Substance Abuse and Crime

October 6, 2009

Housekeeping

• Online Assignments
  — Assignment #4 – Portrait of Addiction – Due tomorrow afternoon: Optional for extra credit
  — Assignment #4a – Substance Abuse Datasets – Due next Wednesday 10/14
• Readings
  — Chapter 4 for today
  — Chapter 5 for Thursday
• Methland (by Nick Reding)
  — Have it in hand - plan to begin reading next week
  — Journal entries due beginning 10/21

Marijuana
## Marijuana Products

- **The Basic Stuff**
  - *Cannabis sativa*
  - *Cannabis indica*
  - Cross-breeds (common since 1980’s)

- **Hashish**
  - Highly concentrated form of *cannabis indica*
  - Derived from resin on top of plant flowers
  - Also in form of concentrated hash oil

- **Sinsemilla** – buds from female plants w/ enhanced potency

## Short Term Effects

- Very high LD/ED ratio
- **Acute Effects**
  - Effects last 1-3 hours
  - Euphoric effects
  - Elevated heart rate & BP
  - Physical responses (dry mouth, appetite increase, expansion of blood vessels)

- High proportion of ED visits involve marijuana, although most in combination w/ other drugs

## Long Term Effects

- Increasing evidence pointing to memory and attention deficits in long term users
- Reproductive system effects (reduced sperm count)
- Potential cardiovascular and respiratory effects
- Link to “cannabinoid psychosis”
  - 25% of Population w/ genetic marker (COMT)
  - Of those, 15% who are exposed to marijuana early in life develop psychotic symptoms
Gateway Hypothesis

• Based on observed correlations between marijuana, alcohol, and tobacco use and “harder” drugs (e.g. cocaine, LSD, heroin)
• Three dimensions
  – General risk
  – Progression/order of drug use
  – Frequency effects (proportional hazards)
• Strong evidence that phenomenon exists

Drilling Down

• What are some issues or unanswered questions related to the gateway hypothesis?
• Nature of Correlation
  – Causation
  – Association
• Range of Potential Explanations
  – Physiological
  – Psychological (learned behaviors, coping skills, psychological motivators)
  – Sociological (peer influence, roles, social expectations)

ASSESSING DRUG-RELATED BEHAVIORS AND ATTITUDES
SOME BASIC CONCEPTS

- **Prevalence** – Rate or percentage of individuals with a particular condition
- **Distinguish Between:**
  - **Point** Prevalence
  - **Period** Prevalence
  - **Lifetime** Prevalence
- **Incidence** – Rate or number of new cases appearing within a particular timeframe (generally within a given year)

PRIMARY MEANS OF ASSESSING SUBSTANCE USE & ABUSE

- **General Population Survey Data**
  - National Survey on Drug Use and Health (NSDUH)
  - Monitoring the Future Survey (MTF)
- **Incident-based Monitoring Systems**
  - Drug Abuse Warning Network (DAWN)
  - Arrestee Drug Abuse Monitoring (ADAM)
- **Treatment-Based Monitoring Systems**
  - Treatment Episode Data Set (TEDS)

National Survey on Drug Use and Health

- Previously known as the National Household Survey on Drug Abuse
- Conducted since 1972 - annually since 1991
- Sample of roughly 70,000 individuals over age of 12 from all 50 states
- Utilizes face-to-face interviews including details on:
  - Illicit Drug Use
  - Alcohol & Tobacco Use
  - Social/Environmental factors (such as access to drugs)
  - Mental health variables
Past Month Illicit Drug Use among Persons Aged 12+

### Past Month Marijuana Use among Youths Aged 12 to 17, by Geographic Region: 2002-2004

#### Monitoring the Future Survey

- Funded through National Institute on Drug Abuse (NIDA)
- Annually surveys 50,000 students in grades 8-12
- Includes in-school surveys and follow-up
- Includes:
  - Drug & alcohol use
  - Perceptions & attitudes regarding drug use among peer group
  - Availability of drugs
Trends in Annual Prevalence of an Illicit Drug Use Index
Eighth, Tenth, and Twelfth Graders

Marijuana Use (12 month)

Marijuana Perceived Risk
**Drug Abuse Warning Network**

- Established as public health monitoring system
- Covers both substance-related Emergency Room visits and substance-related deaths
- Measures:
  - **ED Event:** Instance of a person coming to the emergency department (ED) of a hospital seeking treatment for a drug-related problem
  - **ED mention:** Substances referred to by the patient during a given ED episode
  - **ME mention:** Substances involved in a particular drug-related death, as reported by the medical examiner (ME)

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**Figure 3**
Drug-related ED visits, by type of case: 2004

- **Alcohol intake:** 30%
- **Accidental ingestion:** 3%
- **Suicide attempt:** 4%
- **Seizures due to:** 9%
- **Overdoses:** 12%
- **Other:** 38%

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**Figure 4**
Illicit drugs in ED visits: 2004

- **Heroin:** 121
- **Heroin and Meth:** 95
- **Meth:** 73
- **Opiates:** 31
Arrestee Drug Abuse Monitoring (ADAM) System

- Consists of data from 39 jurisdictions across United States
- Measures extent of drug and alcohol use in people who have been arrested and booked as adults in city and county detention facilities operated by local police and sheriff departments.
- Information obtained by civilian employees from personal interviews and urinalyses obtained voluntarily and confidentially, usually on the day of arrest and always within 48 hours of arrest.

Treatment Episode Data Set (TEDS)

- Part of larger system known as Drug and Alcohol Services Information System (DASIS)
- Collects and measures demographic, clinical, and treatment information on individuals participating in substance abuse treatment across United States

Assignment #4

- Visit at least one of the following sites:
  – National Survey on Drug Use and Health
  – Monitoring the Future Survey
  – Drug Abuse Warning Network
- Accessible via “Resources” page in BV
- Identify at least two notable patterns or findings related to your chosen datasets
- Post findings AND explanation
Example (continued)

I examined the MTF 2008 results addressing perceived risks associated with regular marijuana use across age groups. The data indicated that about 52% of 12th graders, 65% of 10th graders, and 72% of 8th graders viewed regular marijuana use as posing a significant risk. One interpretation of these results is that perception of risk declines as kids get older and become less influenced by drug education they might have received in school. Another possibility may relate to the fact that marijuana use increases with age, and that kids who experiment with its use begin to downplay its potential risks.

Example

I also examined this same variable looking at changes to 12th-grader attitudes over time. The data indicated that the perceived risk of regular marijuana use has declined steadily since the early 90’s – in 1991, 77% of 12th graders viewed regular marijuana use as posing a significant risk, versus 52% in 2008. These results seem to suggest that there have been major generational changes in attitudes and beliefs, possibly linked to usage patterns, changes in drug education practices, or looser enforcement of marijuana laws.