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The Relationship Between Drug Usage, Mental Well-Being and Felony Convictions Among a Sample of Adult Recreational Drug Users: Case-Control Analyses

Venkata Chilakapti
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THE RELATIONSHIP BETWEEN DRUG USAGE, MENTAL WELL-BEING AND FELONY CONVICTIONS AMONG A SAMPLE OF ADULT RECREATIONAL DRUG USERS: CASE-CONTROL ANALYSES

A Thesis
Presented to
The faculty of the Department of Public Health
Western Kentucky University
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In Partial Fulfillment
of the requirements for the Degree
Master of Public Health in Health Education

by
Dr. Venkata S Chilakapati
May 2001
THE RELATIONSHIP BETWEEN DRUG USAGE, MENTAL WELL-BEING AND FELONY CONVICTIONS AMONG A SAMPLE OF ADULT RECREATIONAL DRUG USERS: CASE – CONTROL ANALYSES

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<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Purpose of the Study</td>
<td>3</td>
</tr>
<tr>
<td>Need for the Study</td>
<td>3</td>
</tr>
<tr>
<td>Research Questions</td>
<td>7</td>
</tr>
<tr>
<td>Delimitations</td>
<td>7</td>
</tr>
<tr>
<td>Limitations</td>
<td>7</td>
</tr>
<tr>
<td>Assumptions</td>
<td>8</td>
</tr>
<tr>
<td>Definitions</td>
<td>8</td>
</tr>
<tr>
<td>2. REVIEW OF LITERATURE</td>
<td>10</td>
</tr>
<tr>
<td>America’s Drug Use Profile</td>
<td>10</td>
</tr>
<tr>
<td>Youth Drug Use Trends</td>
<td>13</td>
</tr>
<tr>
<td>Consequences of Illegal Drug Use</td>
<td>13</td>
</tr>
<tr>
<td>Historical Aspects of Drug Control Laws and Policies</td>
<td>14</td>
</tr>
<tr>
<td>Summary of Recent Drug Laws in United States</td>
<td>15</td>
</tr>
<tr>
<td>Drugs and Crime</td>
<td>17</td>
</tr>
<tr>
<td>Evaluation of Supply Versus Demand Programs</td>
<td>21</td>
</tr>
<tr>
<td>3. METHODS</td>
<td>26</td>
</tr>
<tr>
<td>Hypotheses</td>
<td>26</td>
</tr>
<tr>
<td>Population</td>
<td>27</td>
</tr>
<tr>
<td>Sample Collection</td>
<td>27</td>
</tr>
<tr>
<td>Design</td>
<td>28</td>
</tr>
<tr>
<td>Instrumentation</td>
<td>28</td>
</tr>
<tr>
<td>Data Analysis</td>
<td>31</td>
</tr>
<tr>
<td>4. RESULTS</td>
<td>36</td>
</tr>
<tr>
<td>Selection of Sample</td>
<td>36</td>
</tr>
<tr>
<td>Description of Study Sample</td>
<td>36</td>
</tr>
<tr>
<td>Tests of Research Questions</td>
<td>48</td>
</tr>
<tr>
<td>Discriminant Function Analyses</td>
<td>48</td>
</tr>
<tr>
<td>5. CONCLUSION</td>
<td>57</td>
</tr>
<tr>
<td>Summary of Results</td>
<td>57</td>
</tr>
<tr>
<td>Discussion</td>
<td>60</td>
</tr>
<tr>
<td>Limitations</td>
<td>61</td>
</tr>
<tr>
<td>Conclusion</td>
<td>61</td>
</tr>
<tr>
<td>Recommendations</td>
<td>62</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>64</td>
</tr>
<tr>
<td>APPENDIX-A</td>
<td>69</td>
</tr>
<tr>
<td>APPENDIX-B</td>
<td>70</td>
</tr>
</tbody>
</table>
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Types of drugs used by Past Month Illicit Drug Users, Age 12yrs. and older</td>
<td>11</td>
</tr>
<tr>
<td>2.</td>
<td>ONDCP- National Drug Control Budget vs. The Effective Drug Control Budget</td>
<td>25</td>
</tr>
<tr>
<td>Table</td>
<td>Page</td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>1. Treatment Program Characteristics</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>2. Confusion Matrix (Group I: non-drug felony offense vs. do not have felony offense)</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>3. Confusion Matrix (Group II: have drug-related felony offense vs. do not have drug-related felony offense)</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>4. Description of Drug-related Felony Cases vs. Controls: Demographic Indices</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>5. Description of Drug-related Felony Cases vs. Controls: Lifestyle and Behavioral Indices</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>6. Description of GWBS: Drug-related Felony Cases vs. Controls</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td>7. Description of Non-drug Felony Cases vs. Controls: Demographic Indices</td>
<td>44</td>
<td></td>
</tr>
<tr>
<td>8. Description of Non-drug Felony Cases vs. Controls: Lifestyle and Behavioral Indices</td>
<td>46</td>
<td></td>
</tr>
<tr>
<td>9. Description of GWBS: Non-drug Felony Cases vs. Controls</td>
<td>47</td>
<td></td>
</tr>
<tr>
<td>10. Standardized Canonical Discriminant Function Coefficients of Predictor Variables for Drug-related Felony Criterion Sample</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td>11. Classification Results for Drug-related Felony Criterion Sample</td>
<td>51</td>
<td></td>
</tr>
<tr>
<td>12. Standardized Canonical Discriminant Function Coefficients of Predictor Variables for Non-drug Felony Criterion Sample (Analysis 1)</td>
<td>52</td>
<td></td>
</tr>
<tr>
<td>13. Classification Results for Non-drug Felony Criterion Sample (Analysis 1)</td>
<td>54</td>
<td></td>
</tr>
<tr>
<td>14. Standardized Canonical Discriminant Function Coefficients of Predictor Variables for Non-drug Felony Criterion Sample (Analysis 2)</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>15. Classification Results for Non-drug Felony Criterion Sample (Analysis 2)</td>
<td>56</td>
<td></td>
</tr>
</tbody>
</table>
Changing lifestyles in today’s world have resulted in the evolution of many human activities. One of them is recreational drug use. The purpose of this study was to explore the association between drug usage, mental well-being and felony convictions among a sample of adult recreational drug users. The primary purpose of this analysis was to develop a set of predictor variables from the DRUGNET data set (i.e., lifestyle, drug usage, GWBS) that were able to account for the criterion variables (i.e., drug-related felony vs. no drug-related felony and non-drug felony vs. no felony). The analyses attempted to differentiate the smaller portion of drug users who have experienced felony offenses (i.e., cases) from the majority of users who have not been convicted of these offenses (i.e., controls). Epidemiological case-control analyses (discriminant analyses) were performed by drawing a matched sample of cases and controls using their gender and age (+/- 2 yrs.). Drug laws and policies differ from country to country. Therefore the present study was limited to the United States citizens of age 18 yrs. or older. The study results support the hypothesis that there is a subgroup of the drug consuming population (i.e., recreational drug users) who lead productive and successful lives. The results found suggest that punishing a relatively small portion of drug users for their personal habits of using/possessing drugs may be counter productive rather than focusing on controlling abuse. The implication is that drug use should be perceived as a public health problem, not a criminal activity. The national policy targets should focus on education, public health, treatment and rehabilitation rather than incarceration.
Chapter-1

INTRODUCTION

There is ample research focusing on the attributes of individuals who abuse drugs. There are two subgroups of substance abusers easily accessible for study. One consists of individuals who are in treatment facilities. The other involves individuals who have been arrested on drug related offenses. These sub-populations have been thoroughly described in the literature. Many in the public believe that these individuals represent all drug users and abusers. However the ‘National Household Survey on Drug Abuse (NHSDA) and the Monitoring the Future Study’ (1995) reveal that there are millions of Americans who consume illicit drugs and never present themselves for treatment or become engaged with the criminal justice system (Substance Abuse and Mental Services Administration [SAMSA], 1997). One of the major difficulties in studying drug use behavior is the fact that this population tends to remain anonymous (Weibel, 1990). The existing opportunities to study drug abusers come about as a result of these individuals entering a treatment program, overdosing, or being arrested. Unfortunately the existing opportunities give rise to distorted samples of abusers, since many never seek treatment, overdose, get arrested or if arrested, do not remain in custody (Watter & Biernacki, 1989). Recreational drug users are even harder to identify. These individuals do not need treatment and are unlikely to overdose or be arrested. Reaching this population is a real challenge for researchers. One way to reach this hidden population is through the use of the Internet. This medium appears to be potentially valuable in studying hidden populations, including recreational illicit drug users and is the purpose of the DRUGNET
study. Internet study also eliminates some forms of subject-response bias (Nicholson, White, & Duncan, 1998).

Because law enforcement resources are limited, violent and property criminals are usually not caught until they have committed a relatively large number of crimes, if they are caught at all. And, even after they are caught for their crimes, these individuals can be forced out of prison relatively early due to the increasing numbers of individuals admitted on drug offenses, freeing them to commit new crimes (Benson & Rasmussen, 1996). In the 1992 Bureau of Justice Statistics report on recidivism of felons on probation from 1986 to 1989 it was found that drug offenders are far more likely to recidivate for a drug offenses than for either violent or property offenses. Furthermore, violent offenders who are arrested tend to recidivate most often for a new violent crime, and property offenders are more likely to recidivate for another property crime (Logan, Patrick, & Cunniff, 1992).

A policy of early interventions with youthful offenders for their first or second offense might teach them that they have to pay for their crimes. This approach might not only divert them from further crime but also move them out of the crime subculture where they are likely to find their way into drug use. Letting young people commit several offenses before they are punished creates a criminal cohort that develops few options other than crime. Shifting criminal justice resources away from a focus on drugs toward a focus on nondrug crime, including early intervention and treatment of such crimes (perhaps traditional punishments but also alternatives such as work programs to earn money for mandated restitution to victims as well as efforts to enhance literacy),
could actually prevent the development of both more serious criminal activities and of
drug abuse among such criminals.

Purpose of the study

DRUGNET is a cross sectional survey of adult recreational drug users (i.e., not
abusers) via the World Wide Web. The survey was developed by Thomas Nicholson,
Ph.D., John White, Ph.D., and David F. Duncan, Dr.P.H. The purpose of this survey is to
provide a unique, broad description of nondeviant, adult, recreational drug users. The
survey instrument consists of four sections: a) demographic and lifestyle indices,
b) drug intake history, c) legal history and attitudes about drug issues, and d) the General
Well-being Schedule (GWBS).

The present study explored the association between felony offense convictions
and recreational drug use behaviors. The purpose of the present analyses was to study
potential relationships between qualitative criterion variables and the quantitative
predictor variables. In this study, subjects identified as “have a felony offense” were
considered the “cases” and subjects who “do not have a felony offense” were treated as
“controls.” A matched sample of controls were drawn from the individuals responding
with “not having a felony offense.” Cases were compared to controls based on lifestyle,
drug usage variables, and the General Well-being Schedule (GWBS). The goal of this
investigation is to develop a set of predictor variables (lifestyle, drug usage, GWBS) that
are able to account for the criterion variable (felony vs. no felony). A separate set of
analyses was conducted for each of the two-criterion variables (drug related felony
offense and non-drug related felony offense).
Need for the study

According to Nicholson, White, and Duncan (1998), this survey was needed because most current studies focus on drug abusers rather than recreational, occasional users. Recreational drug users are harder to identify because they do not need treatment and are unlikely to overdose or be arrested. Reaching this population is a challenging task. The DRUGNET survey was developed in 1996 to explore the potential of using the World Wide Web (WWW) on the Internet to sample this hidden population and to collect exploratory data documenting the characteristics of adult, nonabusive recreational users of illicit drugs. Drug users do not easily reveal their honest feelings or experiences due to social and legal prohibitions. DRUGNET provides confidentiality and anonymity to express their feelings and experiences. DRUGNET also draws a worldwide sample in a short period of time.

There are over two million people in prisons or jails in the United States. An estimated one-fourth of these are incarcerated for nonviolent drug possession offenses (U.S. Department of Justice and Bureau of Justice Statistics, 1999). Millions of people occasionally use illicit drugs each year, and tens of millions have tried them in the past (SAMHSA, 1997). This analysis attempted to differentiate between the smaller proportion of drug users who have experienced felony offenses from the majority of users who have not been convicted of these offenses. The results of this analysis have implications for drug policies in the United States.

The domain of criminal law can be controversial. For instance, should we have laws similar to those for theft, rape, and murder for behaviors such as suicide, smoking, possession/consumption of alcohol and homosexual acts between consenting adults?
Would such laws be acceptable to most citizens and are they feasible? Sinful conduct is not necessarily criminal behavior. The area of criminal law should be regarded not as the first line of defense against crime but rather as the last resort. Excessive cigarette smoking, for example, is potentially harmful to the user and others in the environment. Increased public awareness has led to new approaches in education and to ordinances and laws imposing civil fines for smoking in designated nonsmoking areas. Yet there have been no serious proposals to jail those who smoke. Likewise, possession of alcohol by adults and homosexual acts between consenting adults in most areas are not considered crimes. But in the case of drug laws, simple possession of drugs is considered a felony. Nearly 60 percent of the inmates in the federal prison system in 1997 were sentenced for drug offences, up from 53 percent in 1990 (Allen & Christopher, 1998). In 1997, 19,115 people were sentenced in federal court for drug violations (ONDCP, 2000). A Bureau of Justice Survey of 12,000 inmates indicated that over 75% had used drugs, 56% had used drugs in the month prior to their incarceration, and one-third admitted to being under the influence of alcohol or drugs at the time of their offense (Wexler, Galkin, & Lipton, 1989). It must be remembered that simply being in possession of marijuana, cocaine, etc is a crime in and of itself. And the majority of drug related convictions are for possession, alone (Wexler, Galkin, & Lipton, 1989). Costs for incarceration continue to rise. In 1996 state correction expenses for prisons exceeded $22 billion, an increase of 83% from 1990. State spending per resident for correction operations has increased faster than spending on health, education, and natural resources. State spending for corrections totaled $994 per capita in 1998, more than twelve times larger than expenditures for education (Kathleen & Pastore, 1997).
Though tens of millions of people are current or past drug users, the majority of them are not being punished through the criminal justice system. People of color, lower socio-economic individuals and young people have a much greater chances of entering the legal system than do middle/upper class, older, Caucasians, thus raising the fundamental questions of fairness and efficacy with regard to current U.S. drug policies (Clifford, 1992). This study explores the differences between cases (having a felony) and controls (not having a felony). If there is a significant difference between these two groups it may help us to focus on those variables in making and implementing drug laws and strategies. If there are no significant differences between these two groups, then it may mean that punishing only a small portion of users is unfair and not helping the smaller numbers of real abusers. It will also imply that sentencing people for personal habits like the possession and recreational use of certain drugs, unless until they harm the public, is an irrational policy. Drug abuse could also be perceived as a major public health problem with less emphasis on legal measures. If our goal is to minimize harm and dysfunction, the target of national efforts should logically be the harm caused by indiscriminate use of drugs that hurt others and the promotion of health. Such a focus calls primarily for education, public health, treatment, and rehabilitation measures rather than incarceration.

Perhaps some of the greatest costs of legal measures have been those attendant to criminalizing users of illicit drugs. For example, to brand as criminals hundreds of thousands of American youth otherwise leading normal lives, by virtue of their experimental or recreational marijuana use, presents a fundamental problem in a society founded on principles of justice and respect for law. It leads directly to suspicion of and
disrespect for the law. Addiction, whether to narcotics, alcohol, or nicotine is essentially a psychological and physiological phenomenon. But traditionally we have labeled certain drug possession/abuse/addiction as a crime. The results of this study provide some recommendations to review current drug laws and policies (Nicholson, 1992).

**Research Questions**

**Research question 1**: Can a set of predictor variables (i.e., lifestyle activities, drug behaviors and mental well-being) be formed from the DRUGNET data set to predict whether a subject has experienced a drug related felony offense (i.e., case subjects) or has not experienced this type of offense (i.e., control subjects)?

**Research question 2**: Can a set of predictor variables (i.e., lifestyle activities, drug behaviors and mental well-being) be formed from the DRUGNET data set to predict whether a subject has experienced a non-drug related felony offense (i.e., case subjects) or has not experienced this type of offense (i.e., control subjects)?

**Delimitations**

This study was delimited to those individuals with access to the Internet from February 1997 through June 1998 and who accessed and completed the DRUGNET survey (N = 907).

**Limitations**

This study had the following limitations:

1. The method of sampling was self-selection, not random sampling. Because the subjects were self-selected they can’t be assumed to be representative of all recreational drug users or all drug users who use the Internet.
2. This was an Internet survey. Hence, most of the sample members are from
educated, above average socioeconomic groups. Results may not be
generalizable to people who do not use the Internet.

3. Drug laws and policies differ from country to country. So the present study was
limited to United States citizens of age $\geq 18$ years.

**Assumptions**

The study was been conducted based on the following assumptions:

1. It was assumed that individuals answered the questionnaire honestly and to the
best of their knowledge.

2. It was assumed that individuals were able to understand the directions for taking the
survey and completed all of the sections that apply to them.

3. It was assumed that a large number of recreational users of illicit drugs belong to
educated and above average socioeconomic status groups.

4. It was assumed that the variance of a given predictor variable was the same in the
respective populations from which our groups of subjects had been drawn.

5. It was assumed that the correlation between any two-predictor variables was the same
in the respective populations from which our alternative criterion groups had been
sampled.

**Definitions**

The following are definitions of some terms used in this investigation:

1. **Drug Use** - Taking a drug in such a manner that sought-for effects are attained with
minimal hazard (Irwin, 1973).

2. **Drug Misuse** - Occurs when a drug is taken or administered under circumstances
and at doses that significantly increases the hazard to the individual or the others (Irwin, 1973).

3. **Drug Abuse** – Taking a drug to such an extent that it greatly increases the danger or impairs the ability of the individual to adequately function or cope with their circumstances (Irwin, 1973).

4. **Drug** – Any substance that, by virtue of its chemical nature, alters the structure or functioning of any of the tissues of a living organism (Duncun & Gold, 1982).

5. **Psychoactive Drugs** – Drugs that alter consciousness and thought processes. They alter an individual’s thoughts, feelings, and/or behavior (Nicholson, 1992).

6. **Current Use** – Consumption of a controlled substance at least once within the previous thirty days (ONDCP, 2000).

7. **Felony Offense** – A serious crime usually punishable by imprisonment for more than one year or by death. At common law, a felony was an offense for which conviction involved the forfeiture of the defendant’s land or goods or both, to the crown. Treason was traditionally included in the term felony- also termed major crime; serious crime (Garner, 1999).
Chapter-2

LITERATURE REVIEW

America’s Drug Use Profile

According to SAMHSA (1999), an estimated 14.8 million Americans were current illicit drug users, meaning that they had used an illicit drug during the month prior to being interviewed. This estimate represents 6.7 percent of the population aged 12 years and older. Marijuana was the most commonly used illicit drug. It was used by 75 percent of current illicit drug users. Approximately 57 percent of current illicit drug users consumed only marijuana, 18 percent used marijuana and another illicit drug, and the remaining 25 percent used an illicit drug but not marijuana in the past month. Therefore, about 43 percent of current illicit drug users in 1999 (an estimated 6.4 million Americans) were current users of illicit drugs other than marijuana and hashish, with or without concomitant use of marijuana (see Figure 1).

Of the 6.4 million users of illicit drugs other than marijuana, four million were using psychotherapeutics non-medically. Psychotherapeutic users represent 1.8 percent of the population aged 12 years and older. Psychotherapeutics include pain relievers (2.6 million users), tranquilizers (1.1 million users), stimulants (0.9 million users), and sedatives (0.2 million users). In 1999, an estimated 1.5 million Americans were current cocaine users, 900,000 were current hallucinogen users, and 200,000 were current heroin users. These numbers represent 0.7, 0.4 and 0.1 percent of the population aged 12 years and older, respectively. The estimated number of current crack users was 413,000 in 1999 (SAMHSA, 1999).
Figure 1. Types of Drugs Used by Past Month Illicit Drug Users, Age 12 and Older

Marijuana only → 57%

Marijuana and some other drugs → 18%

Drug other than Marijuana → 25%

14.8 Million Illicit Drug Users

Source: SAMHSA, 1999
Among youth aged 12-17 years, the percent using illicit drugs in the 30 days prior to interview was slightly higher for boys (11.3%) than for girls (10.5%). Although in the age group 12-17 years, boys had a slightly higher rate of marijuana use than girls (8.4% vs. 7.1%); girls were more likely to use psychotherapeutics nonmedically than boys (3.2% vs. 2.6%). The rates of current illicit drug use for major racial/ethnic groups were 6.6% for whites, 6.8% for Hispanics, and 7.7% for Blacks. The rate was highest among the American Indian/Alaska Native population (10.6%), and among persons reporting multiple race (11.2%). Asians had the lowest rate of usage (3.2%). The rate of illicit drug use in metropolitan areas was higher than the rate in nonmetropolitan areas. The rates were 7.1% in large metropolitan areas, 7.0% in small metropolitan areas, and 5.2% in nonmetropolitan areas. Rural nonmetropolitan counties had a lower rate of illicit drug use (4.2%) than other counties (SAMHSA, 1999).

Drug use reached peak levels in 1979 when 25.4 million of the population age 12 or over were current users. This figure declined significantly between 1985 and 1992, from 23.3 million to 12 million. Current use rates increased from 12 million in 1992 to thirteen million in 1996. Since 1996, the number of current users remained steady, with statistically insignificant changes occurring each year. An estimated 5 million people met diagnostic criteria for dependence on illegal drugs in 1997 and 1998, including 1.1 million youths between the ages of twelve and seventeen (SAMHSA, 1999).

Drug use affects all Americans. More than half of American citizens say their concern about drug use has increased over the past five years. Alarm is growing most in minority and low-income communities (Gallup Organization, 1999). In 1999, a study by the National League of Cities cited use of illegal drugs, alcohol, and tobacco among
youth as one of the top threats to America in the new millennium (National League of Cities, 1999). Even citizens who do not come into contact with illegal drug abusers share the burden of drug abuse. All of us pay the toll in the form of higher health care costs, dangerous neighborhoods, and an overcrowded criminal justice system.

**Youth drug use trends**

Young people are especially vulnerable to drug abuse. Their immature physical and psychological development makes them more susceptible to the ill effects of drugs for years to come. Moreover behavior patterns that result from teen and preteen drug abuse often produce tragic consequences. Self-degradation, loss of control, disruptive conduct, and antisocial attitudes can cause untold harm to themselves and their families.

There were no significant changes in the rate of past month illicit drug use in any of the age groups 12-17 years, 18-25 years, 26-34 years, or 35 years and older between 1998 and 1999. However the observed rate of use was lower in 1999 than in 1997 for the age group 12-17 years, and there appears to be a consistent downward trend from 1997 to 1999 (Logan, Patrick and Mark Conniff, 1992). Among young adults aged 18-25 years, the observed rate increased from 1997 to 1999 (14.7 % in 1997, 16.1 % in 1998, and 18.8 % in 1999). The rates for the age group 26-34 years old and 35 years and older in 1999 have not changed significantly since 1994 (SAMHSA, 1999).

**Consequences of illegal drug use**

Increased crime, domestic violence, accidents, illness, lost job opportunities, and reduced productivity can be linked to illegal drug abuse. Every year Americans of all ages engage in unhealthy, unproductive behavior as a result of substance abuse (ONDCP, 2000). Illegal drugs exact a staggering cost on American society. In 1995, they
accounted for an estimated $110 billion in expenses and lost revenue. The National Institute on Drug Abuse (NIDA) estimated that health care expenditures due to drug abuse cost America $9.9 billion in 1992 and nearly $12 billion in 1995 (NIDA, 1998). According to death certificate data, there were 15,973 illicit drug-induced deaths in America in 1997 (Hoyert, Kochanek, & Murphy, 1999). Drug induced deaths result directly from drug consumption, primarily overdose. In addition other causes of death, such as HIV/AIDS, are partially due to drug abuse. Drug abuse is a contributing factor in the problem of homelessness. Although only a minority (31%) of the homeless suffer from drug abuse or alcoholism exclusively, in appropriate use of these substances compounds other diseases for many homeless people with mental illness who are “dually diagnosed” (The United States Conference of Mayors, 1999).

Historical Aspects of Drug Control Laws and Policies

The creation of the Federal Bureau of Narcotics (FBN) in 1930 established the preeminence agency of law enforcement in the drug field, a fact that has not changed since then. The FBNs initial major targets were heroin and marijuana. This practice lasted for more than 35 years. States adopted legislation comparable to the Harrison Act, the major federal drug law, and thus tightened the nation’s drug prohibition policy. By 1950, the atmosphere had changed, and many voices demanded new, tougher antidrug laws. Between 1947 and 1950, an apparent increase in illicit drug use was reported among blacks and Puerto Ricans in many northern cities. This report caused alarm, creating support for passage of a new, more stringent drug law in 1951 (Drug Abuse Council, 1980). Commonly called the Boggs Act after its sponsor, the late representative Hale Boggs, it enacted the harshest penalties for drug law violations to date. In 1956 an
even more severe federal narcotics bill was enacted which empowered a jury to impose the death penalty to anyone over the age of 18 selling heroin to anyone under the age of eighteen. The tough approach was eventually moderated, and the mid-1960s marked the beginning of a more comprehensive approach to drug law enforcement. The present era in drug law enforcement, an outgrowth of the 1960s, was inaugurated during the Nixon administration, which organized an intensified, coordinated federal antidrug program. It was the heralded “war on drug abuse.” The Comprehensive Drug Abuse Prevention and Control Act of 1970 replaced the former crazy quilt of criminal drug law statutes, which had been gradually patched together since the beginning of the century (Drug Abuse Council, 1980).

Summary of Recent Drug Laws in United States

- “The Controlled Substances Act, Title II of the Comprehensive Drug Abuse Prevention and Control Act of 1970 provides an approach to the regulation, manufacture, and distribution of narcotics, stimulants, depressants, hallucinogens, anabolic steroids, and chemicals used in the production of controlled substances (ONDCP, 2000).”

- “The Comprehensive Crime Control Act of 1984 and other statutes passed by the 98th congress reformed the bail and sentencing laws applicable to drug trafficking and other crimes, created a new offense with an enhanced penalty for distributing drugs near schools, and revised civil and criminal forfeiture laws (ONDCP, 2000).”

- “The Anti-Drug Abuse Act of 1986 enhanced penalties for drug trafficking. It also created a new offense with an enhanced penalty for using a juvenile to commit a drug offense, amended the forfeiture laws, proscribed trafficking in controlled substance
"analogues" (sometimes referred to as “designer” drug), created money laundering offenses, and proscribed use of interstate commerce to distribute drug paraphernalia (ONDCP, 2000).

• "Executive Order No. 12564 (1986) makes refraining from illegal drug use a condition of employment for all federal employees. This order requires every federal agency to develop a comprehensive drug free workplace program (ONDCP, 2000)."

• "The Anti-Drug Abuse Act of 1988 establishes as a policy goal the criterion of a drug-free America. A key provision of the Act is the establishment of the Office of National Drug Control Policy to set priorities, implement a national strategy, and certify federal drug control budgets. The law specifies that the strategy must be comprehensive and research based; contain long-range goals and measurable objectives; and seek to reduce drug abuse, trafficking, and their consequences. Specifically, drug abuse is to be curbed by preventing youth from using illegal drugs, reducing the number of users, and decreasing drug availability (ONDCP, 2000)."

• "The Violent Crime Control and Law Enforcement Act of 1994 extends ONDCP’s mission to assessing budgets and resources related to the National Drug Control Strategy. It also establishes specific reporting requirements in the areas of drug use, availability, consequences, and treatment (ONDCP, 2000)."

• "Executive Order No. 12880 (1993) and Executive Order Nos. 12992 and 13023 (1996) assign ONDCP responsibility within the executive branch of government for leading drug control policy and developing an outcome measurement system. The executive orders also charter the president’s Drug Policy Council and establish the
ONDCP Director as the president’s chief spokesman for the drug control (ONDCP, 2000).”

• “The Office of National Drug Control Policy Reauthorization Act of 1998 expands ONDCP’s mandate and authority. It sets forth additional reporting requirements and expectations, including (ONDCP, 2000):
  1) Development of a long-term national drug strategy,
  2) Implementation of a robust performance measurement system,
  3) Commitment to a five-year national drug control program budget,
  4) Permanent authority granted to the High Intensity Drug Trafficking Areas (HIDTA) program along with improvements in HIDTA management,
  5) Greater demand reduction responsibilities given to the Counter-Drug Technology Assessment Center (CTAC),
  6) Statutory authority for the President’s Council on Counter-Narcotics,
  7) Increased reporting to Congress on drug control activities,
  8) Reorganization of ONDCP to allow more effective national leadership,
  9) Improved coordination among national drug control program agencies,
  10) Establishment of a Parents Advisory Council on Drug Abuse.”

Drugs and Crime

While national crime rates in general continue to decline, almost 1.6 million Americans were arrested for drug-law violations in 1998 (Federal Bureau of Investigation [FBI], 1998). Many crimes like murder, assault, prostitution, and robbery are often committed under the influence of alcohol or may be motivated by need to obtain money for illicit drugs. Substance abuse is frequently a contributing factor in family violence,
sexual assaults, and child abuse. The National Institute of Justice's Arrestee Drug Abuse Monitoring (ADAM) drug testing program found that more than two-thirds of adult male arrestees and half of male juvenile arrestees tested positive for at least one drug in 1998. Marijuana was the drug most frequently detected among both groups. The percentage of persons who tested for cocaine declined between 1997 and 1998. Multiple drug use remains an endemic problem among arrestees, and more than two-thirds of the individuals who tested positive for opiates also tested positive for another drug (National Institute of Justice, 1998). It should be noted, however, drug testing detects all recent drug use not just drug use during criminal acts.

State and federal prison authorities reported that 1,232,900 people were physically in their custody at the end of 1998, and 1,284,894 people were in custody at the end of 1999 (U.S. Department of Justice, 2000). One in every 113 men in the United States was incarcerated in a state or federal prison at that time. The number of sentenced prisoners rose 4.8 percent in 1998 (Allen & Christopher, 1999). Between 1990 and mid-year of 1999, the incarcerated population grew an average of 5.7% annually. The population growth during the 12-month period beginning June 1998 to ending June 30, 1999 was significantly lower in state prisons (up to 3.1%) and local jails (up to 2.3%) than in previous years. The federal prison population rose by 9.9% or 10,614 prisoners, the largest 12-month gain ever reported (U.S. Department of Justice, 1999).

Between 1990 and 1998, the number of female inmates serving time for drug offenses in state prisons was up by 12,000, and drug offenders accounted for 19 percent of the total growth in the state inmate population (Allen & Christopher, 1999). Nearly 60 percent of the inmates in the federal prison system in 1997 were sentenced for drug
offences, up from 53 percent in 1990 (Allen & Christopher, 1998). In 1997, 19,115 people were sentenced in federal court for drug violations. Almost all (94%) of these drug offenders were convicted of drug trafficking. Drug offenders in federal and state prison have extensive criminal histories. More than half (53%) of state inmates and 24% of federal prisoners were on probation or parole at the time of their current offense. More than eight in every ten state inmates and six of ten federal inmates had prior sentences. Nearly half (45%) of state inmates and a quarter of federal inmates had three or more prior sentences. Approximately one in every four drug offenders within state prisons had been sentenced previously for violent offenses (ONDCP, 2000). This high rate of incarceration is spread disproportionately among racial/ethnic groups. In 1997 the rate of incarceration for African-American males was 3,209 per 100,000 compared to 1,273 for Hispanics males and 386 for white males (Gilliard & Beck, 1997). A March 1997 study by the Bureau of Justice Statistics (BJS) found that black men were nearly twice as likely to be incarcerated (28.5%) as Hispanic men (16%) and six times more likely than white men (4.4%) (U.S. Department of Justice, 1997).

Costs for incarceration continue to rise. In 1996 state correction expenses for prisons exceeded $22 billion, an increase of 83% from 1990. State spending per resident for corrections operations have increased faster than spending on health, education, and natural resources. State spending for corrections totaled $994 per capita in 1998, more than twelve times larger than expenditures for education (Kathleen & Pastore, 1997).

Substance abuse, family violence, and child maltreatment

Researchers have found that one fourth to one half of men who commit acts of domestic violence also have substance abuse problems. Women who abuse alcohol and
illegal drugs are more likely to become victims of domestic violence than non-abusing women. Children of substance abusing parents tend to stay in foster care for longer periods of time than children of non-substance abusing parents (U.S. Department of Health and Human Services [DHHS], 1999).

Drugs, violence and sexual crimes

The nexus between drugs, violence and sexual crimes is abundantly clear. Alcohol is implicated in more incidents of sexual violence, including rape and child molestation, than any other drug. Alcohol use by the victim, perpetrator, or both is involved in 46 to 75 percent of date rapes among college students. Two thirds of sexual offenders in state prisons were under the influence of alcohol or other drugs at the time of the crime; 15 percent were under the influence of both alcohol and other drugs; and the 5 percent were under the influence of drugs alone (Nation Center on Addiction and Substance Abuse at Columbia University [CASA], 1999).

A Bureau of Justice Survey of 12,000 inmates indicated that over 75% had used drugs, 56% had used drugs in the month prior to their incarceration, and one-third admitted to being under the influence of alcohol or drugs at the time of their offense (Wexler, Galkin, & Lipton, 1989). It must be remembered that simply being in possession of marijuana, cocaine, etc, is a crime in of itself. And, the majority of drug related convictions are for possession, alone. By asking the question “do a substantial portion of known violent and property criminals use drugs?” misses the mark. To make the “drugs-cause-crime” link, research must answer a different question: “Do a substantial portion of drug users commit non-drug related crime?”
Evaluation of supply versus demand programs

Supply control programs

Supply control strategies harm drug producers in three ways: 1) by seizing the product, 2) by imposing financial sanctions, and 3) by causing processing costs to increase.

Law enforcement or supply side drug control strategies have predominated drug policy since the early part of the 20th century. How effective have these policies been in reducing drug availability and drug abuse? The evidence to date is not encouraging. Current government policy seeks to prevent children from gaining access to illegal substances. Since 1975, the federal government has been asking high school seniors how easy it is for them to obtain marijuana. Adolescents’ access to marijuana is virtually unchanged by the drug war (NIDA, 1997). Since 1992, federal surveys show there has been a rise in adolescent drug use. This increase has coincided with record spending, arrests and incarceration rates. The drug war has escalated for decades, but has not resulted in less adolescent drug use (NIDA, 1998).

Drug crimes receive some of the most severe criminal sanctions in our legal system. Based on federally sponsored surveys and by definition of state and federal law, more than 50% of all high school seniors are drug criminals who could be imprisoned. Is this a realistic or appropriate approach to controlling juvenile drug use? If not, then why should only some be arrested? How do we determine who gets prison sentences and who does not?

The current model of youth drug control essentially relies on the random chance of arrest, coupled with an increasing use of locker searches, drug-sniffing dogs, and “just
say no” television ads to reduce adolescent drug use. The evidence shows that these strategies have not decreased the availability of drugs for school-aged kids, nor has it deterred their use of drugs (NIDA, 1998).

Possible indicators of a successful supply reduction effort are rising drug prices and decreasing drug purity levels (ONDCP, 1998). Using data supplied by the ONDCP, it is clear that the price of heroin has instead dropped significantly over time, while its production has risen greatly. The price of cocaine has similarly dropped from $275.12 per gram in 1981 to $94.52 in 1996. Despite massive investments in border patrols, overseas crop eradication efforts, Department of Defense involvement and arrests of drug smugglers and drug dealers, the drug war has not reduced the supply of drugs nor made them more costly to obtain.

The market prices for illegal drugs follow the same laws of supply and demand that apply to all commodities. The drug war creates an artificially high commodity price, and these huge profit margins have encouraged more drug producers to enter the market. Greater production has created economies of scale. Lower production costs allow drug cartels to earn the same high profit margins with lower retail prices. Easy availability, increased purity and lowered prices have resulted in higher levels of overdose deaths and hospital emergency room drug episodes as recorded by the Drug Abuse Warning Network (DAWN). So the current strategy is not protecting the public’s health.

Demand reduction strategies

One type of demand reduction strategy is drug treatment. Out patient treatment is shorter and relatively inexpensive, and accounts for the bulk of the treatment interventions. Residential treatments are longer, relatively expensive, and less commonly
used. On average, both in and out patient treatment programs are about 80% effective in keeping users off drugs while they are actually in the program. They are much less effective at keeping users off drugs after completing treatment (see Table 1).

Another important drug reduction strategy is Drug Education. Education is a key component of any plan to change self-destructive behavior. In order for it to be effective and not undermine its purpose, education must be completely factual and rational. By focusing educational campaigns on information that is scientifically accurate, health professionals can meet their educational goals and become a more credible force with the younger generation.

Since we are failing to reduce the supply and use of drugs, while incarcerating record numbers of drug offenders, we need to accept that criminal laws alone cannot effectively solve the complex issue of drug abuse. Indeed, there is mounting evidence that the extreme criminal sanctions we employ today may actually worsen some of the problems of drug abuse. The Effective National Drug Control Strategy (1999) provides a detailed alternative model of drug control based on sound research and empirical evidence, and was developed by a wide range of professional associations. This strategy emphasizes public health approaches, investment in our children and confronting the underlying economic and social problems, which are the root causes of drug abuse. As can be seen from Figure 2, the effective strategy seeks to balance law enforcement, treatment and prevention efforts. The present study will explore the association between felony offense convictions and lifestyle activities, drug behaviors and mental well-being among recreational drug users.
Table 1.

*Treatment Program Characteristics.*

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Type of treatment</th>
<th></th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Outpatient</td>
<td>Residential</td>
<td>All</td>
</tr>
<tr>
<td>Program Levels (Assessments) in 1992</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent of all treatments</td>
<td>77.5</td>
<td>22.5</td>
<td>100.0</td>
</tr>
<tr>
<td>Percent of all heavy users</td>
<td>24.5</td>
<td>7.1</td>
<td>31.6</td>
</tr>
<tr>
<td>Program Cost and Duration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost per treatment (1992 $)</td>
<td>762</td>
<td>5107</td>
<td>1740</td>
</tr>
<tr>
<td>Treatment duration (Years)</td>
<td>0.280</td>
<td>0.410</td>
<td>0.309</td>
</tr>
<tr>
<td>Cost per person-year (1992 $)</td>
<td>2722</td>
<td>12467</td>
<td>5626</td>
</tr>
<tr>
<td>Program Effectiveness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Off drugs during treatment (%)</td>
<td>73</td>
<td>99</td>
<td>79</td>
</tr>
<tr>
<td>Additional outflow rate (%)</td>
<td>12.2</td>
<td>16.7</td>
<td>13.2</td>
</tr>
</tbody>
</table>

Source: Butynski et al. (1990) and Hubbard et al. (1989).
Figure 2. ONDCP- National Drug Control Budget vs. The Effective Drug Control Budget

Source: The Effective National Drug Control Strategy, 1999 (Network of Reform Groups), Need for a new model of drug control Figure 7
Chapter-3

METHODS

The purpose of this study was to explore the association between felony offense convictions and lifestyle activities, drug behaviors and mental well being among a sample of recreational drug users. Case-control analyses attempted to differentiate between the smaller proportions of drug users who have experienced felony offenses from the majority of users who have not been convicted of these offenses. The results of this analysis may have implications for drug policies in the United States.

Hypotheses

Research Question 1: Can a set of predictor variables (i.e., lifestyle activities, drug behaviors and mental well-being) be formed from the DRUGNET data set to predict whether a subject has experienced a drug related felony offense (i.e., case subjects) or has not experienced this type of offense (i.e., control subjects)?

a). Null Hypothesis: The set of predictor variables (i.e., lifestyle activities, drug behaviors and mental well-being) formed from the DRUGNET data set can not predict whether the subject has experienced a drug related felony offense.

b). Alternate Hypothesis: The set of predictor variables (i.e., lifestyle activities, drug behaviors and mental well-being) formed from the DRUGNET data set can predict whether the subject has experienced a drug related felony offense.

Research Question 2: Can a set of predictor variables (i.e., lifestyle activities, drug behaviors and mental well-being) be formed from the DRUGNET data set to predict whether a subject has experienced a non-drug related felony offense (i.e., case subjects) or has not experienced this type of offense (i.e., control subjects)?
a). **Null Hypothesis**: The set of predictor variables (i.e., life style activities, drug behaviors and mental well-being) formed from the DRUGNET data set can not predict whether the subject has experienced a non-drug related felony offense.

b). **Alternate Hypothesis**: The set of predictor variables (i.e., life style activities, drug behaviors and mental well-being) formed from the DRUGNET data set can predict whether the subject has experienced a non-drug related felony offense.

**Population**

The population under consideration was all adult, recreational drug users in the United States.

**Sample Collection**

The method of sampling was self-selection by adult, recreational drug users who had access to the Internet and completed the DRUGNET survey. DRUGNET is a cross-sectional survey of adult recreational drug users through the World Wide Web, developed by Nicholson, White, and Duncan (1996). The time frame of data collection was from February 1997 through June 1998. The purpose and objectives of the study have been advertised through on-line and other electronic mailing lists. This design allows for drawing of large sample size from the hidden worldwide population of recreational drug users. It provides anonymity to the participants, encourages them to respond honestly to the questionnaire and also minimizes the Hawthorne effect. This design provides cost and time effectiveness. Subjects are self-selected, and informed consent was implied when they took the survey.
Design

The study was an epidemiological, case-control design. Subjects identified as “have a felony offense” were considered the “cases” and subjects who “do not have a felony offense” were treated as “controls.” A matched sample of controls was drawn from the individuals responding with “not having a felony offense.” Cases were compared to controls on lifestyle, drug usage variables, and the General Well-being Schedule (GWBS). The goal was to develop a set of predictor variables (lifestyle, drug usage, GWBS) that were able to account for the criterion variable (felony vs. no felony). A separate set of analyses were conducted for each of the two-criterion variables (drug related felony offense; non-drug related felony offense).

Respondents participated in the DRUGNET survey via the World Wide Web (see Appendix A). Publicity was given through USENET news groups (e.g., the entire alt.drugs and rec.drugs hierarchies etc) and electronic mailing list drug-policy@wku.edu. Interested voluntary participants could point their browser to the address http://whuweb1.wku.edu/~drugnet and begin to participate in the study. The page provides a brief tutorial on how to complete the survey; they could also be connected to http://www.anonymyzer.com, an anonymity procedure to ensure further privacy and protection. Respondents were told that by taking the survey they were providing informed consent.

Instrumentation

The survey consisted of questions concerning seven categories of drugs. The drug categories included in the survey were alcohol, marijuana, depressants, cocaine, other stimulants, hallucinogens and opiates. The instrument also had three additional sections
including 1) past experiences with the legal system, policy issues and opinions, 2) a demographic profile section (i.e., educational level, age, marital status, happiness with marital status, ethnicity, employment and life style activities such as regular attending of religious services, involvement in community activities, other non-drug related recreational activities, voting behavior and child care responsibilities etc.); and 3) the General Well-being Schedule (See appendix A). The focus of this study was on all the sections of the survey questionnaire. The survey questions reflected both qualitative and quantitative measures. Question formats included multiple choice, multiple responses, Likert scale, fill-in-the blank and short essay.

The GWBS was developed in 1970 by Dupuy to assess self-representation of subjective well-being and distress. The instrument consists of 33 items with the first 14 questions having six response options, the next 4 items are 0 to 10 rating bars, and the last 15 questions are criterion-type behavioral and self-evaluation items. A total score can be calculated, along with six subscales which measure relaxed versus tense-anxious, healthy worry, depressed-cheerful mood, energy level, satisfying-interesting life, and emotional behavioral control (Fazio, 1977).

Fazio (1977) evaluated the robustness of the GWBS and studied it in comparison with the Minnesota Multiphasic Personality Inventory (MMPI) (Hathway & Mckingley, 1951), the Zung Self-rating Depression Scale (Zung, 1956), the college health questionnaire (CHQ) (Whitney, Cadoret, & McClure, 1971), the personal feeling Inventory (PFI) (Fazio, 1977), and the Psychiatric Symptom Scale (PSS) (Dohrenwend & Crandell, 1970). The study sample included 195 undergraduates (79 male; 116 female) enrolled at the University of Wisconsin-Milwaukee, 1972-1973.
Intercorrelations were performed between the six GWBS subscales and the other instruments. Healthy worry had an average correlation with the anxiety scales of 0.40. Satisfying-interesting life correlated 0.52 with the depression scales; also, energy level had an average correlation 0.57 with the depression scales. The depressed-cheerful mood subscale and the emotional-behavioral control subscale correlated 0.63 and 0.60, respectively with the depression scales. Finally, the emotional-behavioral control subscale and the relaxed vs. tense-anxious subscale, correlated 0.63 and 0.57, respectively, with the anxiety scales (Fazio, 1977).

The GWBS was also administered to 41 students from the original sample three months after the initial testing. Test-retest reliability was 0.85 for the total scale. Fazio (1977) contends the major weakness of the scale is in its differentiation of the scale into the 6 subscales-too few items exit per subscale. Overall, the GWBS proved to be the single most useful instrument in measuring a major symptom of distress- depression (Healthy People, 1979; Smith, 1968). It is also brief, well designed, relevant in content, and can be used in any number of settings (Fazio, 1977).

For scoring purposes the sum of the responses to the first 18 questions constitutes an individual’s total score. The first 14 questions have 6 structured response options and the next 4 questions have 0 to 10 rating bars. Each item response is given an ordinal score from 0 to 10 or 0 to 5 with the high value (10 or 5) representing a high level of well being and the low values (0) representing high distress. A total score between 73 and 110 representing positive well being, a score between 61 and 72 signifies moderate stress, while a score below 60 signifies severe distress.
Data Analysis

Variables

Independent variables

i. Life style activities

ii. Drug consumption behaviors

iii. Mental Well-being (GWBS)

Dependent variables

i. Have felony conviction vs. do not have felony conviction

ii. Have drug related felony conviction vs. do not have drug related felony conviction.

Statistical procedures

A statistical procedure used for identifying relationships between qualitative criterion variables (felony vs. no felony) and the quantitative predictor variables (lifestyle, drug-related behavior & General Well-being) is discriminant analysis. The subjects are divided into two groups based on the criterion variable. The discriminant analysis will be done twice; once for have felony conviction vs. do not have felony conviction and a second time for have drug related felony conviction vs. do not have drug related felony.

Group I

Have felony conviction (cases) vs. do not have felony conviction (controls)

Group II

Have drug related felony conviction (cases) vs. do not have drug related felony conviction (controls)
In discriminant analysis, a concept will be employed called the discriminant function. The discriminant function uses a weighted combination of predictor variable values to classify a subject into one of the criterion variable groups. The discriminant function is a derived variable defined as a weighted sum of values on individual predictor variables. Each subject’s score on the discriminant function—its discriminant score—will depend upon its values on the predictor variables.

In symbolic form, the discriminant function (L) can be expressed as follows:

\[ L = b_1 x_1 + b_2 x_2 + \cdots + b_k x_k \]

Where \( x_1, x_2, \ldots x_k \) represents values on the various predictor variables and \( b_1, b_2, \ldots, b_k \) are the weights associated with each of the respective predictor variables.

Subjects with discriminant scores greater than the cutoff score were assigned to one of the criterion groups and the subjects with discriminant scores less than the cutoff score were assigned to the other criterion group. So each subject’s discriminant score was judged against the cutoff score to determine its group membership.

Parameters of discriminant function are

1) the weights associated with each predictor variable, and

2) the critical cutoff score for assigning objects into alternative criterion groups.

The group membership is presented in the form of confusion matrix (see Tables 2 and 3), which presents the tabulation of the subjects’ actual group membership versus their predicted group membership.

The figures in the actual group are compared with the figures in the predicted group. This comparison reflects the association between predicted and the
Table 2.

Confusion Matrix (Group I: non-drug felony offense vs. do not have felony offense)

<table>
<thead>
<tr>
<th>Predicted group</th>
<th>Actual group</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Do not have felony</td>
<td>Have felony</td>
</tr>
<tr>
<td>Have felony</td>
<td>A (errors)</td>
<td>B</td>
</tr>
<tr>
<td>Do not have felony</td>
<td>C</td>
<td>D (errors)</td>
</tr>
<tr>
<td>Totals</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 3.

**Confusion Matrix (Group II: have drug-related felony offense vs. do not have drug-related felony offense)**

<table>
<thead>
<tr>
<th>Predicted group</th>
<th>Actual group</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Do not have drug-related felony</td>
<td>Have drug-related felony</td>
</tr>
<tr>
<td>Have drug-related felony</td>
<td>A (errors)</td>
<td>B</td>
</tr>
<tr>
<td>Do not have drug-related felony</td>
<td>C</td>
<td>D</td>
</tr>
</tbody>
</table>

**Totals**
actual group membership. The relative importance of the predictor variables can be determined from the squared coefficient weights associated with each variable in the discriminant function.
Chapter-4

RESULTS

Selection of sample

A total of 906 subjects completed the DRUGNET survey. These individuals were composed of 704 (78%) United States citizens and 198 (22%) people who were not U.S. citizens (n = 4 missing data). Because drug laws and policies differ from country to country this study has been limited to United States citizens 18 years of age or older. Among the U.S citizens who completed the DRUGNET survey, 79 subjects (considered cases) reported being convicted of drug related felony and 26 subjects (considered as a second differentiating group of cases) had been convicted of non-drug related felony. Each case subject (convicted of drug related felony) was matched with a control subject (not convicted of a drug related felony) on gender and age (+/- 2 years). The same procedure was repeated for subjects convicted of a non-drug related felony. Thus two case-control analyses were performed (i.e., drug related felony vs. no drug related felony and felony vs. no felony).

Description of Sample

Demographic characteristics of drug related felony criterion sample

This sample consisted of 158 subjects, comprised of 79 (50%) subjects convicted of a drug related felony (cases) and 79 (50%) matched subjects (controls) not convicted of a drug related felony [69 (87.3%) were male and 10 (12.66%) were female in each group]. Among cases, 72 (92.3%) were whites and 6 (7.7%) were nonwhite (n = 1 missing data). Among controls, 75 (93.6%) were whites and 4 (5.1%) were nonwhite. Among cases, 53 (68.8%) were full-time employees and 24 (31.2%) were other (n = 2
Among cases, 53 (68.8%) were full-time employees and 24 (31.2%) were other (n = 2 missing data), whereas among control subjects there were 59 (75.6%) and 19 (24.4%), respectively (n = 1 missing data). Twenty-three (29.1%) of the cases had a high school level education; 21 (26.6%) had some college level education; 26 (32.9%) had bachelor’s degrees and 9 (11.4%) had a masters or higher level degree. Among control subjects the breakdown was 10 (13%), 13 (16.9%), 24 (31.2%) and 30 (39%), respectively (n = 2 missing data). Among cases, 45 (91.8%) had an employed spouse and 4 (8.2%) had unemployed spouses (n = 30 missing data); whereas among control subjects 47 (85.5%) had an employed spouse and 8 (14.5%) had unemployed spouse (n = 24 missing data).

The cases reported their household income in US dollars as follows: (a) < 29,999 [n = 20 (25.3%)], (b) 30,000-49,999 [n = 24 (30.4%)], (c) 50,000-69,999 [n = 14 (17.7%)], (d) 70,000-89,999 [n = 11 (13.9%)], (e) 90,000-109,999 [n = 5 (6.3%)] and (f) 110,000+ [n = 5 (6.3%)]. Among control subjects there were 10 (12.8%), 17 (21.8%), 15 (19.2%), 12 (15.4%), 6 (7.7%) and 18 (23.1%), respectively. Among cases, 57 (72.2%) reported that their income was enough for current life style needs and 22 (27.8%) said it was not; whereas, among control subjects these were 65 (82.3%) and 13 (16.5%), respectively (n=1 missing data) (see Table 4).

Description of life style and behavioral indices of drug-related felony criterion sample

Among cases, 7 (9.1%) attended religious services regularly and 70 (90.9%) did not (n = 2 missing data), whereas among control subjects these were 10 (12.7%) and 69 (87.3%), respectively. Among cases, 30 (38%) were regularly active in the community activities and 49 (62%) were not, whereas among controls these were 31 (39.2%) and 48 (60.8%), respectively. Among cases, 59 (75.6%) voted regularly and 19 (24.4%) did not
Table 4

Description of drug-related felony cases vs. controls: Demographic indices

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Cases (n) (%)</th>
<th>Controls (n) (%)</th>
<th>X²</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total subjects</td>
<td>79</td>
<td>79</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Demographic Indices</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>69 (87.3%)</td>
<td>69 (87.3%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>10 (12.66%)</td>
<td>10 (12.66%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race:</td>
<td></td>
<td></td>
<td>0.455</td>
<td>1</td>
</tr>
<tr>
<td>white</td>
<td>72 (92.3%)</td>
<td>75 (93.6%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-white</td>
<td>6 (7.7%)</td>
<td>4 (5.1%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment:</td>
<td></td>
<td></td>
<td>0.896</td>
<td>1</td>
</tr>
<tr>
<td>Full-time</td>
<td>53 (68.8%)</td>
<td>59 (75.6%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>24 (31.2%)</td>
<td>19 (24.4%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education:</td>
<td></td>
<td></td>
<td>18.369*</td>
<td>3</td>
</tr>
<tr>
<td>High school</td>
<td>23 (29.1%)</td>
<td>10 (13%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>College level</td>
<td>21 (26.6%)</td>
<td>13 (16.9%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelors</td>
<td>26 (32.9%)</td>
<td>24 (31.2%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masters or higher</td>
<td>9 (11.4%)</td>
<td>30 (39%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spouse employment:</td>
<td></td>
<td></td>
<td>1.034</td>
<td>1</td>
</tr>
<tr>
<td>Employed</td>
<td>45 (91.8%)</td>
<td>47 (85.5%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Un-employed</td>
<td>4 (8.2%)</td>
<td>8 (14.5%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household income (US$):</td>
<td></td>
<td></td>
<td>12.039*</td>
<td>5</td>
</tr>
<tr>
<td>&lt; 29,999</td>
<td>20 (25.3%)</td>
<td>10 (12.8%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30,000-49,999</td>
<td>24 (30.4%)</td>
<td>17 (21.8%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50,000-69,999</td>
<td>14 (17.7%)</td>
<td>15 (19.2%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>70,000-89,999</td>
<td>11 (13.9%)</td>
<td>12 (15.4%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>90,000-109,999</td>
<td>5 (6.3%)</td>
<td>6 (7.7%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>110,000+</td>
<td>5 (6.35)</td>
<td>18 (23.1%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enough income for needs:</td>
<td></td>
<td></td>
<td>3.839</td>
<td>1</td>
</tr>
<tr>
<td>Yes</td>
<td>57 (72.2%)</td>
<td>65 (82.3%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>22 (27.8%)</td>
<td>13 (16.5%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Chi-square analysis revealed a significant difference between the two groups (alpha level at 0.05)
(n = 1 missing data), where as among control subjects these were 69 (88.5%) and 9 (11.5%), respectively (n = 1 missing data). Among cases, 73 (92.4%) had other non-drug related recreational hobbies (e.g., athletics, crafts, reading, etc.) and 6 (7.6%) did not, whereas among control subjects these were 77 (97.5%) and 2 (2.5%), respectively. Among cases, 24 (30.4%) were never married and 29 (36.7%) were married, 13 (16.5%) were divorced/widowed and 13 (16.5%) were living together. Among control subjects these were 19 (24.1%), 40 (50.6%), 9 (11.4%) and 11 (13.9%), respectively. Among cases, 63 (91.3%) were happy with their marital status and 6 (8.7%) were unhappy with their marital status. Among control subjects 69 (94.5%) were happy with their marital status and 4 (5.5%) were unhappy with their marital status. Among cases, 25 (35.2%) had childcare responsibilities and 46 (64.8%) did not (n = 8 missing data). Among controls these were 28 (35.9%) and 50 (64.1%), respectively (n = 1 missing data). Among cases, 26 (78.8%) reported that their children were aware of their drug behavior and 7 (21.2%) reported that their children were unaware of their drug use (n = 46 missing data). Among control subjects, 22 (51.2%) reported that their children were aware of their drug usage and 21 (48.8%) reported that their children were unaware of their drug behavior (n = 36 missing data) (see Table. 5).

Chi-square analyses were performed on the aforementioned nominal variables. 1. There was a significant difference ($X^2 = 4.353, df = 1, N = 156, p < 0.05$) in voting behavior between the two groups. Control subjects were more likely to vote than the case group (88.5% vs. 75.6%).
Table 5

Description of drug-related felony sample: Life style and behavioral indices

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Cases (n)</th>
<th>Cases (%)</th>
<th>Controls (n)</th>
<th>Controls (%)</th>
<th>X^2</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total subjects</td>
<td>79</td>
<td></td>
<td>79</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Lifestyle and Behavioral Indices:**

- **Attend religious services regularly:**
  - Yes: 7 (9.1%) vs. 10 (12.7%)
  - No: 70 (90.9%) vs. 69 (87.3%)
  - X^2 = 0.511, df = 1

- **Active in community activities:**
  - Yes: 30 (38%) vs. 31 (39.2%)
  - No: 49 (62%) vs. 48 (60.8%)
  - X^2 = 0.027, df = 1

- **Regular voting behavior:**
  - Yes: 59 (75.6%) vs. 69 (88.5%)
  - No: 19 (24.4%) vs. 9 (11.5%)
  - X^2 = 4.353*, df = 1

- **Having non-drug recreational activities:**
  - Yes: 73 (92.4%) vs. 77 (97.5%)
  - No: 6 (7.6%) vs. 2 (2.5%)
  - X^2 = 2.107, df = 1

- **Marital status:**
  - Never married: 24 (30.4%) vs. 19 (24.1%)
  - Married: 29 (36.7%) vs. 40 (50.6%)
  - Divorced/widowed: 13 (16.5%) vs. 9 (11.4%)
  - Living together: 13 (16.5%) vs. 11 (13.9%)
  - X^2 = 3.229, df = 3

- **Happy with marriage:**
  - Yes: 63 (91.3%) vs. 69 (94.5%)
  - No: 6 (8.7%) vs. 4 (5.5%)
  - X^2 = 0.560, df = 1

- **Child care responsibilities:**
  - Yes: 25 (35.2%) vs. 28 (35.9%)
  - No: 46 (64.8%) vs. 50 (64.1%)
  - X^2 = 0.008, df = 1

- **Children aware of parents drug use:**
  - Yes: 26 (78.8%) vs. 22 (51.2%)
  - No: 7 (21.2%) vs. 21 (48.8%)
  - X^2 = 6.124*, df = 1

* Chi-square analysis revealed a significant difference between the two groups (alpha level at 0.05)
2. There was a significant difference ($X^2 = 6.124, df = 1, N = 76, p < 0.05$) in “Child knows parent uses drugs” between the two groups. Control subject’s children were less likely to know their parents drug behavior than that of cases (21.2% vs. 48.8%).

3. There was a significant difference ($X^2 = 18.369, df = 3, N = 156, p < 0.05$) in education level between two groups. Control subjects were more likely to have professional degrees (Masters or higher level) than the cases (39% vs. 11.4%).

4. There was a significant difference ($X^2 = 12.039, df = 5, N = 157, p < 0.05$) in household income between the two groups. Cases were more likely to belong to low-income families than that of controls (25.3% vs. 12.8%).

Descriptive Data on the General Well-being Schedule drug related felony criterion sample

The mean GWBS score of the sample (n = 158) was 78.7 (SD = 15.68; range = 11 to 107) (see Table. 6). Median and mode were both 82. In the case group (n = 79), the mean GWBS score was 78.06 (SD = 15.45; range = 21 to 105). Median and mode were both 82. For the control subjects (n = 79), the mean GWBS score was 79.34 (SD = 15.97; range = 11 to 107). Median and mode were 82 and 87, respectively. An ANOVA was conducted to see if there were any significant differences in subjects GWBS scores. No significant difference was detected ($F = 0.261; df = 1,156; p > .05$).

Demographic characteristics of non-drug felony criterion sample

The sample consisted of 52 subjects, composed of 26 cases (convicted of a non-drug felony) and 26 matched control subjects (not convicted of a non-drug felony) [20 (76.9%) were male and 6 (23.1%) were female in each group]. Among the cases, 25
**Table 6**

Description of GWBS drug related felony cases vs. controls

<table>
<thead>
<tr>
<th></th>
<th>Sample</th>
<th>Cases</th>
<th>Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>158</td>
<td>79</td>
<td>79</td>
</tr>
<tr>
<td>Mean</td>
<td>78.7</td>
<td>78.06</td>
<td>79.34</td>
</tr>
<tr>
<td>Median</td>
<td>82</td>
<td>82</td>
<td>82</td>
</tr>
<tr>
<td>Mode</td>
<td>82</td>
<td>82</td>
<td>87</td>
</tr>
<tr>
<td>SD</td>
<td>15.68</td>
<td>15.45</td>
<td>15.97</td>
</tr>
<tr>
<td>Range</td>
<td>11 to 107</td>
<td>21 to 105</td>
<td>11 to 107</td>
</tr>
</tbody>
</table>
(96.2%) were white and 1 (3.8%) was nonwhite, whereas for controls 26 were white. Among cases 17 (65.4%) were full-time employees and 9 (34.6%) were other, whereas among control subjects 20 (80%) were full-time employees and 5 (20%) were other (n = 1 missing data). Among cases 8 (30.8%) had high school/equivalent level of education; 9 (34.6%) had some college level education; and 9 (34.6%) had higher than college level (Bachelors/Masters/Post-Doc, etc.). Among control subjects the breakdown was 4 (15.4%), 7 (26.9%) and 15 (57.7%), respectively. Among cases, 13 (86.7%) had an employed spouse and 2 (13.3%) did not (n = 11 missing data). Whereas among control subjects these were 17 (94.4%) and 1 (5.6%), respectively (n = 8 missing data). The cases reported their household income in U.S dollars as follows: (a) < 29,999 [n = 7 (26.9%)], (b) 30,000-49,999 [n = 8 (93.0%)], (c) 50,000-69,999 [n = 6 (23.1%)], and (d) 70,000+ [n = 5 (19.2%)]. Among control subjects these were 10 (19.2%), 19 (36.5%), 11 (21.2%) and 12 (23.1%), respectively. Among cases, 19 (73.1%) reported that their income was enough for their current lifestyle needs and 7 (26.9%) said it did not, whereas among controls these were 22 (84.6%) and 4 (15.4%), respectively (see Table. 7). Description of lifestyle and behavioral indices of non-drug felony criterion sample

Among cases, 6 (24%) attended religious services regularly and 19 (76%) did not (n = 1 missing data), whereas in controls these were 3 (11.5%) and 23 (88.5%), respectively. Among cases 13 (50%) were regularly active in community activities and 13 (50%) were not, whereas among control subjects these were 12 (46.2%) and 14 (53.8%), respectively. Among cases 18 (69.2%) voted regularly and 8 (30.8%) did not, whereas among controls these were 22 (84.6%) and 4 (15.4%), respectively. Among
Table 7

Description of non-drug felony cases vs. controls

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Cases (n) (%)</th>
<th>Controls (n) (%)</th>
<th>$X^2$</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total subjects</td>
<td>26</td>
<td>26</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Demographic Indices</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>20 (76.9%)</td>
<td>20 (76.9%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>6 (23.07%)</td>
<td>6 (23.07%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race:</td>
<td></td>
<td></td>
<td>1.020</td>
<td>1</td>
</tr>
<tr>
<td>White</td>
<td>25 (96.2%)</td>
<td>26 (100%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-white</td>
<td>1 (3.8%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment:</td>
<td></td>
<td></td>
<td>1.367</td>
<td>1</td>
</tr>
<tr>
<td>Full-time</td>
<td>17 (65.4%)</td>
<td>20 (80%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>9 (34.6%)</td>
<td>5 (20%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education:</td>
<td></td>
<td></td>
<td>3.083</td>
<td>2</td>
</tr>
<tr>
<td>High school</td>
<td>8 (30.8%)</td>
<td>4 (15.4%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>College level</td>
<td>9 (34.6%)</td>
<td>7 (26.9%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher than college level</td>
<td>9 (34.6%)</td>
<td>15 (57.7%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spouse employment:</td>
<td></td>
<td></td>
<td>0.599</td>
<td>1</td>
</tr>
<tr>
<td>Employed</td>
<td>13 (86.7%)</td>
<td>17 (94.4%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Un-employed</td>
<td>2 (13.3%)</td>
<td>1 (5.6%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household income (US$)</td>
<td></td>
<td></td>
<td>2.498</td>
<td>3</td>
</tr>
<tr>
<td>&lt; 29,999</td>
<td>7 (26.9%)</td>
<td>10 (19.2%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30,000-49,999</td>
<td>8 (30.8%)</td>
<td>19 (36.5%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50,000-69,999</td>
<td>6 (23.1%)</td>
<td>15 (21.2%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>70,000+</td>
<td>5 (19.2%)</td>
<td>12 (23.1%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enough income for needs:</td>
<td></td>
<td></td>
<td>1.038</td>
<td>1</td>
</tr>
<tr>
<td>Yes</td>
<td>19 (73.1%)</td>
<td>22 (84.6%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>7 (26.9%)</td>
<td>4 (15.4%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
cases, 23 (88.5%) had other non-drug related recreational hobbies and 3 (11.5%) did not, whereas all control subjects 26 (100%) had other recreational hobbies. Among cases 10 (38.5%) were never married, 11 (42.3%) were married/living together and 5 (19.2%) were divorced/widowed. Among control subjects these were 9 (34.6%), 16 (61.5%) and 1 (3.8%), respectively. Among cases 22 (100%) were happy with their marital status (n = 4 missing data) whereas among controls 19 (95%) were happy with their marital status and 1 (5%) was unhappy with his marital status (n = 6 missing data). Among cases, 11 (44%) had childcare responsibilities and 14 (56%) did not (n = 1 missing data). Among controls these were 9 (36%) and 16 (64%), respectively (n = 1 missing data). Among cases, 8 (61.5%) had children knowing of their drug use behavior and 5 (38.5%) did not (n = 13 missing data), whereas among control subjects these were 2 (22.2%) and 7 (77.8%), respectively (n = 17 data missing) (see Table. 8). Chi-square analyses showed no significant differences between the two groups (cases vs. controls) on these variables.

Descriptive Data on the General Well-being Schedule non-drug felony criterion sample

The mean GWBS score of the sample (n = 52) was 79.29 (SD = 16.37, range = 21 to 105) (see Table. 9). Median and mode were 85.5 and 84, respectively (multiple modes existed, the smallest value reported). For the case group (n = 26), the mean GWBS score was 76.46 (SD = 19.84; range = 21 to 105). Median and mode were 81 and 61, respectively (Note: Multiple modes existed, the smallest value reported). For the control group (n = 26), the mean GWBS score was 82.12 (SD = 11.67; range = 56 to 102). Median and mode were both 84. An ANOVA was conducted to see if there were any significant differences in subjects' GWBS scores. No significant difference was detected (F = 1.569; df = 1,50; p > .05).
Table 8

Description of non-drug felony cases vs. controls

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Cases (n) (%)</th>
<th>Controls (n) (%)</th>
<th>$X^2$</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total subjects</td>
<td>26</td>
<td>26</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Lifestyle and Behavioral Indices:

- **Attend religious services regularly:**
  - Yes: 6 (24%) vs. 3 (11.5%)
  - No: 19 (76%) vs. 23 (88.5%)
  - $X^2 = 1.362$, df = 1

- **Active in community activities:**
  - Yes: 13 (50%) vs. 12 (46.2%)
  - No: 13 (50%) vs. 14 (53.8%)
  - $X^2 = 0.077$, df = 1

- **Regular voting behavior:**
  - Yes: 18 (69.2%) vs. 22 (84.6%)
  - No: 8 (30.8%) vs. 4 (15.4%)
  - $X^2 = 1.733$, df = 1

- **Having non-drug recreational Activities:**
  - Yes: 23 (88.5%) vs. 26 (100%)
  - No: 3 (11.5%)
  - $X^2 = 3.184$, df = 1

- **Marital status:**
  - Never married: 10 (38.5%) vs. 9 (34.6%)
  - Married/living together: 11 (42.3%) vs. 16 (61.5%)
  - Divorced/widowed: 5 (19.2%) vs. 1 (3.8%)
  - $X^2 = 3.645$, df = 2

- **Happy with marriage:**
  - Yes: 22 (100%) vs. 19 (95%)
  - No: 0 vs. 1 (5%)
  - $X^2 = 1.127$, df = 1

- **Child care responsibilities:**
  - Yes: 11 (44%) vs. 9 (36%)
  - No: 14 (56%) vs. 16 (64%)
  - $X^2 = 0.333$, df = 1

- **Children aware of parents drug use:**
  - Yes: 8 (61.5%) vs. 2 (22.2%)
  - No: 5 (38.5%) vs. 7 (77.8%)
  - $X^2 = 3.316$, df = 1

Chi-square analysis showed no significant differences between the two groups on any of these variables.
Table 9

Description of GWBS non-drug felony cases vs. controls

<table>
<thead>
<tr>
<th></th>
<th>Sample</th>
<th>Cases</th>
<th>Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>52</td>
<td>26</td>
<td>26</td>
</tr>
<tr>
<td>Mean</td>
<td>79.29</td>
<td>76.46</td>
<td>82.12</td>
</tr>
<tr>
<td>Median</td>
<td>85.5</td>
<td>81</td>
<td>84</td>
</tr>
<tr>
<td>Mode</td>
<td>*84</td>
<td>*61</td>
<td>84</td>
</tr>
<tr>
<td>SD</td>
<td>16.37</td>
<td>19.84</td>
<td>11.67</td>
</tr>
<tr>
<td>Range</td>
<td>21 to 105</td>
<td>21 to 105</td>
<td>56 to 102</td>
</tr>
</tbody>
</table>

* multiple modes existed, the smallest value reported
Test of research questions

Research Question 1: Can a set of predictor variables (i.e., lifestyle activities, drug behaviors and mental well-being) be formed from the DRUGNET data set to predict whether a subject has experienced a drug related felony offense (i.e., case subjects) or has not experienced this type of offense (i.e., control subjects)?

Research Question 2: Can a set of predictor variables (i.e., lifestyle activities, drug behaviors and mental well-being) be formed from the DRUGNET data set to predict whether a subject has experienced a non-drug related felony offense (i.e., case subjects) or has not experienced this type of offense (i.e., control subjects)?

Discriminant function analyses

Drug related felony criterion

A direct discriminant function analysis was performed in a stepwise manner using all the variables as predictors of drug related felony status. The two groups were cases (have drug related felony) and control subjects (not having drug related felony). At each step, the variable that minimized the overall Wilk's lamda is entered. Maximum significance of 'F' to enter a new variable was 0.1, and the minimum significance of 'F' to remove a variable from the equation was 0.2.

Of the original 158 subjects of the drug-felony sample, three were dropped from the analysis because of missing data. After 13 steps, using 13 variables as best predictors of group membership, Wilk's lambda was significantly reduced to 0.527 ($\chi^2 = 91.27; df = 13; p < .01$). Table 10 presents the standardized canonical discriminant functions used in the analysis. The unstandardized canonical discriminant functions evaluated at group means were .935 and -.947 for the case and control groups, respectively. The predictor
Table 10.

Standardized canonical discriminant function coefficients of predictor variables for drug-related felony criterion sample

<table>
<thead>
<tr>
<th>Predictor variable</th>
<th>Discriminant function coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of education</td>
<td>-0.371</td>
</tr>
<tr>
<td>Household income</td>
<td>-0.367</td>
</tr>
<tr>
<td>Frequency of marijuana</td>
<td>0.428</td>
</tr>
<tr>
<td>Frequency of depressants use</td>
<td>-0.386</td>
</tr>
<tr>
<td>Level of marijuana intoxication</td>
<td>-0.360</td>
</tr>
<tr>
<td>Level of hallucinogen intoxication</td>
<td>0.390</td>
</tr>
<tr>
<td>Use of depressants relative to first year of use</td>
<td>0.481</td>
</tr>
<tr>
<td>Use of marijuana relative to year of heaviest use</td>
<td>0.305</td>
</tr>
<tr>
<td>Effect of alcohol on health</td>
<td>-0.449</td>
</tr>
<tr>
<td>Effect of marijuana on health</td>
<td>0.253</td>
</tr>
<tr>
<td>Cut down on use of hallucinogens because of health</td>
<td>0.268</td>
</tr>
<tr>
<td>Overall effect of hallucinogens on life</td>
<td>-0.452</td>
</tr>
</tbody>
</table>
variables level of education, household income, frequency of depressants use, level of marijuana intoxication, effect of alcohol on health, and overall effect of hallucinogens on life had negative discriminant function coefficients suggesting that they are negatively associated with the drug related felony offences. The predictor variables frequency of marijuana use, level of hallucinogen intoxication, use of depressants relative to first year of use, use of marijuana relative to year of heaviest use, effect of marijuana on health, cut down on use of hallucinogens because of health, and overall effect of cocaine on life had positive discriminant function coefficients suggesting that they are positively associated with the drug related felony offenses. Using these best predictor variables 83.9% of original grouped cases were correctly classified (see Table 11).

Non-drug felony criterion

For this sample, a similar direct discriminant function analysis was performed in a stepwise manner using all the variables as predictors of non-drug felonies. The two groups were case (have non-drug related felony) and control subjects (not having non-drug related felony). At each step, the variable that minimized the overall Wilk’s lamda was entered. Maximum significance of ‘F’ to enter a new variable was 0.1, and the minimum significance of ‘F’ to remove a variable from the equation was 0.2.

Of the original 52 subjects of the non-drug felony sample, one was dropped from the analysis because of missing data. After 17 steps, 11 variables remained as best predictors of group membership, Wilk’s lambda was significantly reduced to 0.217 ($\chi^2 = 65.028; df = 11; p < .01$). Table 12 presents the standardized canonical discriminant functions used in the analysis. The unstandardized canonical discriminant functions evaluated at group means were 1.864 and -1.864 for cases and control subjects,
Table 11.

Classification results for drug-related felony criterion sample

<table>
<thead>
<tr>
<th>Original</th>
<th>Convicted of drug-related felony</th>
<th>Predicted group membership</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Count</td>
<td>Yes</td>
<td>66</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>12</td>
<td>64</td>
</tr>
<tr>
<td>Percent (%)</td>
<td>Yes</td>
<td>83.5</td>
<td>16.5</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>15.8</td>
<td>84.2</td>
</tr>
</tbody>
</table>
Table 12.

**Standardized canonical discriminant function coefficients of predictor variables for non-drug felony criterion sample (Analysis 1)**

<table>
<thead>
<tr>
<th>Predictor variable</th>
<th>Discriminant function coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Importance of spirituality</td>
<td>0.690</td>
</tr>
<tr>
<td>Regularly attend services</td>
<td>-1.068</td>
</tr>
<tr>
<td>Regular voting behavior</td>
<td>0.957</td>
</tr>
<tr>
<td>Cut down on use of hallucinogens because of health</td>
<td>0.472</td>
</tr>
<tr>
<td>Effect of alcohol on life</td>
<td>-1.127</td>
</tr>
<tr>
<td>Effect of cocaine on health</td>
<td>-1.159</td>
</tr>
<tr>
<td>Level of cocaine intoxication</td>
<td>1.908</td>
</tr>
<tr>
<td>Frequency of hallucinogen use</td>
<td>0.947</td>
</tr>
<tr>
<td>Cocaine use</td>
<td>0.762</td>
</tr>
<tr>
<td>Freedom from health concern &amp; worry</td>
<td>0.951</td>
</tr>
<tr>
<td>Alcohol use</td>
<td>0.581</td>
</tr>
</tbody>
</table>
respectively. The predictor variables regular attending of services, overall effect of alcohol on life, effect of cocaine on health, and alcohol intake have negative discriminant coefficients suggesting that they are negatively associated with non-drug felony offenses; whereas importance of spirituality, regular voting behavior, cut down on use of hallucinogens because of health, level of cocaine intoxication, frequency of hallucinogen use, cocaine use, and freedom from health concern and worry are positively associated with non-drug felonies. Using these best predictors 94.1% of the cases and controls were correctly classified (see Table 13). A second analysis was performed using the following predictor variables: level of cocaine intoxication, overall effect of alcohol on life, frequency of hallucinogen usage, regular voting behavior, regular attending of services, effect of hallucinogens on health. Wilk’s lambda was significantly reduced to 0.537 ($\chi^2 = 28.613; df = 6; p < .01$). Table 14 presents the standardized canonical discriminant functions of these six variables used in the analysis. The unstandardized canonical discriminant functions evaluated at group means were -0.928 and 0.893 for case and control groups, respectively. The predictor variables effect of alcohol on life, regularly attending services, and effect of hallucinogens on health had positive discriminant function coefficients suggesting that they are negatively associated with the non-drug felony offense; whereas level of cocaine intoxication, frequency of hallucinogen use and regular voting behavior had negative discriminant function coefficients suggesting that they are positively with non-drug felony offense. When using the above six-predictor variables 82.4% of original grouped cases were correctly classified (see Table 15).
Table 13.

Classification results for non-drug felony criterion sample (Analysis 1)

<table>
<thead>
<tr>
<th>Original Count</th>
<th>Convicted of non-drug felony</th>
<th>Predicted group membership</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>Yes</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>No</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>28</td>
</tr>
<tr>
<td>Percent (%)</td>
<td>Yes</td>
<td>100.00</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>11.5</td>
<td>88.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>100.00</td>
</tr>
</tbody>
</table>


Table 14.

**Standardized canonical discriminant function coefficients of predictor variables for non-drug felony criterion sample (Analysis 2)**

<table>
<thead>
<tr>
<th>Predictor variable</th>
<th>Discriminant function coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect of alcohol on life</td>
<td>0.874</td>
</tr>
<tr>
<td>Regularly attend services</td>
<td>0.471</td>
</tr>
<tr>
<td>Level of cocaine intoxication</td>
<td>-0.784</td>
</tr>
<tr>
<td>Frequency of hallucinogen use</td>
<td>-1.198</td>
</tr>
<tr>
<td>Effect of hallucinogens on health</td>
<td>0.894</td>
</tr>
<tr>
<td>Regular voting behavior</td>
<td>-0.170</td>
</tr>
</tbody>
</table>
Table 15.

Classification results for non-drug felony criterion sample (Analysis 2)

<table>
<thead>
<tr>
<th>Original</th>
<th>Convicted of non-drug felony</th>
<th>Predicted group membership</th>
<th>Total</th>
</tr>
</thead>
<tbody>
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<td>Yes</td>
<td>Yes</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td></td>
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<td>Yes</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>26</td>
</tr>
<tr>
<td>Count</td>
<td>Yes</td>
<td>88.0</td>
<td>12.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>100.00</td>
</tr>
<tr>
<td>Percent (%)</td>
<td>Yes</td>
<td>23.1</td>
<td>76.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>100.00</td>
</tr>
</tbody>
</table>
A cross-sectional survey of adult, recreational drug users was performed on the Internet via the World Wide Web. This survey is known as DRUGNET. Subjects completed various sections of the survey (i.e., personal experiences; demographic section; past experiences with legal aspects and policy issues; and the general well-being schedule). An epidemiological case-control sub-analysis was performed to evaluate the relationship between drug usage, demographic and lifestyle indices, mental well-being and felony convictions among a sample of adult, recreational drug users. The statistical procedure used for identifying relationships between the qualitative criterion variables (i.e., drug related felony vs. no drug related felony and non-drug felony vs. no felony) and the quantitative predictor variables of lifestyle, drug related behavior and general well-being, was a discriminant analysis.

Summary of Results

DRUGNET survey participants were international in origin with 78% being U.S. citizens and 22% were foreign citizens. Because drug laws and policies differ from country to country this analysis was limited to United States citizens 18 years of age or older. Among U.S citizens who completed the survey, 79 subjects reported being convicted of drug related felony and 26 subjects reported being convicted of non-drug felony. Cases were matched with control subjects based on gender and age (+/- 2 yrs.).

Drug related felony criterion analysis

Approximately 92% of the cases and 94% of the control group subjects were white. Overall there was no significant difference between the two groups (cases vs.
controls) on employment status, employment status of the spouse, income for current lifestyle needs, attending religious services, active participation in community activities, other non-drug recreational hobbies, marital status, happiness with their marital status, child care responsibilities and the General Well-being Schedule. But there was a significant difference between the two groups (cases vs. controls) on regular voting behavior, awareness of children about their parents drug behavior, educational status and household income. Control group subjects were more likely to vote, to have professional degrees, belong to high income families and their children were less likely to know their parents drug behavior than that of case subjects.

**Non-drug felony criterion analysis**

Approximately 96% of the case group and 100% of the control group subjects were white. There was no significant difference between the two groups (cases vs. controls) on employment status, spouse employment status, level of education, household income, income for current lifestyle needs, attending of religious services, regular participation in community activities, voting behavior, non-drug recreational hobbies, marital status, happiness with their marital status, child care responsibilities, children knowing of their drug behavior, and the General Well-being Schedule.

**Discriminant function analyses**

Direct discriminant function analyses were performed in a stepwise manner using all the variables as predictors. At each step, the variable that minimized the Wilk's lambda was entered. Maximum significance of 'F' to enter a new variable was 0.1, and the minimum significance of 'F' to remove a variable from the equation was 0.2.
Drug related felony criterion analysis

The predictor variables of level of education, household income, frequency of depressants use, level of marijuana intoxication, effect of alcohol on health and overall effect of hallucinogens on life are negatively associated with the drug related felonies; whereas frequency of marijuana use, level of hallucinogen intoxication, use of depressants relative to first year use, use of marijuana relative to year of heaviest use, effect of marijuana on health, cut down on use of hallucinogens because of health and the overall effect of cocaine on life were positively associated with drug related felonies. Using these best predictor variables 83.9% of the original grouped cases were correctly classified. Hence, the null hypothesis has been rejected and the alternate hypothesis has been accepted. However, despite the significant equation, the feasibility or practical utility of this equation is questionable. The identified predictor variables do not follow any cohesive pattern with respect to the behavior or type of drugs consumed. They form a mixed group of variables that do not match up in a logical or behavioral sense. So, in reality, it is difficult to interpret them in a meaningful or practical way.

Non-drug felony criterion analysis

The predictor variables of regular attending of services, overall effect of alcohol on life, effect of cocaine on health and alcohol intake were negatively associated with non-drug felonies; whereas importance of spirituality, regular voting behavior, cut down on use of hallucinogens because of health, level of cocaine intoxication, frequency of hallucinogen use, cocaine use, and freedom from health concerns and worry were positively associated with non-drug felonies. Using these variables as predictors 94.1% of the original cases were correctly classified. A second analysis was performed using
the variables: level of cocaine intoxication, overall effect of alcohol on life, frequency of hallucinogen use, regular voting behavior, regular attending of services, and effect of hallucinogens on health. The variables effect of alcohol on health, regular attending of services and effect of hallucinogens on health were negatively associated with non-drug felonies; whereas, level of cocaine intoxication, frequency of hallucinogen use, and voting behavior were positively associated with non-drug felonies. Using the above six-predictor variables 82.4% of the original cases were correctly classified. Hence, the null hypothesis was rejected and the alternate hypothesis was accepted. However, despite the significant equation, the feasibility or practical utility of this equation is questionable. The identified predictor variables do not follow any cohesive pattern with respect to the behavior or type of drugs consumed. They form a mixed group of variables that do not match up in a logical or behavioral sense. So, in reality, it is difficult to interpret them in a meaningful or practical way.

Discussion

One of the main problems encountered in this study was the loss of subjects who began but did not complete the full survey. Of the 1,476 subjects who began the survey, only 906 (61.5%) answered all sections and had used at least one drug category. This loss could have been due to the fact that DRUGNET is a lengthy survey. It appears that survey respondents used drugs recreationally and were leading productive, successful lives. A small portion of these individuals were caught and incarcerated at some point in their life. In many states felons can not vote. The felony offenders in the DRUGNET sample were very similar to national norms in their low level of education as well as low socioeconomic status.
The research methods of this survey enabled the researchers to access this hidden population (due to legal issues), however there were some drawbacks. The survey is an on-line survey, which requires computer expertise with appropriate hardware and software. Secondly, the length of the survey may have led to larger amounts of missing data toward the end of the survey.

Limitations

The major limitation of this study was the non-random sampling procedure. Generalizations can not be made to the entire population of adult recreational drug users. The analysis was also limited to United States citizens aged 18-yrs. or older. Subjects can not be assumed to be representative of either the drug using population or the population using the Internet, because the subjects were self-selected. Large amounts of data were missing due to the lengthy nature of the survey.

Conclusions

After the univariate analysis, the quantitative predictor lifestyle variables and general well being did not show any difference between the case and control groups in relation to non-drug felony offenses. It is possible that the case group subjects were incarcerated/sentenced/ punished by chance; whereas the control subjects escaped conviction because of good fortune.

But the univariate analysis for drug related felonies showed that there are some significant differences between case group and control group subjects on voting behavior, educational status, household income and the children knowing of their drug behavior. Because of incarceration or conviction of felony offenses the case group was less likely to still have their right to vote. Low educational status contributes to low household
income, and they may be less aware of drug laws and policies and how to avoid arrest and conviction. So they may be more likely to get arrested. Also, because of their lower incomes they may be more likely to do drug trafficking to raise money along with recreational use that leads to incarceration; whereas the control subjects may have escaped detection because of their high education and income. They might be more aware of the drug laws and policies and less likely to do drug trafficking. Once the parents are incarcerated (in case group), their children are more likely to be aware of their parents’ drug behavior; whereas in the control group it is less likely because the parents won’t reveal their drug use behavior to their children.

The findings of this study support the alternate hypothesis that the set of predictor variables (i.e., life style activities, drug using behavior, and General Well-being) formed can predict whether the subject experienced a drug related felony or a non-drug felony. However despite the significant equations, the feasibility or practical utility of these equations is questionable. The identified predictor variables do not follow any cohesive pattern with respect to the behavior or type of drugs consumed. They form a mixed group of variables which do not match up in a logical or behavioral sense. So, in reality, it is difficult to interpret them in a meaningful or practical way. It also demonstrates that on-line computer-based surveys can be a valuable tool to gain access to this hidden population. People are willing to give honest answers concerning sensitive information.

Recommendations

The results document a sub-group of the drug consuming population (i.e., recreational drug users) that lead productive and successful lives. Imprisonment for drug offense, in and of itself, may change this reality. Punishing a relatively small portion of
the drug using population for their personal habits of using/possessing drugs may be counterproductive rather than controlling drug abuse. This practice also increases the costs due to decreased productivity and increased criminal justice expenses. The implication is that drug abuse should be perceived as a public health problem, not a criminal activity. If our goal is to minimize harm and dysfunction, the target of national efforts should logically be the harm and dysfunction, which come from drug abuse and misuse. Such a target calls primarily for education, public health, treatment, and rehabilitation measures rather than incarceration. A person should be incarcerated for harming others not for his/her personal health behaviors or moral beliefs. Sinful conduct is not necessarily a criminal behavior. Law should be regarded not as the first line of defense against crime but rather as the last resort. The study raises serious questions regarding U.S. drug policies.
References


Substance Abuse and Mental Health Services Administration (SAMHSA), Office of Applied studies. (1999). Summary of Findings from the 1999 National Household


Appendix A

Are you successful?
Do you have a stable home life?
Are you a happy adult?
Do you occasionally enjoy the recreational use of Marijuana or other drugs (e.g., Cocaine, LSD, etc.)?

Past research on drug use has concentrated on drug abusers (i.e., people in treatment), elementary, high-school or college students. We are conducting a survey to demonstrate the existence of successful adult drug users in our society.

If you fit the above qualifications, we would like you to take our *survey*. All information is anonymous. You don't have to e-mail us *ANYTHING* that carries your e-mail address. All you have to do is set your web browser to:

http://wkuweb1.wku.edu/~drugnet).

All you need to take this survey is a little time (approximately 20 to 30 minutes, depending on your level of experience with a mouse and recreational drugs). All responses will be kept confidential.

This is for REAL! This is *not* an attempt to identify drug users for police records. We are all researchers at academic institutions who are interested in Drug Policy. If you have any questions at all about this study you may contact us at the address below.

If you have taken this survey before, during our pilot study last year, we'd like for you to take it *again*!. Based on respondent feedback, we've added new questions and made other modifications. So please, tell us about your experiences using this other format.

NOTE: This survey should work with any web browser that supports forms and tables. This includes Netscape 2.0+, Internet Explorer 2.0+, and similar software.

Tom Nicholson, Ph.D.
John White, Ph.D.
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Voice: 502/745-4797
Appendix B
Drugnet (1997)

Demographic Information
We would like to get some demographic information from you. Please answer the following questions about your background. Remember, all of this information is general and will not be used to identify you.

1. Are you a citizen or legal resident of the United States?
   yes
   no

2. What country(s) are you a citizen of?
   If you are a U.S. citizen, leave this question blank

3. Are you currently living the majority of this calendar year in the United States?
   yes
   no

4. What is your ethnic identification?
   Asian
   Black
   Hispanic/Latino
   Native American
   Pacific Islander
   White
   Other

5. What is your gender?
   Male
   Female

6. What is your current age?

7. Are you employed:
Full-Time Employee
Part-Time Employee
Self-Employed
Unemployed

8. Please type in your job title: \textit{(leave blank if unemployed)}

9. Please tell us, in what industry are you employed? If we left your industry out, please tell us what it is:

10. Please rate how important spirituality is in your daily life:

\begin{center}
\begin{tabular}{ccccccccccc}
0 & 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10 \\
\end{tabular}
\end{center}

No importance \hspace{1in} Central focus of your life

11. Please rate how important your religious beliefs and values are in your daily life:

\begin{center}
\begin{tabular}{ccccccccccc}
0 & 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10 \\
\end{tabular}
\end{center}

No importance \hspace{1in} Central focus of your life

12. Do you regularly attend religious services?

\begin{center}
\begin{tabular}{c}
yes \\
no \\
\end{tabular}
\end{center}

13. Do you participate in community activities (e.g., PTA, Chamber of Commerce, United Way, etc...)?

\begin{center}
\begin{tabular}{c}
Yes \\
No \\
\end{tabular}
\end{center}

14. Do you vote regularly?

\begin{center}
\begin{tabular}{c}
Yes \\
\end{tabular}
\end{center}
15. How would you rate your own physical health status?
   Excellent
   Good
   Average
   Fair
   Poor
   Very Poor

16. Do you regularly engage in recreational activities (e.g., hobbies, athletics, crafts, reading, etc...)?
   Yes
   No

17. What is your marital status?
   Never Married
   Married
   Divorced/Separated
   Widow/Widower
   Living with Someone

17a. Does your spouse or significant other work? [Please skip if this question does not apply.]
   Yes
   No
17b. Are you happy with your marital status?
Yes
No

18. Do you regularly have parental child care responsibilities?
Yes
No

18a. If yes, please check all that apply:
- Biological Parent
- Step-Parent
- Adoptive Parent
- Grand Parent
- Foster Parent
- Other Parent

18b. Do your children know about your use of illicit drugs?
Yes
No

19. Please tell us the highest education level you have achieved:
Less than High School  
High School  
Graduate Equivalency Diploma (GED)  
Associate Degree (2 year degree)  
Vocational Degree  
Bachelors Degree (BA, BS, etc.)  
Masters Degree (MA, MS, etc.)  
Law Degree  
Doctoral Degree (Ph.D., Ed.D., M.D., etc.)  
Post-Doctoral Study

20. Are you currently attending college?  
Yes  
No

20a. What is your year in school? [Note: Leave blank if not in college.]  
Freshman  
Sophomore  
Junior  
Senior  
Graduate Student  
Other

20b. What do your parents earn in a year? [If both parents work, please add together parents incomes to obtain the amount. If you are not sure, please take your best guess.] *Skip if you are not in school, or if in school, are self-supported.*  
Less than $10,999  
$11,000 to $29,999  
$30,000 to $49,999  
$50,000 to $69,999  
$70,000 to $89,999  
$90,000 to $109,999  
$110,000 or more

21. What is (or if graduated, was) your last overall GPA?  
[Note: Please use a 4 point scale where a 4.0 would be an "A", 3.0 would be "B", etc.]
22. What is your household income? [If both you and your partner work, please add together your incomes to obtain the amount. If you are not sure, please take your best guess.] If you live at home or your parents support you, we'd like to know just the income that you and/or your partner earn.

- Less than $10,999
- $11,000 to $29,999
- $30,000 to $49,999
- $50,000 to $69,999
- $70,000 to $89,999
- $90,000 to $109,999
- $110,000 or more

23. Do you and/or your partner have enough income to satisfy your current lifestyle needs?

- Yes
- No

**USE OF ALCOHOL**

I have never used alcohol. Skip to: [COCAINE]

For these questions, a "drink" is considered one 12-ounce beer, a 4-ounce glass of wine, or a mixed drink with 1 and 1/2 ounces ("shots") of hard liquor. The word "intoxication" refers to the effects that a drug has on your mood and consciousness.

**NOTE:** These questions were written with the assumption that you are currently using this drug. If you have quit using this drug, please answer the questions as if they were asking about your behavior when you were "using."

1. At what age did you first try alcohol?
2. At what age did you first become intoxicated by alcohol?
3. Have you used alcohol in the past year?
   - Yes
   - No

If you haven't used alcohol in the past year, how many years has it been since you drank?

[Note: 1.5 would mean one and one-half years.]

4. Do you consider yourself to have permanently quit using alcohol?
5. When you do drink alcohol, how many do you usually have, on the average? If you have quit, how many did you drink on average?

6. How many times, on average, do you use alcohol? [Remember, if you have not used alcohol in the past year, what was your frequency of use?]
   - At least once a week
   - At least once a month
   - At least once a year
   - Less than once a year

7. When you do use alcohol, what is the level of intoxication that you usually reach?
   - Not at all drunk
   - Mildly drunk
   - Moderately drunk
   - Very drunk
   - Extremely drunk

8. How many times, on average, do you use alcohol and other drugs at the same time?
   - At least once a week
   - At least once a month
   - At least once a year
   - Less than once a year
   - Never

9. Has your use of alcohol ever caused or contributed to a failure in your education, work or family life -- such as failing a course, being fired, family problems, or a divorce?
   - Yes
   - No

10. Have you ever used alcohol under circumstances which might be dangerous, such as while driving a car or operating machinery?
77

Yes
No

If you have used alcohol under dangerous circumstances, how often does this occur? [Skip if you answered no to question #10.]

Less than once a year
Once a year
A few times a year
Once a month
A few times a month
Once a week
A few times a week
Daily

11. Have you ever had legal problems because of your use of alcohol?

Yes
No

12. Have you had arguments with your family or friends about your use of alcohol?

Yes
No

13. During the year that I most heavily used alcohol, I used it about:

About the same as first year of use
Somewhat more than the first year of use
A lot more than the first year of use

14. This past year I used alcohol:

Much less than my heaviest year of use
Somewhat less than my heaviest year of use
About the same as my heaviest year of use

15. Have you ever experienced withdrawal (e.g., shakes, nausea, trouble sleeping) illness when you stopped taking alcohol?
Yes
No

If so, how often does this happen? [Skip you haven't suffered withdrawal.]
On a daily basis
On a weekly basis
On a monthly basis
On a yearly basis

16. Have you wanted to stop using alcohol but had trouble doing so?
Yes
No

17. Does getting alcohol occupy a large part of your time?
Yes
No

18. Have you ever experienced health or psychological problems as a result of your use of alcohol?
Yes
No

If you have had health or psychological problems, did you quit using alcohol or cut down on your use as a result? [Skip if you answered no to #17.]
Yes
No

If you haven't had health or psychological problems, have you cut down on your use of alcohol? [Skip if you answered yes to #17.]
Yes
No

19. Overall, the effects of alcohol on my life have been:
20. What positive effects has alcohol had on your life:

USE OF COCAINE
(Either Snorted or Smoked: "Coke", "Crack")

I have never used cocaine. Skip to: [DEPRESSANTS]

NOTE: These questions were written with the assumption that you are currently using this drug. If you have quit using this drug, please answer the questions as if they were asking about your behavior when you were "using."

1. At what age did you first try cocaine?

2. At what age did you first become intoxicated by cocaine?

3. Have you used cocaine in the past year?
   - Yes
   - No

   If you haven't used cocaine in the past year, how many years has it been since you used cocaine?
   [Note: 1.5 would mean one and one-half years.]

4. Do you consider yourself to have permanently quit using cocaine?
   - Yes
   - No

5. When you do use cocaine, how much do you usually have, on the average? If you have quit, how much did you use on average?

   Number of Grams
   - OR -

   Percentage of a Gram %

Please answer only one!
6. How many times, on average, do you use cocaine? [Remember, if you have not used cocaine in the past year, what was your frequency of use?]
   - At least once a week
   - At least once a month
   - At least once a year
   - Less than once a year

7. When you do use cocaine, what is the level of intoxication that you usually reach?
   - Not at all intoxicated
   - Mildly intoxicated
   - Moderately intoxicated
   - Very intoxicated
   - Extremely intoxicated

8. How many times, on average, do you use cocaine and other drugs at the same time?
   - At least once a week
   - At least once a month
   - At least once a year
   - Less than once a year
   - Never

9. Has your use of cocaine ever caused or contributed to a failure in your education, work or family life -- such as failing a course, being fired, family problems, or a divorce?
   - Yes
   - No

10. Have you ever used cocaine under circumstances which might be dangerous, such as while driving a car or operating machinery?
    - Yes
    - No

   If you have used cocaine under dangerous circumstances, how often does this occur? [Skip if you answered no to question #10.]
Less than once a year
Once a year
A few times a year
Once a month
A few times a month
Once a week
A few times a week
Daily

11. Have you ever had legal problems because of your use of cocaine?
   Yes
   No

12. Have you had arguments with your family or friends about your use of cocaine?
   Yes
   No

13. During the year that I most heavily used cocaine, I used it about:
   About the same as first year of use
   Somewhat more than the first year of use
   A lot more than the first year of use

14. This past year I used cocaine:
   Much less than my heaviest year of use
   Somewhat less than my heaviest year of use
   About the same as my heaviest year of use

15. Have you ever experienced withdrawal (e.g., shakes, nausea, trouble sleeping) illness when you stopped taking cocaine?
   Yes
   No

If so, how often does this happen? [Skip you haven't suffered withdrawal.]
On a daily basis
On a weekly basis
On a monthly basis
On a yearly basis

16. Have you wanted to stop using cocaine but had trouble doing so?
   Yes
   No

17. Does getting cocaine occupy a large part of your time?
   Yes
   No

18. Have you ever experienced health or psychological problems as a result of your use of cocaine?
   Yes
   No

If you have had health or psychological problems, did you quit using cocaine or cut down on your use as a result? [Skip if you answered no to #17.]
   Yes
   No

If you haven't had health or psychological problems, have you cut down on your use of cocaine? [Skip if you answered yes to #17.]
   Yes
   No

19. Overall, the effects of cocaine on my life have been:

   0 1 2 3 4 5 6 7 8 9 10
   Negative Positive
20. What positive effects has cocaine had on your life:

**USE OF DEPRESSANTS**

I have never used depressants. Skip to: [HALLUCINOGENS]

**NOTE:** These questions were written with the assumption that you are currently using this drug. If you have quit using this drug, please answer the questions as if they were asking about your behavior when you were "using."

1. At what age did you first try depressants?

2. At what age did you first become intoxicated by depressants?

3. Have you used depressants in the past year?
   - Yes
   - No

If you haven't used depressants in the past year, how many years has it been since you used depressants?
   - [Note: 1.5 would mean one and one-half years.]

4. Do you consider yourself to have permanently quit using depressants?
   - Yes
   - No

5. When you do use depressants, how much do you usually have, on the average? If you have quit, how many did you have on average? (# of pills)

6. How many times, on average, do you use depressants? [Remember, if you have not used depressants in the past year, what was your frequency of use?]
   - At least once a week
   - At least once a month
   - At least once a year
   - Less than once a year

7. When you do use depressants, what is the level of intoxication that you usually reach?
2. At what age did you first become intoxicated by hallucinogens?

3. Have you used hallucinogens in the past year?
   Yes
   No

If you haven't used hallucinogens in the past year, how many years has it been since you used hallucinogens?
[Note: 1.5 would mean one and one-half years.]

4. Do you consider yourself to have permanently quit using hallucinogens?
   Yes
   No

5. When you do use hallucinogens, how much do you usually have, on the average? If you have quit, how much did you have on average? (# of hits, NOTE: .5 would mean half of a hit)

6. How many times, on average, do you use hallucinogens? [Remember, if you have not used hallucinogens in the past year, what was your frequency of use?]
   At least once a week
   At least once a month
   At least once a year
   Less than once a year

7. When you do use hallucinogens, what is the level of intoxication that you usually reach?
   Not at all intoxicated
   Mildly intoxicated
   Moderately intoxicated
   Very intoxicated
   Extremely intoxicated

8. How many times, on average, do you use hallucinogens and other drugs at the same time?
13. During the year that I most heavily used hallucinogens, I used them about:
   About the same as first year of use
   Somewhat more than the first year of use
   A lot more than the first year of use

14. This past year I used hallucinogens:
   Much less than my heaviest year of use
   Somewhat less than my heaviest year of use
   About the same as my heaviest year of use

15. Have you ever experienced withdrawal (e.g., shakes, nausea, trouble sleeping) illness when you stopped taking hallucinogens?
   Yes
   No

   If so, how often does this happen? [Skip you haven't suffered withdrawal.]
   On a daily basis
   On a weekly basis
   On a monthly basis
   On a yearly basis

16. Have you wanted to stop using hallucinogens but had trouble doing so?
   Yes
   No

17. Does getting hallucinogens occupy a large part of your time?
   Yes
   No

18. Have you ever experienced health or psychological problems as a result of your use of hallucinogens?
   Yes
   No
If you have had health or psychological problems, did you quit using hallucinogens or cut down on your use as a result? [Skip if you answered no to #17]

Yes
No

If you haven't had health or psychological problems, have you cut down on your use of hallucinogens? [Skip if you answered yes to #17]

Yes
No

19. Overall, the effects of hallucinogens on my life have been:

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20. What positive effects has hallucinogens had on your life:

**USE OF MARIJUANA**

I have never used marijuana. Skip to: [OPIATES]

NOTE: These questions were written with the assumption that you are currently using this drug. If you have quit using this drug, please answer the questions as if they were asking about your behavior when you were "using."

1. At what age did you first try marijuana?

2. At what age did you first become intoxicated by marijuana?

3. Have you used marijuana in the past year?
   
   Yes
   
   No

If you haven't used marijuana in the past year, how many years has it been since you used marijuana?

[Note: 1.5 would mean one and one-half years.]

4. Do you consider yourself to have permanently quit using marijuana?

   Yes
5. When you do use marijuana, how much do you usually have, on the average? If you have quit, how much did you have on average? (# of hits, NOTE: .5 would mean half of a hit)

6. How many times, on average, do you use marijuana? [Remember, if you have not used marijuana in the past year, what was your frequency of use?]
   - At least once a week
   - At least once a month
   - At least once a year
   - Less than once a year

7. When you do use marijuana, what is the level of intoxication that you usually reach?
   - Not at all intoxicated
   - Mildly intoxicated
   - Moderately intoxicated
   - Very intoxicated
   - Extremely intoxicated

8. How many times, on average, do you use marijuana and other drugs at the same time?
   - At least once a week
   - At least once a month
   - At least once a year
   - Less than once a year
   - Never

9. Has your use of marijuana ever caused or contributed to a failure in your education, work or family life -- such as failing a course, being fired, family problems, or a divorce?
   - Yes
   - No

10. Have you ever used marijuana under circumstances which might be dangerous, such as while driving a car or operating machinery?
At least once a week
At least once a month
At least once a year
Less than once a year

7. When you do use opiates, what is the level of intoxication that you usually reach?
Not at all intoxicated
Mildly intoxicated
Moderately intoxicated
Very intoxicated
Extremely intoxicated

8. How many times, on average, do you use opiates and other drugs at the same time?
At least once a week
At least once a month
At least once a year
Less than once a year
Never

9. Has your use of opiates ever caused or contributed to a failure in your education, work or family life -- such as failing a course, being fired, family problems, or a divorce?
Yes
No

10. Have you ever used opiates under circumstances which might be dangerous, such as while driving a car or operating machinery?
Yes
No

If you have used opiates under dangerous circumstances, how often does this occur? [Skip if you answered no to question #10.]
Less than once a year
Once a year
A few times a year
Once a month
A few times a month
Once a week
A few times a week
Daily

11. Have you ever had legal problems because of your use of opiates?
   Yes
   No

12. Have you had arguments with your family or friends about your use of opiates?
    Yes
    No

13. During the year that I most heavily used opiates, I used them about:
    About the same as first year of use
    Somewhat more than the first year of use
    A lot more than the first year of use

14. This past year I used opiates:
    Much less than my heaviest year of use
    Somewhat less than my heaviest year of use
    About the same as my heaviest year of use

15. Have you ever experienced withdrawal (e.g., shakes, nausea, trouble sleeping) illness when you stopped taking opiates?
   Yes
   No

If so, how often does this happen? [Skip you haven't suffered withdrawal.]
On a daily basis
On a weekly basis
On a monthly basis
On a yearly basis

16. Have you wanted to stop using opiates but had trouble doing so?
   Yes
   No

17. Does getting opiates occupy a large part of your time?
   Yes
   No

18. Have you ever experienced health or psychological problems as a result of your use of opiates?
   Yes
   No

If you have had health or psychological problems, did you quit using opiates or cut down on your use as a result? [Skip if you answered no to #17.]
   Yes
   No

If you haven't had health or psychological problems, have you cut down on your use of opiates? [Skip if you answered yes to #17.]
   Yes
   No

19. Overall, the effects of opiates on my life have been:

   0 1 2 3 4 5 6 7 8 9 10
   Negative                       Positive
20. What positive effects has opiates had on your life:

USE OF STIMULANTS (e.g., Amphetamines, Crystal Methedrine ("Ice"), etc.)

I have never used stimulants. Skip to: [NEXT SECTION]

NOTE: These questions were written with the assumption that you are currently using this drug. If you have quit using this drug, please answer the questions as if they were asking about your behavior when you were "using."

1. At what age did you first try stimulants?

2. At what age did you first become intoxicated by stimulants?

3. Have you used stimulants in the past year?
   Yes
   No

If you haven't used stimulants in the past year, how many years has it been since you used stimulants?
[Note: 1.5 would mean one and one-half years.]

4. Do you consider yourself to have permanently quit using stimulants?
   Yes
   No

5. When you do use stimulants, how much do you usually have, on the average? If you have quit, how much did you have on average?
   We recognize that stimulants cover a wide range of drugs and methods of use. Please tell us, in your own words, how much you use(d)

6. How many times, on average, do you use stimulants? [Remember, if you have not used stimulants in the past year, what was your frequency of use?]
At least once a week
At least once a month
At least once a year
Less than once a year

7. When you do use stimulants, what is the level of intoxication that you usually reach?
   Not at all intoxicated
   Mildly intoxicated
   Moderately intoxicated
   Very intoxicated
   Extremely intoxicated

8. How many times, on average, do you use stimulants and other drugs at the same time?
   At least once a week
   At least once a month
   At least once a year
   Less than once a year
   Never

9. Has your use of stimulants ever caused or contributed to a failure in your education, work or family life -- such as failing a course, being fired, family problems, or a divorce?
   Yes
   No

10. Have you ever used stimulants under circumstances which might be dangerous, such as while driving a car or operating machinery?
    Yes
    No

If you have used stimulants under dangerous circumstances, how often does this occur?
[Skip if you answered no to question #10.]
Less than once a year
Once a year
A few times a year
Once a month
A few times a month
Once a week
A few times a week
Daily

11. Have you ever had legal problems because of your use of stimulants?
   Yes
   No

12. Have you had arguments with your family or friends about your use of stimulants?
   Yes
   No

13. During the year that I most heavily used stimulants, I used them about:
   About the same as first year of use
   Somewhat more than the first year of use
   A lot more than the first year of use

14. This past year I used stimulants:
   Much less than my heaviest year of use
   Somewhat less than my heaviest year of use
   About the same as my heaviest year of use

15. Have you ever experienced withdrawal (e.g., shakes, nausea, trouble sleeping) illness when you stopped taking stimulants?
   Yes
   No
   If so, how often does this happen? [Skip if you haven't suffered withdrawal.]
7. Would you support major drug reform which included strategies such as legalization and/or decriminalization of currently illegal drugs?

Yes
No

8. Is there anything else that you would like to tell the researchers about drugs and your experiences with them?

**General Well Being**

Now we would like to ask you some questions about how you have been feeling during the last month.

1. How have you been feeling in general?

   In excellent spirits
   In very good spirits
   In good spirits
   I have been up and down in spirits a lot
   In low spirits mostly
   In very low spirits

2. Have you been bothered by nervousness or your "nerves"? (During the past month)

   Extremely so— to the point where I could not work or take care of things
   Very much so
   Quite a bit
   Some— enough to bother me
   A little
   Not at all

3. Have you been in firm control of your behavior, thoughts, emotions or feelings? (During the past month)

   Yes, definitely so
   Yes, for the most part
   Generally so
   Not too well
   No, and I am somewhat disturbed
   No, and I am very disturbed
4. Have you felt so sad, discouraged, hopeless, or had so many problems that you wondered if anything was worthwhile? (During the past month)
   - Extremely so -- to the point I had just about given up
   - Very much so
   - Quite a bit
   - Some -- enough to bother me
   - A little bit
   - Not at all

5. Have you been under or felt you were under any strain, stress, or pressure? (During the past month)
   - Yes--almost to the point that I have just about given up
   - Yes--quite a bit of pressure
   - Yes--some - more than usual
   - Yes--some - but about usual
   - Yes--a little
   - Not at all

6. How happy, satisfied, or pleased have you been with your personal life? (During the past month)
   - Extremely happy - could not have been more satisfied or pleased
   - Very happy
   - Fairly happy
   - Satisfied--pleased
   - Somewhat dissatisfied
   - Very Dissatisfied

7. Have you had any reason to wonder if you were losing your mind, or losing control over the way you act, talk, feel, think, or of your memory? (During the past month)
   - Not at all
   - Only a little
   - Some--but not enough to be concerned or worried about
   - Some and I have been a little concerned
   - Some and I have been quite concerned
   - Yes, very much so and I am very concerned

8. Have you been anxious, worried, or upset? (During the past month)
All the time
Most of the time
A good bit of the time
Some of the time
A little of the time
None of the time

13. Have you been feeling emotionally stable and sure of yourself? (During the past month)
   All the time
   Most of the time
   A good bit of the time
   Some of the time
   A little of the time
   None of the time

14. Have you felt tired, worn out, used-up, or exhausted? (During the past month)
   All the time
   Most of the time
   A good bit of the time
   Some of the time
   A little of the time
   None of the time

15. How concerned or worried about your HEALTH have you been? (During the past month)

   0 1 2 3 4 5 6 7 8 9 10
   Not at all concerned
   Very concerned

16. How RELAXED or TENSE have you been? (During the past month)

   0 1 2 3 4 5 6 7 8 9 10
   Very relaxed
   Very tense
17. How much ENERGY, PEP, VITALITY have you felt? (During the past month)

0 1 2 3 4 5 6 7 8 9 10
No energy at all, listless
very energetic, dynamic

18. How DEPRESSED or CHEERFUL have you been? (During the past month)

0 1 2 3 4 5 6 7 8 9 10
Very depressed
Very cheerful

These final two questions are not about how you feel, but are to help us understand a bit more about the mechanics of our survey and also, how we can better target successful adults.

19. How did you find out about this survey?

20. How many minutes did it take you to complete our survey?
[Note: 90 would mean one and one-half hours.]