3.7	3.7	92.6	92.6	74.1
Housing									
Rented gov't	67.6	62.2	59.6	16.2	8.1	8.1	89.2	75.7	67.6
Shelter	33.3	33.3	100.0	100.0	100.0	100.0	66.7	100.0	100.0
Rented pvt	69.0	50.0	43.1	19.0	8.6	8.6	98.3	86.2	75.9
Own home	62.6	49.7	44.1	13.3	9.7	7.7	93.8	80.5	73.8
Main Income									
Family/friend	70.8	58.3	47.9	16.7	14.6	14.6	91.7	75.0	62.5
Welfare	77.8	44.4	44.4	22.2	22.2	22.2	100.0	100.0	77.8
Full time work	63.8	49.8	47.5	11.5	5.5	14.7	91.7	80.2	71.0
Part time work	76.3	63.5	53.2	22.4	16.0	14.7	93.6	77.6	71.2
Other sources	72.7	45.5	45.5	36.4	18.2	18.2	100.0	81.8	72.7
No main source	68.8	56.3	56.3	25.0	18.8	18.8	100.0	75.0	62.5
Employment									
Full time	62.1	48.8	45.8	11.8	5.9	4.9	91.6	82.3	73.4
Part time	78.6	63.6	56.5	20.8	14.3	13.0	64.2	77.3	69.5
Not wrk'g look	86.8	73.7	60.5	31.6	29.7	23.7	94.7	73.7	68.4
Not wrk'g not look	73.3	66.7	66.7	33.3	26.7	26.7	93.3	73.7	53.3
Unable to work	42.9	28.6	-	14.3	14.3	-	100.0	83.3	33.3
Student	45.5	27.3	27.3	-	-	-	81.8	63.6	54.5

Source: The National Council on Substance Abuse (NCSA), 2003, Computer Database
Notes: wrk'g = working   pvt = private   div = divorced   sep = separated   wid = widowed

Arrestees Testing Positive By Selected Variables

Table 4f below shows the percentage of arrestees testing positive for cocaine cannabis and alcohol and "any illicit drug". The variables covered are sex, race, age grouping, country of citizenship, marital status, and education, type of housing and source of legal income.

Table 4g: Percentage of Arrestees Testing Positive by Selected Variables

	Cocaine		Cannabis		Alcohol		Any Illicit	
	pos	neg	pos	neg	pos	neg	pos	neg
Sex								
Male	23 (15.6)	124	73 (49.7)	74	108 (73.5)	39	88 (59.9)	59
Female	-	6	1 (16.7)	5	4 (66.7)	2	1(16.7)	5
Race								
Black	23 (15.4)	126	72 (48.3)	77	109 (73.2)	40	87 (58.4)	62
Other	-	4	2 (50.0)	2	3 (75.1)	1	2 (50.0)	2
Age Grouping								
Under 17	-	8	5 (62.5)	3	6 (75.0)	2	5 (62.5)	3
17 - 19	-	17	9 (52.9)	8	9 (52.9)	8	9 (52.9)	8
20 - 29	5(9.3)	49	37 (68.5)	17	38 (70.4)	16	38 (70.4)	16
30 - 39	11 (26.80	30	15 (36.6)	26	34 (82.9)	7	24 (58.5)	17
40 - 49	7 (26.9)	19	7 (26.9)	19	18 (69.2)	8	12 (46.2)	14
50 plus	-	7	1 (14.3)	6	7 (100.0)	-	1 (14.3)	6
Nationality								
Barbadian	20 (14.2)	121	69 (48.9)	72	105 (74.5)	36	81 (57.4)	60
Other national	3 (25.0)	9	5 (41.7)	7	7 (58.3)	5	8 (66.7)	4
Marital Status								
Single	19 (15.0)	108	65 (51.2)	62	93 (73.2)	34	78 (61.4)	49
Married	1 (9.1)	10	3 (27.3)	8	8 (72.7)	3	4 (36.4)	7
Sep/wid /div	2 (20.0)	8	1 (10.0)	9	9 (90.0)	1	2 (20.0)	8
Common-law	1 (20.0)	5	5 (100.0)	-	2 (40.0)	3	5 (100.0)	-
Level of Education								
None	-	2	-	2	1 (50)	1	-	2
Primary	10 (22.2)	35	22 (48.9)	23	33 (73.3)	12	30 (66.7)	15
Secondary	9 (11.3)	71	40 (50.0)	40	58 (72.5)	22	45 (56.3)	35
Tertiary	2 (13.3)	13	6 (40.0)	9	12 (80.0)	3	7 (46.7)	8
Other	2 (18.2)	9	6 (54.5)	5	8 (72.7)	3	7 (63.6)	4
Type of Housing								
Rented Gov't	3 (25.0)	9	6 (50.0)	6	8 (66.7)	4	8 (66.7)	4
Shelter	1 (100.0)	-	1 (100.0)	-	1 (100.0)	-	1 (100.0)	-
Rented private	6 (28.6)	15	9 (42.9)	12	16 (76.2)	5	12 (57.1)	9
Own home	8 (9.4)	77	42 (49.4)	43	63 (74.1)	22	48 (56.5)	37
Prison	1 (100.0)	-	1 (100.0)	-	1 (100.0)	-	1 (100.0)	-
Street	2 (66.7)	1	2 (66.7)	1	2 (66.7)	1	3 (100.0)	-
Treatment centre	1 (100.0)	-	1 (100.0)	-	1 (100.0)	-	1 (100.0)	-
Other type	4 (14.3)	24	14 (50.0)	14	22 (78.6)	6	17 (60.7)	11
Main Income (legal)								
Family or friend	3 (16.7)	15	9 (50.0)	9	11 (61.1)	7	10 (55.6)	8
Welfare	2 (40.0)	3	3 (60.0)	2	4 (80.0)	1	3 (60.0)	2
Full time work	8 (9.5)	76	33 (39.3)	51	60 (71.4)	24	40 (47.6)	44
Part time job	10 (19.6)	41	30 (58.8)	21	40 (78.4)	11	37 (72.5)	14
Other sources	-	4	3 (75.1)	1	2 (50.0)	2	3 (75.0)	1
No main source	2 (66.7)	1	2 (66.7)	1	2 (66.7)	1	3 (100.0)	-

Source: The National Council on Substance Abuse (NCSA), 2003, Computer Database

EMPLOYMENT AND DRUG USE [table 4g]

There were strong indications that employment status was a factor in the use of various types of drugs. For all drug types (including alcohol) unemployed were more likely than employed arrestees to test positive for cocaine, cannabis and alcohol (see table 4g). Though the proportions were notable especially in the case of cocaine, the differences were not statistically significant.

The size of the effect for unemployment was especially large for cocaine. More than twice as many unemployed arrestees as employed arrestees (27.3% in contrast to 13%) tested positive for cocaine. Six times more unemployed than employed tested positive for multiple drugs (18.2% in contrast to 3.1%).

Table 4h: Employment And Drug Use (From Urinalysis)

Work status	Urinalysis results		
	Cocaine	Cannabis	Alcohol
Full time (n=84)	9 (10.7)	35 (41.7)	61 (72.6)
Part time (n=47)	8 (17.0)	27 (57.4)	35 (74.5)
Not working and looking (n=12)	4 (33.3)	9 (75.0)	8 (66.7)
Not working not looking (n=3)	2 (66.7)	2 (66.7)	3 (100.0)
Unable to work (n=4)	-	-	3 (75.0)
Student (n=2)	-	1 (50.0)	1 (50.0)
Employed (n=131)	13.0	47.3	73.3
Un-employed (n=22)	27.3	54.5	72.7
p-value	p>0.05	p>0.05	p>0.05

Source: The National Council on Substance Abuse (NCSA), 2003, Computer Database

ANY OTHER DRUG USE

A small proportion of arrestees, 2.8% (12 persons) indicated using other types of illicit drugs in their lifetime – 11 males and one female. The drugs describes were magic mushrooms (4 persons); speed (2 persons); and six other less commonly known drugs (blue boy, scout, kemadrin, jake and bonavis). There was one mention of illicit drug use in the last month but none in the last 30 days.

The age of first use for these other illicit drugs ranged between 15 and 29 years of age. A small proportion of arrestees (8.3%) or 36/436, did indicate that they were aware of other drugs in the street in addition to those mentioned on the questionnaire.

AGE OF FIRST USE [table 5a]

Arrestees were asked to indicate the age at which the various substances were first used. The ages were recoded into groupings of: less than 17yrs; 17-19yrs; 20-29yrs; 30yrs plus. Table 5a shows distribution of age of first use by these age groupings as well as those who indicated that they did not know or could not remember the age of first use, the mean and median ages indicated and the range of ages.

Age of first use for alcohol, tobacco and marijuana was low (mean 15 yrs). There was a notable difference between these substances and the other "harder" drugs. For example, mean age for

cocaine was 22yrs, a difference of seven years compared to tobacco, alcohol and marijuana. Interestingly, the mean age of first use for heroin and ecstasy was much higher than that of say marijuana (24 and 25yrs in contrast to 15yrs). Most initiation of marijuana use had taken place by age 19yrs (88.4%). It is also worth noting that 11 to 25% of arrestees did not know at what age initiation of the indicated drug had taken place.

Table 5a: Age of First Use of Various Substances among Arrestees

Substance	Percent who reported using drug by age				% dk	Mean age	Med Age	Range (yrs)
	<17	17 – 19	20 – 29	30+				
Tobacco (n=289)	192 (66.4)	59 (20.4)	37 (12.8)	1 (0.3)	13.0	15.0	15.0	5 - 34
Alcohol (n=321)	204 (63.6)	71 (22.1)	41 (12.8)	5 (1.6)	20.3	15.4	16.0	3 - 41
Marijuana (n=269)	182 (68.4)	55 (20.4)	28 (10.4)	2 (0.7)	11.2	15.0	15.0	2 - 37
Crack coc. (n=66)	7 (10.6)	15 (22.7)	37 (56.1)	7 (10.6)	12.0	22.6	21.0	12 - 47
Cocaine pwd. (n=17)	5 (29.4)	3 (17.6)	7 (41.2)	2 (11.8)	19.0	22.0	21.0	7 - 49
Heroin (n=7)	-	2 (28.6)	4 (57.1)	1 (14.3)	22.5	24.0	21.0	17 - 39
Ecstasy (n=3)	-	1 (33.3)	1 (33.3)	1 (33.3)	25.0	25.7	24.0	18 - 35
LSD (n=6)	1 (16.4)	1 (17.7)	4 (66.7)	-	-	20.0	21.0	13 - 26

Source: The National Council on Substance Abuse (NCSA), 2003, Computer Database
Note: dk = don't know   coc = cocaine   pwd = powder

TREATMENT, COUNSELLING AND REHABILITATION [table 6a]

Some 89.9% of arrestees indicated never been treated for any of the indicated substances. Likewise, 88.5% indicated never receiving counseling for any of the indicated substances. Table 6a shows the distribution of arrestees who had treatment, counseling or rehabilitation as a result of drug or substance use. Overall, the analysis revealed that a substantial proportion of detained arrestees were treated for drug abuse in the past (10.1%).

**Table 6a: Treatment, Counseling or Rehabilitation
as a Result of Drug or Substance Use.**

Substances	Treatment No. (%)	Counseling No. (%)
Alcohol	26 (6.0)	18 (4.1)
Tobacco	5 (1.1)	7 (1.6)
Marijuana	15 (3.4)	24 (5.5)
Crack cocaine	11 (2.5)	25 (5.7)
Cocaine powder	1 (0.2)	2 (0.5)
Heroin	1 (0.2)	1 (0.2)
Ecstasy	1 (0.2)	-
LSD	1 (0.2)	1 (0.2)
Other	3 (0.7)	1 (0.2)

Source: The National Council on Substance Abuse (NCSA), 2003, Computer Database

Those that were treated for alcohol and marijuana were all male while of those treated for crack cocaine, nine were males and there was one female. The sex of the other person was not recorded. Most who indicated prior treatment for alcohol, marijuana and crack cocaine were in the 30-39 yrs age grouping: 46.2% (12/26), 46.7% (7/15), and 80% (8/10) respectively, figures 10a thru 10c.

Figure 10a: Arrestees Treated for Alcohol
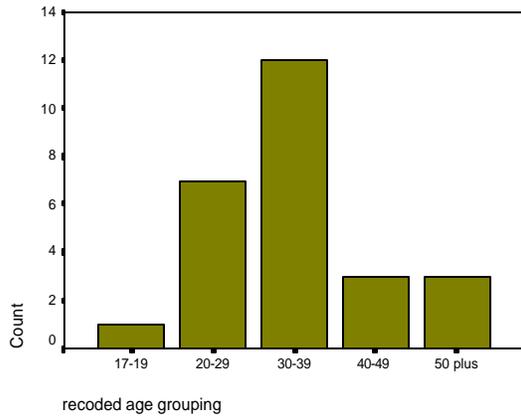

Figuure 10d: Arrestees Counseled for Alcohol
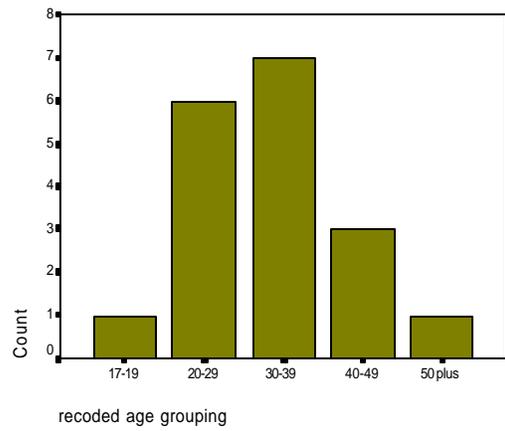
Figure 10b: Arrestees Treated for Marijuana
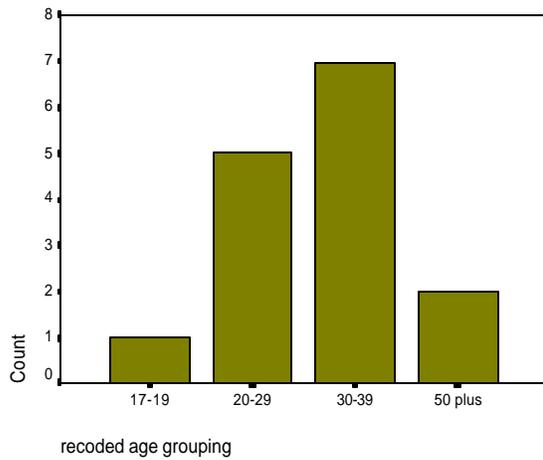
Figure 10e: Arrestees Counseled for Marijuana
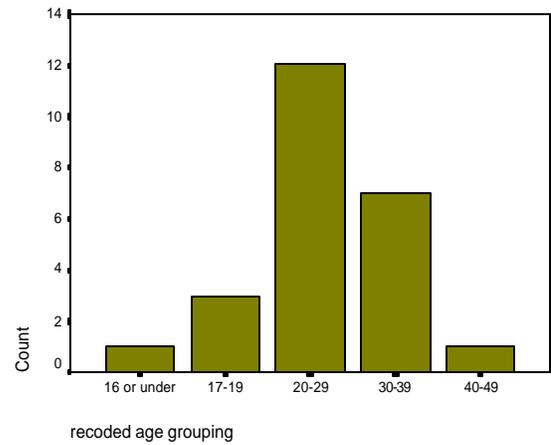
Figure 10c: Arrestees Treated for Crack Cocaine
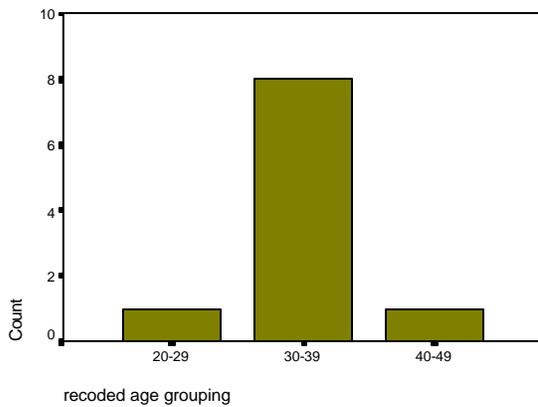
Figure 10f: Arrestees Counseled for Crack Cocai
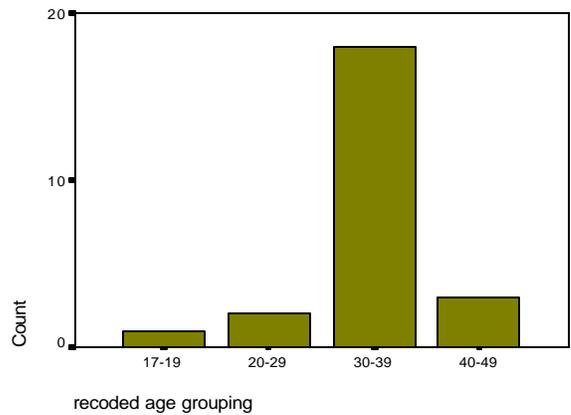
In relation to counseling and rehabilitation for alcohol and marijuana, those with prior access were all males as well as 96% (23/24) of those counseled for crack cocaine. The majority counseled for crack cocaine was in the 30-39 yrs age grouping (75%). In the case of alcohol, about equal proportions were in the 20-29 yrs age grouping (33.3%) and the 30-39 yrs age grouping (38.9%). For marijuana, 50% were in the 20-29 yrs age grouping followed next by the 30-39 yrs age grouping (29.2%), figures 10d thru 10f.

Respondents Perception of Needing Treatment for Drug or Alcohol Use (table 6b)

Overall 18.1% of arrestees indicated they needed treatment with 2.3% or 10 persons saying they were unsure. The vast majority of those who said they needed treatment were males, 96.2% (76/79) – 18.8% of all males compared to only 8% of females. With the majority of arrestees being of Barbadian nationality, it was expected that likewise the majority (92.4%) of those indicating this need would also be Barbadians. However, a notable 14.6% (6/41) of non-nationals indicated they also needed treatment for drug or alcohol use (see table 6b).

Most of those who perceived this need were single (79.7% or 63/79). Interestingly, 2.5% or nine persons were unsure if they needed treatment, had some doubts. It is important to note that 7 of the 17 persons (41.2%) who were separated, widowed or divorced perceived this need. Further analysis showed that one in every four persons described as "other race" compared to about one in every six black person indicated they need treatment.

Table 6b: Perceived Treatment for Drug or Alcohol Use

Subgroups	Perceived need for treatment		
	Yes	No	Unsure
Overall	79 (18.1)	347 (79.6)	10 (2.3)
Sex			
Male	76 (18.8)	319 (78.8)	10 (2.5)
Female	2 (8.0)	23 (92.0)	-
Citizenship			
Barbadian	73 (18.5)	313 (79.2)	9 (2.3)
Other national	6 (14.6)	34 (82.9)	1 (2.4)
Marital Status			
Single	63 (17.3)	287 (79.6)	9 (8.0)
Married	2 (7.4)	25 (92.6)	-
Sep/wid/div	7 (41.2)	10 (58.8)	-
Common-law	6 (22.2)	20 (74.1)	1 (8.0)
Urine Result			
Illicit drug (yes)	23 (25.8)	62 (69.7)	4 (4.5)
Illicit drug (no)	6 (9.4)	57 (89.1)	1 (1.6)
Alcohol in Urine			
Yes	23 (20.5)	87 (77.7)	2 (1.8)
No	6 (14.6)	32 (78.0)	3 (7.3)

Source: The National Council on Substance Abuse (NCSA), 2003, Computer Database

Of those who gave a urine sample, some 79.3% of persons, (23/29) who indicated they needed treatment also had a positive urine sample for an illicit drug. Also of interest was the fact that four of the five persons who were unsure about needing treatment also had a positive urine sample for illicit drugs.

Alcohol Use and Treatment
The percentage of arrestees who had used alcohol in the year before they were interviewed and who were treated was very low (only 7% - 24/343). Those who said they needed treatment for drug or alcohol use/abuse was 20.1% - (69/343), and those who were actually treated were 3.5% (12/343). It means that only 17.4% of those at risk for alcohol dependence were actually treated.

Prescription Drug Use [table 7]
Arrestees were asked about their prescription drug use in the last three days. About 18% (79/436) indicated they had use some type of prescription drug in the last three days. A greater proportion of females reported this use (36% of females compared to 17.3% of males). Cross-tabulation with age grouping suggests that as age increased the proportion of arrestees reporting using a prescription drug in the last three days also increased. The lowest proportions were in the two lowest age groupings and the highest proportions in the two oldest age grouping (table 7).

Table 7: Prescription Drug Use Among Arrestees by Sex and Age Group

Subgroups	No. (%)
Overall	79/436 (18.1)
Sex	
Male	70/405 (17.3)
Female	9/25 (36.0)
Age Grouping	
Under 17	2/25 (8.0)
17 – 19	8/65 (12.3)
20 – 29	29/158 (18.4)
30 – 39	17/112 (15.2)
40 – 49	13/51 (25.5)
50 +	10/81 (55.6)

Source: The National Council on Substance Abuse (NCSA), 2003, Computer Database

Figure 10g: Prescription Drug Use
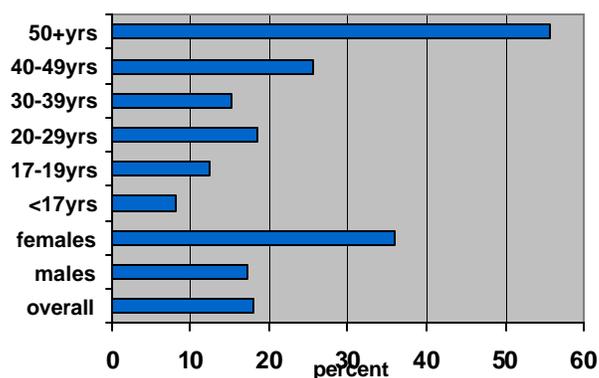
OFFENCES FOR WHICH DETAINEES ARE CHARGED [table 8a thru 8e]

Participants in this study can be charged with multiple offences. Of the arrestees, 9.9% (43/436) were charged with multiple offences, but of those participants who supplied a urine sample (n=153), 90.8% had only one charge and 9.2% or (14/153) had a multiple offence charge against them. Since in this study, offences were not listed as primary or secondary (first listed and second listed), the result will relate to the indication in the questionnaire – "offence(s) currently charged with".

Table 8a shows the number and percent of charges by offence types as well as the offence types by sex and age groupings. Assault offences were the most commonly charged offence among detainees (27.1%). Drug offences (17%) and theft (14.2%) were the most common charges followed by weapons offences (5.4%) and burglary (5%). Interesting to note that they were no charges recorded for fraud and traffic offences. In addition, it is important to note that the number of detainees for some offence type is very small (violence and property offences). Some 160 or 36.7% of detainees were charged with some other offence not listed on the questionnaire.

In every case there were more male offenders than female offenders. Exclusively, males committed all burglary, property, robbery and weapon offences. Female detainees were more likely to be charged with assault (5 females or 4.3% of all assault charges and theft (again 5 females or 8.1% of all theft charges).

Likewise among age groupings, in every case there were more detainees in the 20-29 yrs age group. In rank order the offences were as follows: robbery, violence, weapons, theft, property, drugs and burglary. The teenagers (up to 19yrs) were more likely to be detained for assault, theft, drugs, weapons and burglary. Those in the other three older age groupings were detained mainly for assault followed by drugs and theft, (figure 11a-11h).

Table 8a: Charges by Offence Types and Offence Types by Sex and Age Groupings

Offence types	Number (%)	Sex (number)		Age groupings					
		Male	Female	<17	17-19	20-29	30-39	40-49	50 +
Burglary	22 (5.0)	21	-	2	2	7	6	4	-
Drugs	74 (17.0)	72	2	3	8	27	23	10	2
Assault	118 (27.1)	111	5	8	11	46	31	15	5
Property	8 (1.8)	8	-	-	-	3	2	1	2
Robbery	15 (3.4)	14	-	-	2	7	4	1	-
Violence	7 (1.6)	6	1	1	-	3	1	2	-
Weapons	24 (5.5)	24	-	4	4	10	5	-	1
Theft	62 (14.2)	57	5	4	10	25	14	7	2
Multiple offence	43 (9.9)	42	-	3	6	13	12	6	2

Source: The National Council on Substance Abuse (NCSA), 2003, Computer Database

Figure 11a: Arrestees Current Charge - Burglary
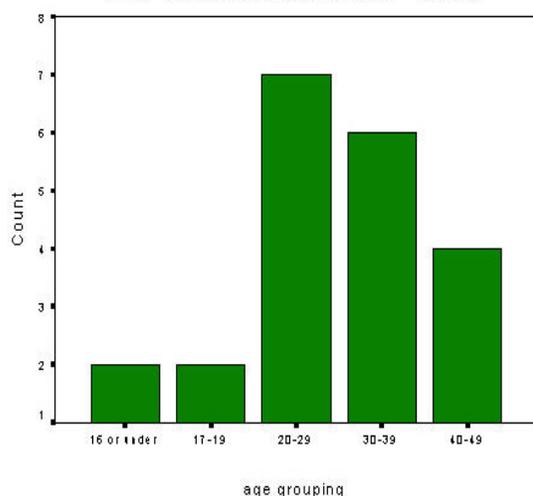

Figure 11b: Arrestees Current Charge - Drugs
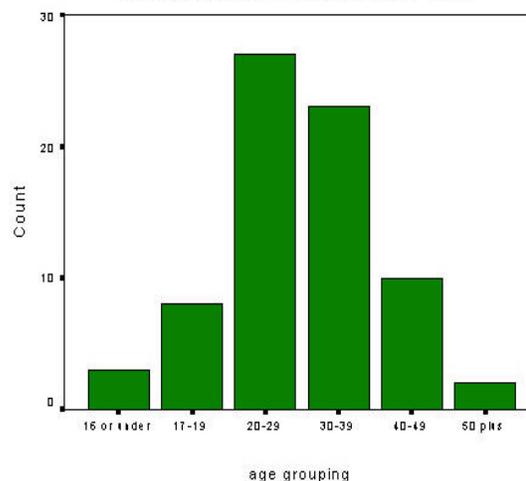
Figure 11c: Arrestees Current Charge - Assault
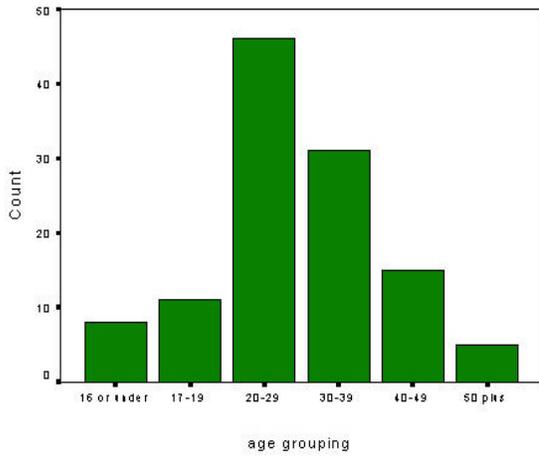
Figure 11f: Arrestees Current Charge - Violence
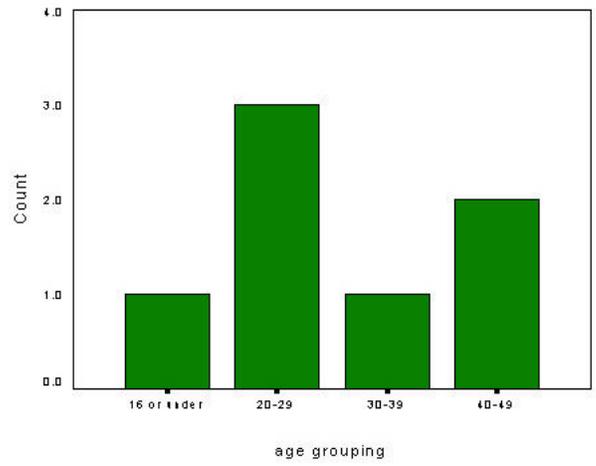
Figure 11d: Arrestees Current Charge - Property
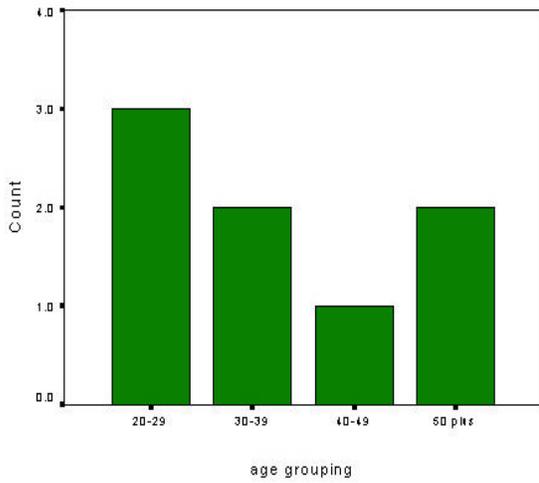
Figure 11g: Arrestees Current Charge - Weapons
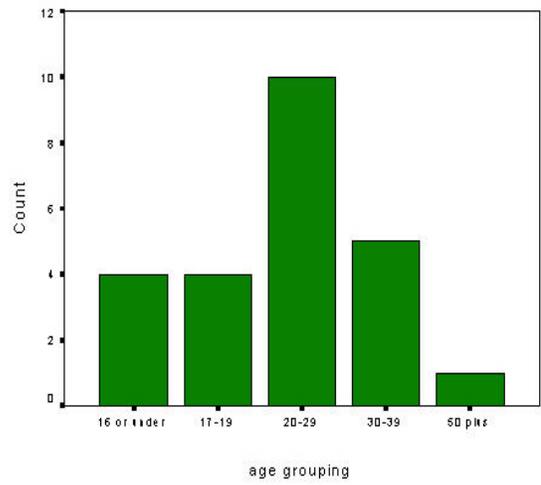
Figure 11e: Arrestees Current Charge - Robbery
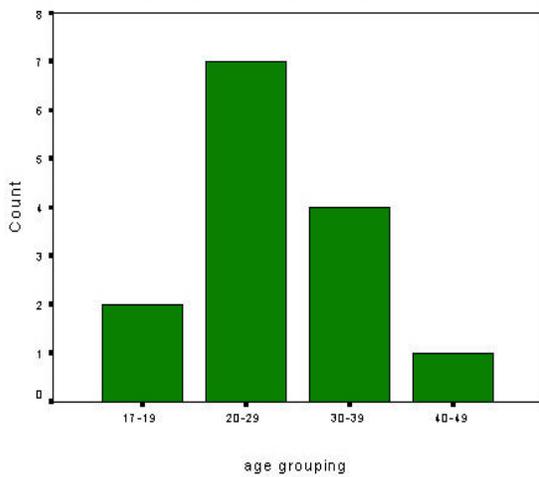
Figure 11h: Arrestees Current Charge - Theft

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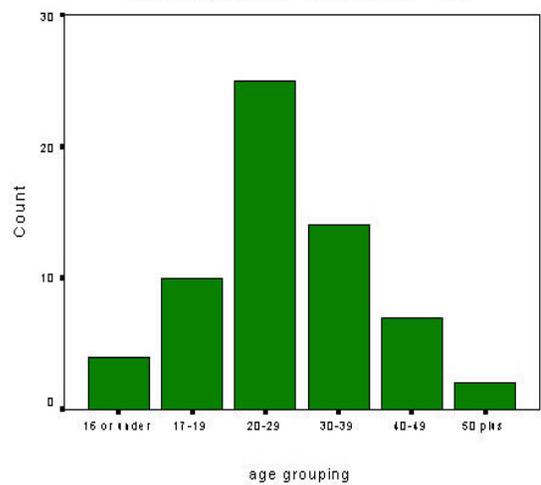
DRUG USE AND OFFENCE TYPE [table 8b]

The drug use profile of offenders in relation to cannabis and cocaine tended to vary notable when offences of this type are considered. It is also worth noting that because of the low number of arrestees who gave urine samples (35.1%) the drug profile by offence types would not at all reflect the full extent of drug use among arrestees. The following table 8b and results reflects drug use by offence type only among those who gave a urine sample.

Among the assault offenders (the dominant charge in this study) who gave a urine sample (n=43), 41.9% tested positive for cannabis while 7% were positive for cocaine. Among those charged with drug offences (n=27), 55.6% were positive for cannabis and 25.9% for cocaine. Theft offenders were 33.3% positive for cannabis and 28.6% for cocaine. For those charged with weapon offences (n=7), cannabis use was very high (85.7%) as well as 100% positive for cocaine use. A little more than half (55.6%) of burglary offenders (n=9) were positive for cannabis but only 22% were positive for cocaine. All persons charged with robbery were positive for both cannabis and cocaine and this was the case for the one person charged with violence.

**Table 8b: Drug Use and Offence Type
Among those who gave Urine Sample**

Offence types	Number	Drug Result	
		Can.	Coc.
Burglary	9	5	2
Drugs	27	15	7
Assault	43	18	3
Property	5	2	1
Robbery	3	3	3
Violence	1	1	1
Weapons	7	6	7
Theft	21	7	6

Notes: Note: Can. = Cannabis   Coc. = Cocaine
Source: The National Council on Substance Abuse (NCSA), 2003,
           Computer Database

PRIOR OFFENCES AND CHARGES AMONG ARRESTEES [table 8c]

Charged With Offence Past 12 Months [figure 12a]

Arrestees were asked whether they were charged with any offence(s) over the past 12 months. Some 32.6% had a prior charge during that period. However, 67.4% indicated that they were not charged with any offence during that period. Most prior offences were: assault (8.9%); drugs (7.6%); theft (4.6%); and robbery (3%). Arrestees also indicated burglary (2.1%), weapon offences (2.1%), property offences by five persons and violence by three persons, (figure 12a).

Served Prison Term, Fined or Probation [figure 12b]

Prior to this arrest, 48.6% of current arrestees had served a prison term, been fined, or was placed on probation - (16% of females and 51.1% of males; 49.1% of Barbadian nationals compared to 43.9% of other nationals). The dominant prior offence, for which arrestees were

fined, imprisoned or placed on probation was drug offences (14%), this was followed by assault (9.2%); theft (8.7%); robbery (4.1%); burglary (3.9%); weapon offences (2.5%); violence, property offence and fraud 1.1% or 5 persons each, (figure 12b).

Figure 12a: Prior offences among arrestees last 12 months
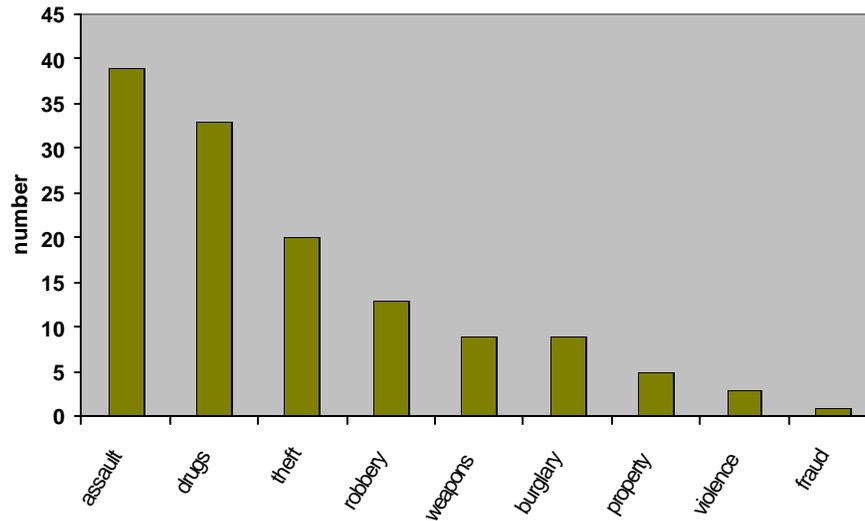
Figure 12b: Prior offences for which arrestees served prison term was fined or given probation
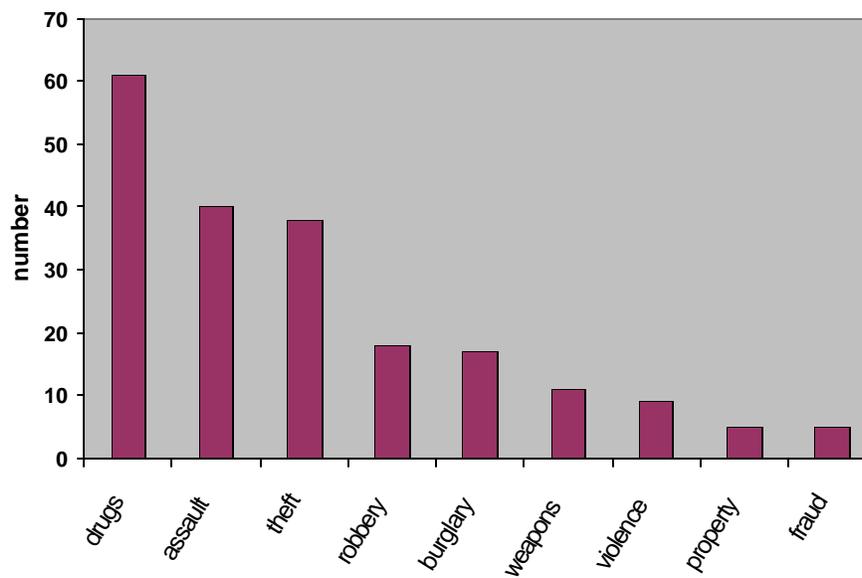
Committed Offence But Not Charged [table 8c]

Quite a few arrestees indicated that they had committed offences within the last month for which they were not charged. The main offence was drugs related, noted by 21 persons or 4.8% of arrestees. Other offences of note were burglary (6 mentions); assault (5 mentions) robbery (6 mentions) and theft (4 mentions), table 8c. Figure 13a below compares the percentage contribution of each value in the categories of table 8c to a total across categories.

Table 8c: Prior Offences and Charges among Arrestees

	Charged last 12 months (a)	Ever served prison term, etc. (b)	Committed offence never charged (c)
Burglary	9 (2.1)	17 (3.9)	6 (1.4)
Drugs	33 (7.6)	61 (14.0)	21 (4.8)
Assault	39 (8.9)	40 (9.2)	5 (1.1)
Property	5 (1.1)	5 (1.1)	-
Robbery	13 (3.0)	18 (4.1)	6 (1.4)
Violence	3 (0.7)	9 (2.1)	1 (0.2)
Weapons	9 (2.1)	11 (2.5)	2 (0.5)
Fraud	1 (0.2)	5 (1.1)	-
Theft	20 (4.6)	38 (8.7)	4 (0.9)
Other	50 (11.8)	57 (13.1)	8 (1.8)

Source: The National Council on Substance Abuse (NCSA), 2003, Computer Database
Notes: (a) Number and percent charged with offence over the last 12 month
(b) Number and percent who ever served a prison term, fine or did probation
(c) Number and percent who committed offence last 12 months but not charged

Figure 13a: Comparison of Arrestees Criminal Activities and Outcomes last 12 Months
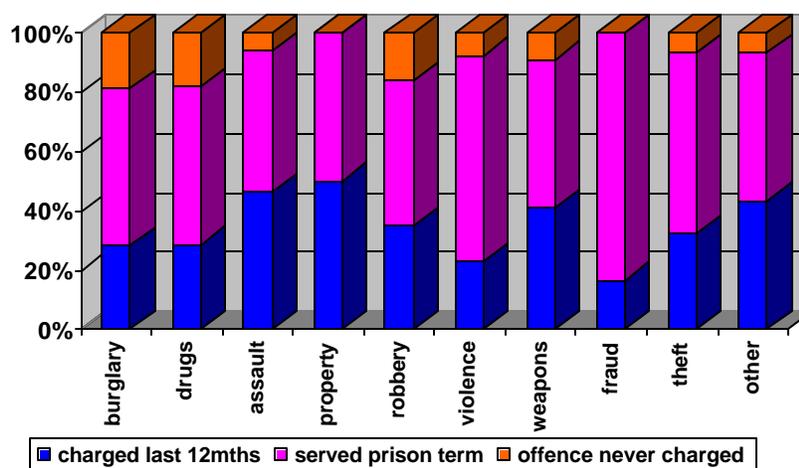
Arrestees present status with the Justice System [table 8d]

Arrestees were asked if they were currently under a court order relating to an earlier offence. Fifty-six arrestees or 12.8% were currently on bail for a previous offence. Nine (2.1%) were under a probation order; five (1.1%) were on a bond order to keep the peace; two were on conditional discharge and three on some other type of court order, (table 8d).

Table 8d: Arrestees Current Status with the Justice System

Type of Court Order (n=436)	Number (%)
Currently on bail	56 (12.8)
Currently on probation order	9 (2.1)
Currently on bond – order to keep the peace	5 (1.1)
Doing community service	2 (0.4)
On conditional discharge for earlier offence	1 (0.2)
Some other order	3 (0.7)
Not charged with any offence last 12 mths	294 (67.4)

Source: The National Council on Substance Abuse (NCSA), 2003, Computer Database

SUPPLEMENTAL CROSS TABULATION FOR PRIOR CRIMINAL ACTIVITY [table 8e]

Table 8e: Cross-tabulation of Prior Imprisonment, Fine or Probation by Selected Subgroups

	Number (%)			Number (%)	
	Yes	No		Yes	No
Overall	212 (48.6)	224 (51.4)	**Marital Status**		
Sex			Single	175 (48.7)	184 (51.3)
Male	207 (51.1)	198 (48.9)	Married	6 (22.2)	21 (77.8)
Female	4 (16.0)	21 (84.0)	Sep/wid /div	8 (47.1)	9 (52.9)
Age Grouping			Common-law	22 (81.5)	5 (18.5)
16 and under	9 (36.0)	16 (64.0)			
17 – 19	21 (32.3)	44 (67.7)	**Urine Drug Test**		
20 – 29	84 (53.2)	74 (46.8)	Cocaine (yes)	18 (78.3)	5 (21.7)
30 – 39	63 (56.3)	49 (43.8)	(no)	60 (46.2)	70 (53.8)
40 – 49	27 (52.9)	24 (47.1)			
50 plus	5 (27.8)	13 (72.2)	Cannabis (yes)	47 (63.5)	27 (36.5)
Nationality			(no)	31 (39.2)	48 (60.8)
Barbadian	194 (49.1)	201 (50.9)			
Other national	18 (43.9)	23 (56.1)	Alcohol (yes)	58 (51.8)	54 (48.2)
			(no)	20 (48.8)	21 (51.2)

Source: The National Council on Substance Abuse (NCSA), 2003, Computer Database

As stated before, a little less than half (48.6%) of current arrestees had some previous imprisonment, fine or probation order. Cross-tabulation of previous contact with the justice system and selected variables showed that they were:
- More than half of all males (51.1%) and 16% of all females
- More than half of all those in the 20-29, 30-39 and 40-49 yrs age grouping and about one-third of teenagers
- About the same proportion of Barbadian (49.1%) as other nationals (43.9%)

- A notable higher proportion of common-law persons (81.5%) compared to other marital status (22-49%)
- For those who gave a urine sample, a significantly higher proportion were positive for cocaine (23.1% versus 6.7%, p<0.01); as well as cannabis (60.3% versus 36%, p<0.01)
- No significant difference was noted for the alcohol results (74.4% versus 72%)

PERCEIVED INFLUENCE OF DRUG AND ALCOHOL ON CRIMINAL ACTIVITIES [table 9a, 9b and figure 13b]

Arrestees were asked if drugs and alcohol were connected to current or past offences. The options were: yes, no and unsure. Some 24.5% (107/436) arrestees said yes drug was connected in some way to their criminal activity, while 1.6% was unsure. In relation to alcohol, 11.2% (49/436) said yes alcohol was a factor while six others (1.4%) were unsure (table 9a).

When asked in what way was "drugs or alcohol" connected with the past or present offending, it was interesting to note that for drugs as a factor, most (7.4%) or 34 persons said it was "through being involved with the drug trade". A further 7.3% (32 persons) said it was "through the effect of drugs on judgment", while 6% (6 persons) said it was "through the need to buy drugs".

The perceived influence of alcohol use and criminal activity showed that almost all persons (46 of 49) said it was "through the effects of alcohol on judgment". The other 3 persons said it was "through the need for money to buy alcohol", table 9a).

Table 9a: Perceived Influence of Drug and Alcohol on Criminal Activity

Influences	Drug as a factor	Alcohol as a factor
Through the effect on judgment	32 (7.3)	46 (10.6)
Through the need for money to buy drugs/alcohol	26 (6.0)	3 (0.7)
Through being involved with the drug trade	34 (7.8)	-
Other influence	15 (3.4)	-

Source: The National Council on Substance Abuse (NCSA), 2003, Computer Database

**Figure 13b: Influence of drug and alcohol on criminal activity**
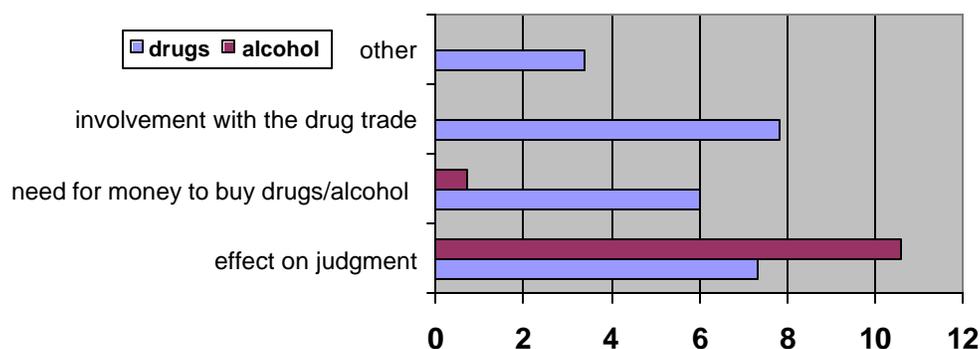
Table 9b: Involvement of Drugs and Alcohol on Past or Present Criminal Activity

	Drug connected to offence			Alcohol connected to offence		
	Yes	No	Unsure	Yes	No	Unsure
Overall	107 (24.5)	322 (73.9)	7 (1.6)	49 (11.2)	381 (87.4)	6 (1.4)
Sex						
Male	103 (25.4)	295 (72.8)	7 (1.7)	47 (11.6)	352 (86.9)	6 (1.5)
Female	3 (12.0)	22 (88.0)	-	2 (8.0)	23 (92.0)	-
Age Grouping						
16 and under	3 (12.0)	22 (88.0)	-	-	25 (100.0)	-
17 – 19	13 (20.0)	50 (76.9)	2 (3.1)	4 (6.2)	60 (92.3)	1 (1.5)
20 – 29	28 (17.7)	128 (81.0)	2 (1.3)	16 (10.1)	138 (87.3)	4 (2.5)
30 – 39	46 (41.1)	65 (58.0)	1 (0.9)	16 (14.3)	95 (84.8)	1 (0.9)
40 – 49	12 (23.5)	38 (74.5)	1 (2.0)	8 (15.7)	43 (84.3)	-
50 plus	4 (22.2)	14 (77.8)	-	4 (22.2)	14 (77.8)	-
Nationality						
Barbadian	95 (24.1)	293 (74.2)	7 (1.8)	47 (11.9)	343 (86.8)	5 (1.3)
Other national	12 (29.3)	29 (70.7)	-	2 (4.9)	38 (92.7)	1 (2.4)
Race						
Black	103 (24.5)	310 (73.8)	7 (1.7)	49 (24.5)	365 (86.9)	7 (1.7)
Other	4 (25.0)	12 (75.0)	-	-	16 (100.0)	-

Source: The National Council on Substance Abuse (NCSA), 2003, Computer Database

Involvement of drug and alcohol with offending [table 9b]

Twice as many males said drugs were connected with their offending in contrast to alcohol (25.4% for drugs in contrast to 11.6% for alcohol). For females the difference was less marked (12% for drugs and 8% for alcohol). The age group with the highest proportion saying drug was connected with their offending was those 30-39 yrs old (41.1). In terms of alcohol, as age increased, the proportion of those indicating alcohol as a factor also increased, (from 6.2% in the lower age group to 22.2% in the highest age group).

A higher proportion of arrestees of other nationality said drugs were a factor in their present or past criminal offending when compared to Barbadian nationals (29.3% in contrast to 24.1%). However a smaller proportion of Barbadian nationals compared to "other nationals" said alcohol was a factor in their offending (4.9% in contrast to 11.9%).

DRUG MARKETS [tables 10a thru 10c]

Drug Purchase Details [table 10a]

Participants were questioned about illegal drug purchase in the past 12 months and last 30 days. Table 10a shows the results for cannabis and crack cocaine, the most commonly used illicit drugs and the two that were purchased by arrestees. A little more than a third (35.3%) of all arrestees reported that they had purchased drugs in the last month and about four of every ten or 40.6% in the last year.

Of those persons who purchase drugs in the last year, 83.6% had purchased marijuana (148/177) while 16.4% (29/177) had purchased cocaine. 79.7% (122/154) of purchase in the last month was for marijuana and 19.6% (30/154) was for cocaine.

**Table 10a: Drug Purchase Details For Participants Who
Bought Drugs in the Past Year and Past Month**

Purchased Drugs	Period of Purchase	
	Last year (n=436)	Last month (n=436)
Yes	177 (40.6)	154 (35.5)
No	256 (58.7)	282 (64.7)
Won't say	3 (0.7)	-
Which Drug	**(n=177)**	**(n=154)**
Marijuana	148 (83.6)	122 (79.7)
Crack cocaine	29 (16.4)	32 (19.6)

Source: The National Council on Substance Abuse (NCSA), 2003, Computer Database

Drug Supply Details [table 10b and figure 14]

Participants were questioned about the means they used to obtain drugs. Table 10b shows the results for cannabis and crack cocaine, the most commonly used illicit drugs. Data about purchase of marijuana and crack cocaine indicated that more arrestees participate in the marijuana market than in the crack cocaine market.

How drugs are acquired (cash or non-cash purchase)
- Overall 96.7% of purchases were cash purchases, and four (3.3%) were non-cash purchases. Crack cocaine was the substance for which cash-only transactions were highest. All purchases of crack in the last 30 days were for cash only. However, some arrestees did report some amount of non-cash purchase in the usual course of crack purchases (table 10b). In this study, 95.9% of arrestees who purchased marijuana and 100% who purchased crack paid in cash

Place of purchase (indoor or open air)
- The street was the most frequent location where arrestees reported last purchase for drugs overall (22.2% of the times). 'on the block' (13.1%) – meaning somewhere where in the open air where transactions are usually made common to all involved. This was followed by less significant purchases in house or apartment, at dancehalls, or outdoor areas

- Most of the marijuana purchases in the last month however, in rank order, were: the street, on the block, dancehalls, house/apartment, outdoor area and sporting events. For cocaine, most of the purchases took place on the street, followed by 'on the block', house/apartment and outdoor area

Outside or inside the district
- More than half of the drugs purchased overall in the last 30 days by arrestees was done in a district other than their own, 52.6% were purchased outside their own district in contrast to 47.2% in own district, (table 10b). For marijuana, the proportion of arrestees who ventured outside their own district was 51.3% and for crack 50%. One useful way in which this information can be used is by looking at instances where arrestees purchased drugs in their own district and mapping the area based on the information about the parish arrestees currently live. Analysis of this nature can help determine the

concentration of purchases in a given area. For example, using this analytical technique one can see that of the 81 arrestees who reported buying drugs in their own district, 53.1% lived in St Michael, 13.6% in Christ Church, 10% in St James and 6.2% in St Phillips – the four leading parishes. This reflects the geographical distribution of the population in the island.

Table 10b: Drug Supply Details for Participants Who Bought Drugs in the Past Month

	Number and percent		
	Overall	Marijuana	Cocaine
Drug purchase last month	**154 (35.3)**	**122 (79.7)**	**30 (19.6)**
How pay for drugs usually			
Cash	149 (98.0)	120 (98.4)	28 (96.6)
Stolen articles	1 (0.7)	-	1 (3.4)
Work	1 (0.7)	1 (0.8)	-
Other	1 (0.7)	1 (0.8)	-
How pay for drugs last purchase			
Cash	148 (96.7)	117 (95.9)	30 (100.0)
Stolen articles	1 (0.7)	1 (0.8)	-
Other	4 (2.6)	4 (3.3)	-
Location where drugs usually bought			
In own district	81 (42.7)	57 (48.7)	15 (50.0)
In a nearby district	38 (22.2)	19 (16.2)	11 (36.7)
Far from own district	52 (30.4)	41 (35.0)	4 (13.3)
Type of place drugs last bought			
Street	97 (22.2)	16 (78.6)	18 (21.4)
Home/apartment	15 (3.4)	7 (58.3)	5 (41.7)
On a "block"	57 (13.1)	42 (79.2)	11 (20.8)
Dancehall	14 (3.2)	10 (100.0)	-
Outdoors areas	9 (2.1)	4 (80.0)	1 (20.0)
Sporting event	3 (0.7)	2 (100.0)	-
Some other place	2 (0.5)	2 (100.0)	-

Source: The National Council on Substance Abuse (NCSA), 2003, Computer Database

Figure 14: Location of Drug Purchase (overall -usual place and for marijuana and crack location of purchase in the last month)
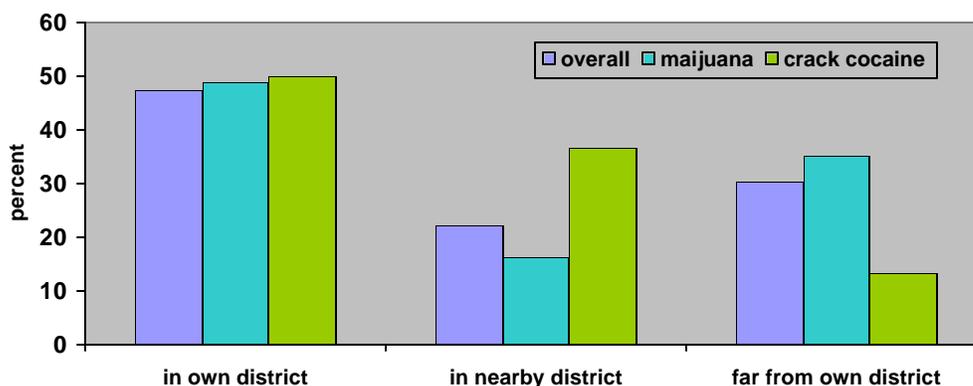
Problems Obtaining Drugs [table 10c]

Table 10c shows the reason attempts to purchase drugs failed by drug type (marijuana and crack) – purchase in the last 30 days. With only 68 episodes of failure to complete a drug transaction reported, it would appear that for the most part, most arrestees had no difficulty in completing a drug transaction. The reasons for transaction failure varied to some extent by type of drug (marijuana compared to crack cocaine).

The reason most commonly reported was "poor quality", indicated for 20 of the 68 episodes (29.4%), this was followed by "insufficient cash" (12/68 or 17.6%), and police activity (9/68 or 13.2%). Lack of availability overall was only cited for four episodes and drug shipment seizure for six episodes.

Of those deterred by police activity, 69.2% of the times the purchase was for marijuana and 30.8% of the times for crack. Two-thirds of the transactions deterred because of "insufficient cash", "lack of availability" and "drug shipment seizure" was also for marijuana. The largest proportion of failure for any of the drug types purchase was in the case of marijuana, deterred because of "poor quality" (90.9% of the episodes reported).

Table 10c: Reason Attempts to Purchase Drugs Failed by Drug Type

Reasons	Drugs purchased	
	Marijuana	Crack cocaine
Police patrol (n=13)	9 (69.2)	4 (30.8)
Drug shipment seizure (n=9)	6 (66.7)	3 (33.3)
Poor quality (n=22)	20 (90.9)	2 (9.1)
Insufficient cash (n=18)	12 (66.7)	6 (33.3)
Lack of availability (n=6)	4 (66.7)	2 (33.3)

Source: The National Council on Substance Abuse (NCSA), 2003, Computer Database

ILLEGAL DRUG SALE [table 11a and 11b]

Arrestees were asked if they had sold any illegal drugs in the last year or last month, some 7.4% had done so in the last year and 5% in the last month. Of those arrestees who sold illegal drugs in the last year (n=32), 81.3% had sold marijuana and 18.7% crack cocaine. Of those who sold drugs in the last month (n=22), 85.7% had sold marijuana and 14.3% crack cocaine, table 11a.

Table 11a: Illegal Drug Sale Details for Participants Who Sold Drugs in the Past Year and Past Month

Sold Drugs	Period of Sale	
	Last year (n=436)	Last month (n=436)
Yes	32 (7.4)	22 (5.0)
No	403 (92.4)	416 (95.0)
Won't say	1 (0.2)	-
Which Drug	**(n=32)**	**(n=21)**
Marijuana	26 (81.3)	18 (85.7)
Crack cocaine	6 (18.7)	3 (14.3)

Source: The National Council on Substance Abuse (NCSA), 2003, Computer Database

Drug Sale Details [table 11b and figure 15]

Participants were questioned about the method of payment when illegal drugs are sold. Table 11b shows the results for cannabis and crack cocaine, the most commonly sold illicit drugs. Data about sale of marijuana and crack cocaine indicated that more arrestees participate in the sale of marijuana than in the crack cocaine market.

How drugs are paid for (cash or non-cash payment)
- Overall all arrestees indicated that the usual method of payment was cash. 95.5% of payment in the last 30 days was for cash and 4.5% by some other method. Crack cocaine was the substance for which another method of payment was used at the last payment – one person paid by a non-cash method. Cash payment was made for all marijuana sales and two of the three cocaine sales

Place of sale (indoor or open air)
- The street was the most frequent location where arrestees reported making last sale of drugs overall (11 episodes), followed by 'on the block' (8 episodes) and dancehall (5 episodes). The less significant sales were made in house or apartment (1), outdoor (2) and some other area (3)

- Most of the marijuana sales in the last month, in rank order, were: the street, on the block, dancehalls, some other place, house/apartment and outdoor area. For cocaine, the purchases took place on the street (1), 'on the block' (1), outdoor area (1)

Outside or inside the district
- Almost two-thirds of the drug sales overall in the last 30 days by arrestees was done in the arrestees own district, 63.2%. 21.1% of sale took place in a nearby district and 15.8% in a far-away district, (table 11a). For marijuana, the proportion of arrestees who made sales outside their own district was 66.7% and for crack 33.3%; 20% of marijuana sale was in a nearby district and 13.3% in a far-away district.

Figure 15: Location of Drug Sale (overall -usual place and for marijuana and crack, place drugs sold in the last month)
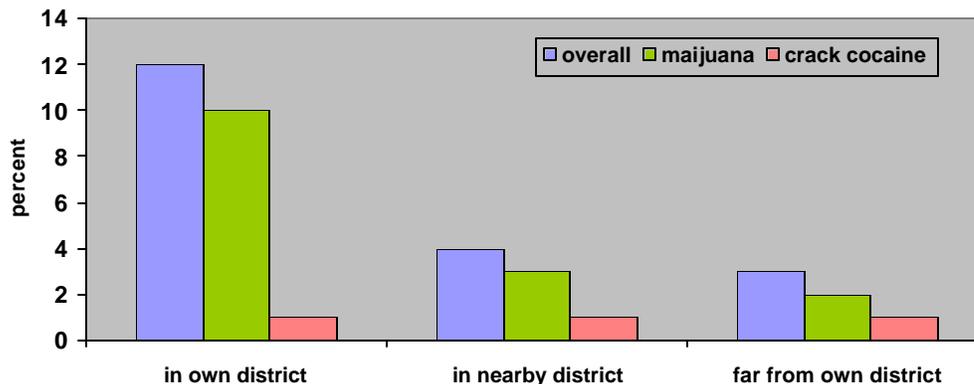
Table 11b: Drug Sale Details for Participants Who Sold Drugs in the Past Month

	Number and percent		
	Overall	Marijuana	Cocaine
Sold drug in the last month	**22 (5.0)**	**18 (84.7)**	**3 (14.3)**
How drug paid for last sale			
Cash	21 (95.5)	18 (90.0)	2 (10.0)
Other	1 (4.5)	-	-
Location where drug sold			
In own district	12 (63.2)	10 (66.7)	1 (33.3)
In a nearby district	4 (21.1)	3 (20.0)	1 (33.3)
Far from own district	3 (15.8)	2 (13.3)	1 (33.3)
Type of place drugs last sold			
Street	11 (2.5)	9 (90.0)	1 (100.0)
Home/apartment	1 (0.2)	1 (100.0)	-
On a "block"	8 (1.8)	7 (87.5)	1 (12.5)
Dancehall	5 (1.1)	5 (100.0)	-
Outdoors areas	2 0.5)	1 (50.0)	1 (50.0)
Some other place	3 (0.7)	3 (100.0)	-

Source: The National Council on Substance Abuse (NCSA), 2003, Computer Database

Problems Selling Drugs

The reason attempts to sell drugs failed by drug type (marijuana and crack) – attempts to sell in the last 30 days. Only 11 episodes of failure to complete a drug sale were reported.   The reasons for transaction failure were all related to the sale of marijuana except for one mention of failure in relation to the sale of cocaine.

The reason most commonly reported was "poor quality" and "drug not available", indicated for 3 of the 11 episodes (27.3%) each. This was followed by "police activity" (2/11) and "drug shipment seizure" also 2/11 episodes.   Customer unable to pay got only one (1) mention.

GUN CRIMES [table 12a and 12b]

Arrestees were asked several questions about ownership of guns, use of guns in committing criminal activities as well as and their perceptions and attitudes towards the use of guns in criminal activities.

Ownership and Access to a gun
- A small proportion of arrestees indicated that they owned a gun (2.6% or 11/436) – all males, all Barbadian nationals and in relation to age groupings, 45% were in the 20-29 yrs age group and 27.3% in the 30-39 yrs age group. All 11 arrestees reported that the gun they owned was an un-licensed firearm

- Some 9.6% (41/436) of arrestees said they had access to a gun – one female and 40 males; 9.5% of Barbadian nationals and 11% of other nationals; mostly reported by those in the 20-29 yrs age group (43.9%) followed by 26.8% in the 17-19 yrs age group and 8.2% in the 30-39 yrs age group (figure 16a). Of the 41 arrestees who had access to a

gun, 85.4% (35/41) said these guns were not licensed. Therefore, only 7.3% of those guns were licensed. However, two persons were unsure and one refused to say

Figure 16a: Comparison of Arrestees Who Owned or Had Access to a Gun
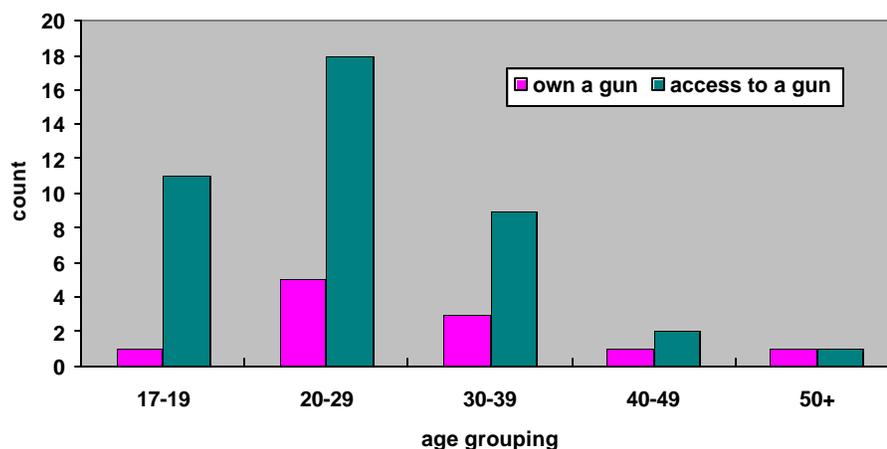
Perception of availability of guns [table 12a]
Respondents were asked, "how would you describe obtaining a gun in Barbados" and the options were: very easy, easy, difficult, very difficult, and don't know. Table 12a shows responses to this question. Most arrestees said they did not know (44.2%), while 29.4% said it was easy or very easy: (22.9%) easy and (6.5%) very easy. 26.4% thought it was generally difficult: 14% difficult and 12.4% very difficult.

Table 12a: Arrestees Perception of Availability of Guns

	Number (%)
Availability	
Very easy	28 (6.5)
Easy	98 (22.9)
Difficult	60 (14.0)
Very difficult	53 (12.4)
Don't know	189 (44.2)
Rental of a gun	
Yes	67 (15.7)
No	183 (42.8)
Unsure	176 (41.1)
Won't say	2 (0.5)

Source: The National Council on Substance Abuse (NCSA), 2003, Computer Database

A small but notable proportion of arrestees (15.7%) said they could rent a gun and then return it, 41.1% were unsure, two persons would not say and the remainder (42.8%) did not think they were able to rent a gun and then return it.

Weapons used to commit crimes [table 12b and figure 16b]

In response to questions about weapons use by arrestees to commit crimes, 6.8% (29 arrestees) indicated that they had used a gun when committing a crime. A large proportion (69.3%) had not used any weapon in committing crimes but some 44 episodes (10.1%) were connected to the use of machete; 35 episodes (8%) to the use of knives; 12 episodes (2.8%) to the use of club sticks and another 42 episodes (9.6%) to the use of some other weapon (figure 16b).

Among those who reported ever using a gun, knife or machete to commit a crime, table 12b shows the distribution of their current and prior offences. In relation to gun crimes, the most common current offences were: drugs, assault, theft and robbery while the common past charges were: drugs, assault, robbery, and to a lesser extent theft and burglary.

For crimes with machete, the most common current and past offences were: assault, drugs, robbery and theft. Those who used knives were mostly currently charged with assault, drugs and theft. This was the case for the prior charges as well.

**Table 12b: No of Crimes Committed With the Use of Various Weapons
Cross-tabulated with Prior and Current Charges among Arrestees**

	Used gun		Used machete		Used knife	
	(a)	(b)	(c)	(d)	(e)	(f)
Burglary	1	2	4	3	3	1
Drugs	7	6	8	6	5	3
Assault	6	6	12	9	12	10
Property	-	1	-	2	-	1
Robbery	4	4	6	6	4	2
Violence	1	1	2	1	1	1
Weapons	1	2	3	3	2	1
Fraud	-	-	-	-	-	-
Theft	5	3	5	2	5	5
Other	7	3	13	4	11	2

Source: The National Council on Substance Abuse (NCSA), 2003, Computer Database

Notes: (a) Used gun to commit offence – current charge
(b) Used gun to commit offence - charge past 12 months
(c) Used machete to commit offence – current charge
(d) Used machete to commit offence – charge past 12 months
(e) Used knife to commit offence – current charge
(f) Used knife to commit offence - charge past 12 months

Attitude towards the use of guns

When asked if a gun was necessary when dealing in illegal drug in Barbados, 34.2% said yes, 31.9% no and 33.9% gave no response. 20.3% of arrestees thought that the penalties for gun crimes deter persons from carrying or using them, however, 13.6% were unsure or could not say.

Figure 16b: Weapons Used to Commit Crimes
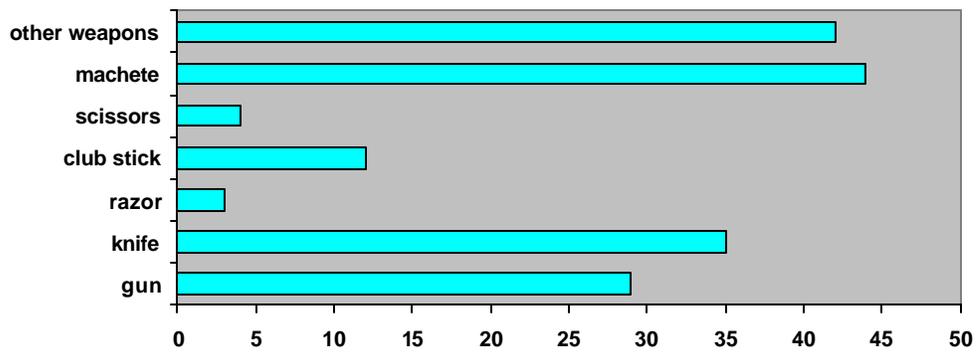
SECTION 3

DISCUSSION

This study can help fill gaps and shed some light on the widely held belief that criminal activities and drug use are highly correlated and that crime rates and drug use are high in the Caribbean countries because of their involvement with drug transshipment. Reports overtime has continually linked these two factors (drug use and crime) as being directly related to each other and this has been demonstrated in increasing news-paper reports throughout the Caribbean. This discussion section will seek to address some of the key areas that the questionnaire focused on in an attempt to provide some perspective on the results as well as relatedness to previous study results of like nature.

Results of Self-Reported Drug Use

Self-report surveys of arrestees' drug use can be important checks on the results of urinalysis. However, they can be much more. They can supply information about the history of drug use and can measure the use of types of drugs not tested with urinalysis (for example, barbiturates, LSD, and inhalants). Self-reports also can help distinguish between, and provide additional information about, the use of crack cocaine and powder cocaine.

Marijuana

Levels of marijuana use among persons involved in the criminal justice system are high; often one-third or more of the population has used marijuana within days of an arrest (NIJ, 1998). Previous reports also cite marijuana as the drug used most commonly by adult male arrestees. In this study, self-reported use was high, with seven of every ten arrested reporting having used it in their lifetime and half of the arrested (50.2%) had used it in the 30-day period prior to the survey. Age and gender analyses indicate that there is need to monitor these subgroups of marijuana users. Most important within these subgroups are younger arrestees, among whom the "heavy use" data revealed notable higher marijuana prevalence among those less than 20 yrs old (83-86%) in contrast to levels of 52-73% in the next three higher age groupings.

The general assessment of marijuana rates presented can be used to anticipate future changes in overall drug use. Young users are particularly important in this regard because, all other factors held constant, their presence is likely to be felt in the community for longer than that of older drug users. Thus, significant continued changes in drug use patterns among young adults should be examined closely. Because the effects of marijuana are quite different from say that of crack cocaine, the level of use might be expected to be different. Yet the average number of days overall that arrestees used marijuana was as almost as high as the number of days they reported using crack cocaine, which is generally considered to have graver effects.

Marijuana and the Use of Other Drugs

Alcohol is most generally reported as the substance used in conjunction with marijuana, but there are a number of reports of marijuana combined with powdered cocaine, crack cocaine, and methamphetamine (ONDCP, 1997; NIDA, 1998). In the Caribbean setting, a known combination ingredient for marijuana is crack-cocaine; know locally as a "seasoned spliff". In the U.S. between 1990 and 1998, among arrestees testing positive for marijuana, 40.0 percent also tested positive for cocaine. In this study, given the small sample size of urine tests and the noticeable percentage of marijuana positive arrestees who also tested positive for both cocaine, (10.8%),

and alcohol (74.3%), it is not surprising that there is little variation with other similar studies.   It therefore means that we are faced with a situation of poly-drug use among arrestees.

Combined, marijuana's prevalence and the degree to which it is concentrated among younger cohorts raise a longer-term issue to which communities should be sensitive. If substantial portions of marijuana users become regular users of other drugs, any declines in those other drug use that have been achieved could be reversed. In other words, since many individuals do not report trying drugs other than marijuana until their late teens and early twenties, and since marijuana use is concentrated among young adults, there is some risk that what is now primarily marijuana use among young adults may spread to include other drugs (poly-drug use). The available information on poly-drug use clearly demonstrates that marijuana users do not confine their drug use to marijuana. Whether use of other drugs with marijuana will become a more prominent pattern in the future is not clear. However, the size of the marijuana-using cohort, in conjunction with its concentration among arrestees whose drug use patterns may not be fully developed, suggests that this potential should be carefully monitored.

It is relatively difficult to form conclusive opinions about female marijuana use because of the small number of females who agreed to the interview and even smaller number that provided a urine sample.   With only one female arrestee of the six who gave a sample testing positive for marijuana and although female arrestees test positive for marijuana less frequently than their male counterparts in other studies among arrestees, marijuana use still remains of grave concern among not only the female arrestee population but the general population as a whole.

Urinalysis Results

A key question was whether urinalysis, relatively new to the criminal justice system in Barbados and the region as a whole, could be used in this setting to measure drug use. The study was somewhat unsuccessful in that compliance rates were low: only about 46% of the possible 947 arrestees during that period were interviewed. Moreover, urine sampling proved to be more challenging: of the arrestees who agreed to the interview, 65% refused to provide a urine specimen.

However, previous studies have shown the feasibility of using urinalysis to test for drug use among arrestees at the site where they are brought into custody. On the basis of this finding, and because urinalysis was detecting higher levels of drug use than was the traditional self-report method, the National Institute of Justice established DUF in 1987 as a way to track drug-abuse trends in this at-risk population.

One question that comes to mind is, "To what extent were the arrestees who gave a urine specimen different from those who did not?" Comparison of those who did and did not give urine samples revealed some small differences: those who gave were significantly older than those who did not (median age among those who gave was 28 years and among those who refused 27years. Females were significantly less likely than males to give a specimen. About three of every four females and two of every three males refused to provide a urine sample. Of the Barbadian nationals, (90.6% of total arrestees – 395/436), 37.7% provided a sample compared to 29.2% of the other nationals and those who gave samples for testing were proportionally more likely to be single (83%).

The major finding of this study has to do with the prevalence of drug use as validated by urine analysis. Of the four drugs analysed in this study, (cocaine, cannabis, amphetamine and opiates), two drugs - cannabis (marijuana) and cocaine (both crack cocaine and cocaine powder) were used most often by arrestees. Ethanol (alcohol) was also analysed for and reported. Although there was one interview mention of heroin and one of ecstasy use in the last 30days, there were no urine positive results for opiates and amphetamines. Urinalysis revealed that

48.4% of arrestees had used marijuana recently. By the definition for heavy marijuana use, 58.9% of those with urine sample were heavy marijuana users. Fifteen percent were positive for cocaine of which most seems to be crack cocaine since there was only three self-reports of powdered cocaine use in the month prior to the interview. Data from the interview coupled with the urinalysis results offer evidence that "hard drug" use is far from over or under control in Barbados.

Demographic Characteristics

Analyses were done to ascertain if there were any differences in drug use by demographic characteristics and types of crime. The aim of these analyses was to find out whether there were differences in drug use among various subgroups of the detained arrestees. The results of the urinalysis were broken down by gender, age, employment status, and type of crime for which the person was arrested.   The emphasis in this discussion would be to look at subgroups whose drug use prevalence can help shed some light (in the context of Barbados) on the widely published evidence in the literature that there are always wide variation in drug use among males, the unemployed, homeless persons, and those of low educational background to name a few.

Gender/Age

Studies based on self-report and official studies based on criminal justice processing tend to show that females are generally less deviant than males (with some exceptions). Some of the early analyses of DUF data showed however, that female detained arrestees were just as likely as male detained arrestees (and sometimes more likely) to test positive for certain types of drugs (Wish and Gropper, 1990).   Unfortunately in this current study the number of arrestees who were females was so small that these hypotheses cannot be explored.

Recent analyses on marijuana use showed that results varied by age group. For the purposes of this discussion, age was reported in six categories: under 17, 17-19, 20-29, 30-39, 40-49, and 50 years and older. This may not always make comparisons easy but it would help to keep the age groupings in intervals where teenagers can be compared with older adults. For age, the pattern is clear. Older arrestees (age 20 or older) were more likely than younger ones (ages less than 20) to test positive for cocaine and to some extent alcohol. Only for marijuana use were younger arrestees more likely than older arrestees to test positive. Thus, on average 57.7% of younger arrestees compared with 36.6% of older arrestees tested positive for marijuana.

Employment Status

There were strong indications that employment status was a factor in the use of various types of drugs as reported in other studies. For all drug types (including alcohol) unemployed were more likely than employed arrestees to test positive (for cocaine, cannabis and alcohol).   There is usually strong association between employment status and use of various types of drugs in most countries and this includes within the general population and not only among arrestees. For example one study in England among arrestees found that unemployed arrestees were significantly more likely than employed arrestees to test positive for a range of drugs. The only exceptions were amphetamine use for which there was no difference by employment status (NIJ, 1999). The size of the effects of unemployment was especially large in England. For example, more than four times as many unemployed arrestees as employed arrestees (22.6 percent, in contrast to 4.9 percent) tested positive for opiates).

Type of Crime

The offences for which arrestees were charged were categorized as burglary, assault, property crimes, drug offenses, violence, robbery, theft, and weapon offences. The relationship between drug use and type of crime was somewhat hard to substantiate because of the relatively low

number of urine samples provided. Those charged with assault and drug crimes tended fairly consistently to be the group among whom the proportions of drug-positive tests were highest. However, those arrestees charged with weapon offences, theft and burglary also had high marijuana use rate. Among those that tested positive for cocaine, arrestees charged with drug and weapon offences or theft had higher rates. Among those charged with drug offences, 55.6% were positive for cannabis and 25.9% for cocaine. Theft offenders were 33.3% positive for cannabis and 28.6% for cocaine, but for those charged with weapon offences (seven persons), cannabis use was very high (85.7%) as well as 100% positive for cocaine use.

Comparing Urinalysis and Self-Reports

Previous research has shown that there is often a discrepancy between self-reporting and urinalysis as measures of recent drug use. To investigate whether or to what extent there is such a discrepancy for detained arrestees in this study, the results of both types of measures were compared. Specifically, the results of the urinalysis were compared with the arrestees' report of drug use in the 30-day period before the interview. Overall, for the two drugs that urine results were reported on, more than 83% of the findings of the self-report survey and the urinalysis were in agreement (83% for cocaine and 98.6% for marijuana). It is also worth noting that for alcohol (which is a little trickier to interpret -refer to explanation in the methods section of chapter 1, page 18) the agreement was 95.5%. The rest either under-reported or over-reported drug use (as measured by urinalysis). For drugs measured by both self-reports and urinalysis and whose findings could therefore be compared, self-reports revealed much the same as did urinalysis. That is, larger percentages of detained arrestees used marijuana and a much smaller but equally important proportion used cocaine.

The rate at which drug use was under-reported (that is, failure to report drug use when the urinalysis was positive) was higher for cocaine. Overall, 17% (at least four persons) underreported cocaine use compared 1.4% (one person) for marijuana. It would have been very interesting to see how consistent this result would have been given a larger sample of urine from arrestees. The only seemingly over-reporting (that is, reporting the use of a drug when the urinalysis was actually negative), was in the case of ecstasy where one person indicated using it in the 30-day period before the interview but the urinalysis result was negative for amphetamines. This should be interpreted with caution since as stated before, none of the urine samples tested were positive for amphetamines or opiates.

Even though there was no clear evidence of huge variation in either under or over-reporting, one may ask, Why the discrepancy? There are a number of reasons for a discrepancy between urinalysis and self-reports. One is based on the argument that urinalysis is more accurate. It includes the assumption that interviewees might be unwilling or unable to disclose precisely the amount of drugs consumed at various times. A second reason is based on the argument that urinalysis and self-reports measure different things, and that neither is more accurate. Urinalysis can measure only drugs that have been consumed within a specific period and have reached a certain point in the body's cycle of metabolism. This argument is highlighted most clearly in the case of marijuana use, which might be detected by urinalysis as long as a month after consumption. A third reason is based on the argument that urinalysis is less accurate than self-reports. According to this argument, technical matters related to the cross-reactivity and specificity of the tests affect the outcome.

Drug Treatment - extent and need
The increasing problem of drug abuse and related criminality in many of our Caribbean countries and the outright failure or at best, limited success of the traditional approaches to treating drug abusers has underlined the need for new and more visible options. With all due recognition of the need for individualized treatment, emphasis here is on the need for and delivery of large-scale in-

prison treatment rather than conventional casework approach which would be prohibitive to a developing country such as Barbados, and then again not necessarily effective. This thinking is in line with the recommendations of the Commission on Narcotic Drugs and other bodies which have stressed the need to concentrate on target population and on mass treatment (UN, 1973). The limitations of treatment in the traditional penal institutional settings are self-evident. One therefore needs to research the many advances being made in developed countries in introducing and successfully carrying out such programmes at penal institutions and adapt them to the realities of our country's situation.

The detained arrestees were asked whether they had ever been treated for drug abuse and or alcohol abuse and whether they wished to be treated. The questions were asked of those who had reported using drugs and those who had reported using alcohol at least once in their lifetime. Overall, the analysis revealed that a substantial proportion of detained arrestees were treated for drug abuse in the past (10.1%) and a slightly higher proportion said they currently needed treatment (18.1%). Of particular importance is the fact that there were some arrestees who were unsure as to whether they currently need treatment. Among the detained arrestees who said they had used alcohol, only 7% had ever had treatment and 20.1% felt they currently needed to be treated for alcohol use. This reality may point to the need to do comprehensive alcohol dependency screening among arrestees in future data collection undertaking.

Since the crime/drug syndrome is difficult to disentangle, there is a need to provide for the maximum possible co-ordination of efforts and for the cross fertilization of expertise and experiences in this field. It would seem to be important and make much sense to have the justice and social ministries represented on all programmes with drug demand reduction and supply reduction/interdiction, and to be provided with the information which might flow from the work of other agencies with like agenda. There is also a real need to ensure that in the allocation of resources at the highest level, crime and drug abuse problems are given adequate attention. This means providing eventually the trained justice and law-enforcement policy planners able to work with economic and social planners in preparing long-term policies and programmes for the prevention of crimes - including the prevention of crimes related to drug use or abuse.

It would have been useful in this study to have examined issues related to the nature of drug treatment, including length and type of treatment. It is hoped that future data collection would seek to include such questions. This kind of information would be useful in establishing baseline for best practices in relation to treatment of "at risk" individuals.

Drug-using "careers." – age of first use
The detained arrestees were asked how old they were when they used drugs for the first time. For three of the eight categories of substances the arrestees were asked about (tobacco, alcohol and marijuana), most began their substance use careers at a younger age. As expected, tobacco and alcohol were, on average, the first two controlled substances that arrestees tried in their lifetime (mean age of first use was 15.0 and 15.4yrs respectively). Among the illicit drugs, marijuana was, on average, the first that arrestees tried in their lifetime (mean age 15 yrs), while The drugs that arrestees began to use latest in their lives were heroin and ecstasy mean age of first use was 24.0 and 25.7yrs respectively). The average age of crack initiation was 22.6 yrs.

Drug market dynamics
There is recognized an inherent link between drug supply and drug demand, a link that is particularly visible in the behavior of the addicted drug user. Even dependent drug users are quite conscious of the price (and purity) of the drugs they consume and can adjust their use of drugs to market conditions. In this study, the reason most often given for failed attempts at purchase was "poor quality"- indicated by 22 persons (91% was poor quality of marijuana and 9% poor quality of cocaine. This should not come as a surprise: addicts must spend almost all their disposable income on illegal drugs, and a disrupted market with unreliable quality and rising

prices for drugs such as cocaine and heroin does not magically enable them to earn, beg, borrow, or steal more.

Drug users respond to market forces because the drug trade itself is just that, a market—a profitable one, to be sure (though less profitable than often assumed), but nonetheless a market that faces numerous and often overlooked obstacles that may be used as pressure points. To view the drug trade as a market is to recognize both the challenges involved and the hopeful lessons of our recent experience: that the drug trade is not an unstoppable force of nature but a profit-making enterprise where costs and rewards exist in an equilibrium that can be disrupted. Every action that makes the drug trade more costly and less profitable is a step toward "breaking" the market.

With 17% of arrestees charged with drug offences, and 24.5% admitting that drugs was a factor in their present offending one can surmise that the criminal activity surrounding such offending was not purely related to the arrestees drug taking but to some form of drug trade as well. This position can also be taken in light of the fact that 22% of the non-nationals charged, were charged with drug offences. Once the drug trade is seen as a type—admittedly, a special type—of business enterprise, the next step is to examine the way the business operates and locate vulnerabilities in specific market sectors and activities that can then be attacked, both abroad and at home, (ONDCP, 2003). Drug market vulnerability is one option at fighting back at availability. Thus, reduced to the simplest possible terms, locating market vulnerabilities means identifying the business activities in which traffickers have invested the most in time and money and received the least back in profits. Once identified, these vulnerabilities can be exploited, the efficiency of the business suffers, and the traffickers' investment is diminished or lost.

One cannot help making the comments about what would be the consequences for our societies of allowing more access to drugs (be it partially controlled or not) through decriminalization. Public health practitioners and researchers increasingly frame the drug issue as a public health rather than a law enforcement problem, and with good measure. A closer look at the drug problem reveals the difficulty of disentangling the two. The fact is, some countries may face an increase in both public health and law enforcement difficulties as a consequence of such policies being adopted.

In some arenas decriminalization policies are being promoted as precisely what they are not—a public health response to the drug problem. These "tolerant" approaches are contrasted with the supposedly more "punitive" drug policy in some countries. As a recent media report put it, "The trend in Western Europe is to decriminalize all drugs, including heroin and cocaine, and treat drug use as a health problem rather than a crime." In this debate one need to weigh the economic spin-off of treatment for drug abuse (which would more likely increase) against monies to be spent on law-enforcement and interdiction. If one further argues that by decriminalization, one is actually decreasing harm and that such "harm reduction" approaches represent a genuine public health approach, then no policy can seriously be considered in the public good if it advances the contagion of drug use. Yet, that is precisely the effect of harm reduction actions such as marijuana decriminalization: as the drug becomes more available, acceptable, and cheap, it draws in greater numbers of vulnerable youth and in effect criminalization of our younger population especially our males.

Conclusions

Perspective and Possibilities
The purpose of this study was to collect empirical evidence of patterns of drug abuse among arrestees and provide an effective vehicle for understanding the changing nature of the drug problem as well as providing the context for developing enforcement, treatment, and prevention strategies that are attuned to local drug problems. Since it is the only programme to date that

have used urinalysis methods for determining accurately the recent substance use in this at-risk population one can now use this evidence to shape policies and effect targeted programmes for this population.

This study should also serve as an effective contribution to the body of knowledge and the ongoing collecting and exchange of information on the crime-related aspects of drug abuse and crime and on strategies for its control and prevention. This contribution would be useful to the work of not only the National Council on Substance Abuse but also for the Justice System, the National Task Force on Crime Prevention and the many government and interested organizations in strengthening and supplementing their work in the field. The continuing development of this data and information system could provide useful future analysis to shape policies and programmes and eventually provide a source of evidence for experts and practitioners to tackle the seemingly intractable problem of crime /drug abuse which has to date received little combined attention.

RECOMMENDATIONS

1. Provide trained justice and law-enforcement policy planners able to work with economic and social planners in preparing long-term policies and programmes for the prevention of crime related to drug abuse.

2. Include drug-abuse aspects on social development planning agenda

3. Encourage public participation in formulating and activating programmes for the prevention and control of crime and delinquency

4. Seriously consider the establishment of a drug court in Barbados

5. As a result of the establishment of a drug court, efforts should be made to develop effective policies, procedures and techniques for screening and assessing treatment needs of potential participants

6. Develop minimum standards of care for the treatment of special groups of prisoners to ensure adequate treatment of imprisoned drug addicts

7. Continue to develop within the supply reduction framework better ways of sharing/receiving information on transnational crime especially those relating to drug abuse

8. In view of the international nature of drug offences and the imprisonment of drug offenders of different nationalities, there is the need for suitable negotiations and arrangement between governments for the sharing of costs related to the treatment of one country's offenders by another country

9. Establish avenues for reshaping policies to include aspects of drug and crime prevention: educational policies, child rearing practice, delinquency prevention, and special education for children of known drug addicts

10. Social programmes that targets youths and drug abuse should now include youth and crime

11. Administer comprehensive alcohol dependency screening as part of future data collection instruments in addition to questions that examine issues related to the nature of drug treatment, including length and type of treatment

In addition, the following key areas should be further explored as immediate follow-up actions to the presentation of this report:

1. This now scientifically sound evidence about the nature and extent of drug use among the arrestee population should be used by local criminal justice agencies to develop drug-control strategies and related interventions

2. Attempts should be made to do further analyses of the data base in relation to mapping the geographic concentrations of drug/crime related activities with a view to implementing community actions or inter-agency collaboration towards prevention and or treatment

3. Law-enforcement and criminal justice should be encouraged to ask questions that would entail further in-depth analysis of the data set to shed light on such things as:
   - by what variables the extent of participation in drug markets vary
   - what are the determinants (risk and or protective factors) to participation in the drug market
   - what other information about the drug market dynamics the police can use to help shape their interdiction strategies
   - what is the true dynamics of the crack cocaine market, etc.

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APPENDICES

Appendix 1 – Definition of terms

- **Multiple drugs**– the overall rate of multiple drug use was measured by two or more positive tests. This did not include positive test for alcohol

- **Heavy drug use** is defined as 13 or more days of self-reported use in a 30-day period in the year before the interview (definition of heavy use established by the National Household Survey on Drug Abuse (NHSDA), Department of Health and Human Services, USA)

- The term **"prevalence"** is used here to refer to the proportion of the detained arrestee population that used drugs in a specified period of time. Prevalence was examined by different measures--urinalysis and self-reports, and in different time periods – lifetime ("ever used"), in the past year (annual prevalence) and in the past month (current prevalence).

- **Under-reported** of drug use, that is, failure to report drug use when the urinalysis was positive

- **Over-reported**, that is, they reported using drugs, but the urinalysis was negative

SAMSHA	Substance Abuse and Mental Health Administration
I-ADAM	International Arrestee Drug Abuse Monitoring
NCSA	National Council on Substance Abuse – Barbados
NTFCP	National Task Force on Crime Prevention – Barbados
DFU	Drug Abuse Forecasting
NIJ	National Institute of Justice
EMIT	Enzyme Immunoassay Technique
NHSDA	National Household Survey on Drug Abuse

Appendix 2 – Limitations to the study as a technical annex

1. small proportion of arrestees sampled and interviewed - the information indicated that 947 arrests were made during the period of the survey but only 436 or roughly 46% were interviewed.

2. the equally small proportion of interviewed arrestees that actually gave a urine sample – 35%

3. the small proportion of female arrestees interviewed – only 5.7%

4. the major issue is the construction of the data base:
   - issues arose in cases where dichotomous responses were only coded with one response, for example, did you use marijuana in your lifetime, there were only responses of yes. One had to logically impute that for those missing that yes response they did not use the drug, but what if the respondent failed to answer the question.
   - It was not noted at all in the data base the respondents who had not provided urine samples. This information had to be re-entered from the raw data.
   - Cases with multiple responses were ignored in the data base.

   For 60% of the variables in the data base logical reconstruction was necessary in order for the information to be analyzed. This took a considerable amount of time. In addition, some 65 new variables had to be created.

   It is strongly recommended that some training be done in this area, - data base construction for epidemiological analysis. Once the data has to be cross tabulated it must lend itself to proper construction at the data entry points.

5. Another question that could be asked in regards to the urine results is whether the test kits were sensitive to amphetamine and opiates detection in urine samples. It is un-characteristic that not a single positive result was gotten for opiates or amphetamine even though arrestees indicated using these substances during the 30-day period prior to the survey. One would also note that the concurrence for cocaine and cannabis for self-report and urinalysis was very good (greater than 85%).