Medication before Criminalization: Drug Maintenance Treatment and Property Crime

Student Name

San Jose State University

Medication before Criminalization: Drug Maintenance Treatment and Property Crime

The treatment of drug addiction as a criminal violation has a history in American law of almost a hundred years; however, this assumption is predicated more upon a policy act than upon any legitimate study or evidence. The investigation of the efficiency of criminal treatment of drug addicts has been severely hampered by government restrictions on access to controlled substances, acceptable treatments for drug addicts, and funding targeted at providing evidence to support the pre-existing conclusion of criminalization. But with the economic costs of drug criminalization constantly rising, and the entire justice system of the United States in clear need of overhaul, the time is ripe for an evaluation of the alternative to criminalization: the treatment of drug addiction as a medical issue.

Chief among the medical treatments for addiction in the United States is methadone substitution, a method which has attracted significant criticism for the addictive nature of the substitution. A treatment which has seen considerable success in Europe, however, is simple drug maintenance therapy: the provision of the addict's drug on a regular dosage prescribed by a doctor, for the sake of permitting the addict to live a normal life most of the time. The use of drug maintenance therapy in the United States, however, would require a considerable amount of attitude shifting, which would doubtless require significant evidence.

It is the intention of this experiment, designed around a state-localized temporary use of drug maintenance clinics, to provide that evidence, by determining the effects drug maintenance has on the property crime of a community. The hypothesis is that drug maintenance, by providing stability, a legal and less costly source of the drug, and an alternative to the illegal economy of the drug market, will lower property crime in the communities it is located in. Further, this treatment is hypothesized to be more effective than methadone treatment in similar communities.

Article Critique

Introduction and Statement of Purpose

Heroin maintenance has seen a far greater use and sociological consideration in Europe than in the United States. A Swiss program started in 1994-1996, as part of a concerted effort to shut down the open drug scene in light of increasing violence, provided heroin maintenance to persons who had been addicted to heroin for at least two years and had failed in at least two approved treatment attempts, including methadone substitution. Short-term results were encouraging, but no long-term research had been conducted on its effectiveness. Ribeaud (2004) examined this program, providing a criminal justice-centered analysis focusing on the effects heroin maintenance treatment had on crimes committed by the individuals receiving treatment – specifically, whether the treatment reduced incidences of police contact, as well as self-reported incidences of crime, over a long-term basis.

Theoretical Assumptions and Hypothesis

The primary goal of Ribeaud's (2004) work was to “analyze the long-term development of criminal involvement of the population treated with heroin in the context of the heroin prescription trials” (Ribeaud, 2004, p. 165). This evaluation lacked a strong hypothesis, but can presumed to be using the hypothesis that the trial did in fact achieve its stated aims – which is to say, a long-term reduction in criminal behavior among its participants. The main theoretical assumptions underlying the work were the potential benefits of the heroin maintenance program, which relied upon the notion of “harm reduction” (Ribeaud, 2004, p. 164). This concept, when applied to the program, would have three main effects: in the short-term, it was expected to reduce the risks and harms of illegal heroin use; in the medium-term, it would stabilize the patient's situation and provide a regular schedule; in the long-term, it was expected to reintegrate

the patients into society, hopefully with the abandonment of heroin. These assumptions, especially the short-term, were predicated upon harm reduction principles, and the theory that they provide an effective foundation for improvement of a situation beyond mere maintenance.

Methodology

Ribeaud's (2004) study utilized clinical data and compulsory face-to-face interviews, but this information was limited to a short-term time, up to 18 months after admission, and to study the long-term effects in question, he collected the police records of the patients involved from 2000, between 4-6 years after most of the patients entered the program. The study itself was a cohort study, lacking a control group due to ethical concerns; it did, however, include all 1031 patients in the trials, including those who dropped out before the end of data collection. Police data was arranged in one-year periods, and the primary measures were number of incidences of police contact with the patients, divided into incidences of heroin possession and those of other crimes.

Results

The study divided results based on the patients who had stayed in the program for the entire 48 months, and those who had dropped out, assigning the drop-outs to different analysis groups based upon their length of time in the program. Data analysis utilized “parametric t-tests for paired samples as regards before-after comparisons [as well as] nonparametric tests such as Mann-Whitney's U-test for between-group comparisons” (Ribeaud, 2004, p. 169). The data presented a decline in the overall prevalence of police contact, the overall incidence rate in the entire group, and the incidence rate of ongoing offenders, all at statistically significant levels (Ribeaud, pp. 170-171). Discrimination of results for gender, age, and cocaine use found that female and older patients, and those with concurrent cocaine use at the start of treatment, had

less of a decline in incidences (Ribeaud, pp. 174-176). Treatment length was also statistically associated with a decline in incidences, although all participants saw a significant decline (Ribeaud, pp. 178-184).

Limitations of the Study and Assessment

Ribeaud (2004) admitted the program, and hence his analysis, was flawed for the lack of a control group, but noted that the trial's original architects refused to create one on ethical grounds, and that they had also noted that there would be an intentional self-selection out of participation in the program if patients were randomly forced into the methadone replacement treatment rather than permitted to use it or transition back into heroin maintenance (p. 166). Ribeaud's own study lacked comparison to the general population, however, and presents no context of the general crime rates. Simply from reading the study, we know there is a decline in incidences of police contact, but not whether it is a greater or lesser decline than that of heroin addicts or others not participating in the program. Ribeaud's assessment is potent for what it is, an analysis of existing data on a completed study; it does provide incomplete explanations at times, and is not especially verifiable, but given that his study was not an actual experiment itself, it fulfills the parameters of an effective survey. His analysis is promising to this author's proposal, as it demonstrates a successful heroin maintenance program – it also suggests a potential alteration to the methodology of this proposal, as heroin maintenance in Ribeaud's study is more effective when paired with methadone substitution treatment as an alternative.

Methodology

Hypothesis: Communities with a drug maintenance program prescribing medicinal heroin and cocaine will experience lower rates of property crime compared to communities with a methadone program, and communities without any kind of drug treatment program.

I. Research Design

A. Design: This study will use an experimental design, since true random selection of communities is possible, and a treatment will be applied to the experimental group. Communities, preferably with similar traits on our two background variables (per-capita income and self-reported drug use) will be randomly assigned; these communities will likely be located in a single state in order to minimize the amount of negotiation required to institute the programs – preferably California, due to the state containing the plurality of U.S. population.

B. Groups: The three groups will consist of two control groups – one with no program whatsoever, and one with a methadone program – as well as one experimental group, with a medicinal heroin and cocaine maintenance program.

C. Random Assignment: This study will utilize random assignment of communities to the two control groups and one experimental group.

D. Matching: This study will not need matching, as random assignment will be possible due to the true experimental design.

E. Data Collection Instruments

1. This study will utilize a pretest of its two dependent variable measures, the arrest rate for property crimes, and a self-report survey of community inhabitants regarding losses due to property crime; both pretests will occur after communities

have been assigned to groups.

2. This study will utilize several posttests of the dependent variable measures, providing a time-lapse study of the effects of the programs.
3. The arrest rate measurement, which will be noted from official police records, will hopefully provide some indication of the amount of property crime, which will presumably be influenced by the drug maintenance program. However, given that police arrests reflect the actions of the police as much as the actions of drug users, the self-report study of losses to property crime should provide another measure of property crime to use in comparison, and to remove police actions from the equation.

F. Causal Validity

1. The threat of selection bias should be avoided due to the random assignment of the communities to groups, although differential attrition might occur as communities become dissatisfied with results before the end of the study; in fact, those selected as the group 1 control (with no treatment at all) might choose to withdraw from the study in protest. Endogenous change in the form of economic growth within the community, as well as the presence and politics of local gangs, might change the rate of property crime without regard to the experiment. The primary potential external event is widespread economic shifts – a long-last national depression will probably increase property crime in a neighborhood regardless of the number of local drug addicts. Contamination is a definite possibility, especially due to the necessary involvement of local and even state government in the study.

2. Selection bias is combated via the use of random assignment. Both differential attrition and contamination should be minimized via the minimal release of information about the study prior to its conclusion. If an external event occurs, it should first be checked to see whether its effects are equilateral or target specific communities; if the latter is the case, results should probably be subdivided into those communities affected by the event and those not affected by it, and statistics compared only within those groups. Steps taken against treatment misidentification include the second control group, the methadone treatment (in order to counter a community-wide version of the placebo effect and Hawthorne effect), as well as the measurement of self-reported property losses, to avoid misattributing shifts that are the result of police policy changes.

G. Generalizability

1. Sample generalizability will be limited to the feasible – only communities willing to participate will be part of the study, and this may limit it to those with pre-existing significant drug-related property crimes and those with maintenance-treatment-approving city administrators. Additionally, there may be difficulties in translating the results to out-of-state communities; the sense of a “Californian character” is vague in some areas, but differences in local culture definitely exist, and might prevent the implementation of the study's results in other states. However, random selection of communities for each group, combined with the broad socio-economic spectrum in California, should render the results mostly transferrable to the rest of the country.
2. The sample population is in effect all communities in California, which is a very

representative population of all communities in the United States – California has a broad enough range of economic status, racial divides, police activity, and so forth, to mirror most other communities. Additionally, our experimental population will hopefully be large enough to touch on all these angles; the primary external validity of this study rests on its proposed size.

H. Ethical Issues

1. There are certain concerns about honesty in this study – the primary concern, however, is not releasing information before the study is complete; while this may strike up criticism, it is also essential to reducing potential causal invalidity. The best solution is the full release of data after the study is completed. The primary ethical issue lies in the experiment itself. It is, after all, conflicting with many "moral" views of how drug addiction should be treated. The potential exists that the experiment might serve only to spread drugs throughout the criminal economy. And, of course, special legal dispensation would be required for this study – most especially because there is danger to the researchers. Drug use is illegal, and hence involves illegal organizations. An attempt to change this might draw their ire.
2. Due to the targeting of communities, and the relatively impersonal nature of the data, the survey should not run into any privacy problems. The primary ethical issue, the distribution of heroin and cocaine, should be regarded from a legitimate ethical perspective – not from a biased "moral" perspective. The nature of the programs – distribution at an affordable price for all those who the medical professionals diagnose the drugs for – should in itself prevent profit from being

funneled to an illegal economy, by removing the market for it. Even drug dealing is ultimately commerce, and profitability comes first. The matter of researcher and medical personnel safety is a more difficult matter – a thin wire would have to be walked between an overt police presence intimidating participant communities, and security from criminal networks. Ultimately, the entire project would vastly benefit from the legalization of most drugs, and the effective gutting of criminal network income and enforcement of territory via violence – but that would also probably remove the requirement for the study.

II. Variables

A. Study Variables:

1. Independent Variable (Categorical): The treatment program. There are three levels. Group 1 (Control): No program. Group 2 (Control): Methadone program. Group 3 (Experimental): Cocaine and heroin maintenance program.
2. Background Variables: Community per-capita income (continuous), Self-reported rate of drug use in the community (continuous)
3. Dependent Variable: Property crime. Two measures: Rate of police arrests for property crimes (continuous) and self-reported losses due to property crime (continuous).

B. Measurement Validity and Reliability of Dependent Variable

1. The validity of the dependent variable will be examined via construct validity
    a. The construct validity of the study will be assessed by comparison to previous studies on the relationship of drug addiction and committing property crimes – studies of pre-existing drug addiction among people convicted of property

crimes as an example.

2. The reliability of the dependent variable will be examined by interim reliability and test-retest reliability
    a. Interim reliability will be measured by comparing the police arrest rate with the self-reported property losses; the two should be roughly correlated.
    b. Test-retest reliability will be measured by the instances of multiple posttests of both dependent variable measures.

III. Sample

A. The population of interest is communities in California willing to participate in the study, presumably those with an existent drug user population and property crime problem (willingness will be determined by the assent of the municipality encompassing the neighborhood); the study will also have two sampling units designed to tell us about the sample – the police departments and individual residents of these neighborhoods. The target population is all communities in California, and more broadly, all communities in the United States.

1. The sampling frame will consist of the officially designated neighborhoods, zones, or districts from each city willing to participate in the study. Secondary sources for the frame include neighborhood associations and real estate neighborhood divisions; preference in case of disputes will lean towards official designations, with further disputes being resolved on a case-by-case basis. Nonresponse will almost certainly be a problem.

B. The sample ($n = 90$) will be selected using simple random sampling from all the Californian communities willing to participate in the study. The sample size, and that

of the sample groups, may be reduced based upon the population size (if participation is smaller than expected). The sample groups will remain equally divided in thirds of the sample size.

C. Groups

1. The no-treatment sample (n = 30) will be a control group, assigned from the main sample through simple random sampling.
2. The methadone treatment sample (n = 30) will be a second control group, assigned from the main sample through simple random sampling.
3. The medicinal drug maintenance treatment sample (n = 30) will be the experimental group, assigned from the main sample through simple random sampling.

D. The external validity of this study is primarily dependent upon the success of its hypothesis; if the hypothesis is in fact supported, it is much more likely that other communities in California, and communities in other states, will be willing to participate in an extended version of the study. A lack of support for the hypothesis might be retested for external validity by repeating the study in another geographic location, or at a later date (if it seems an external event has threatened the validity of the study).

E. The sampling method is simple random sampling, using random selection from the population – via computerized selection of 90 random numbers, from a list corresponding to each community in the general population – to gather a sample population (n = 90), then using random selection from within the sample population – via computerized assignment of a random number to each community in the

population, with each number corresponding to one of the three levels of the independent variable – to assign each community to a group, until each group is filled (n = 30)

IV. Recruitment of Subjects, Obtaining Informed Consent, and Obtaining Permission to Access Data

A. There will be three components to the study, each affecting a different sampling unit. The element of study is the community, to which the experiment will be applied. Once the communities are selected, we will locate the other subjects: the first sampling unit is the police departments responsible for the selected communities, from whom we will obtain data on arrest rates for property crimes. The second sampling unit is individuals from the community, who will be asked to self-report their losses due to property crime. Finally, we should note that the study will also require willing medical personnel (with the authority to prescribe medicinal drugs; that is to say, primarily doctors and potentially some assisting psychiatrists, as well as assisting staff) to participate in the experiment.

B. To gain access to the communities, we will approach the municipal authorities – the city, town, or village governments responsible for the area encompassing each community of interest. Their willingness to participate will in effect define our population for us; the sample will be chosen from among these communities. Local police data on property crimes should be publicly available in most cases; in most cases, simply asking about the data should suffice, although it may be possible that researchers may have to collate publicly available case records and analyze them to obtain full data. The self-report study requires personnel to distribute and collect the

studies – via mail or telephone. The experiment itself requires doctors and medical personnel to be approached for participation; a list of doctors with sympathies towards drug maintenance programs should be established, and these doctors contacted until sufficient participants are located. Lastly, and most significantly, establishing any of the experimental group treatment will of course require significant legislative authority. The researchers will have to consult the Federal Drug Enforcement Administration, and California's Department of Alcohol and Drug Programs. This process will likely be quite long and difficult.

C. Municipal authorities for all communities in the population (that is, those willing to participate in the study) will be told about the three levels of the study, and that they may be selected for any of them. The police departments will be informed of the existence of the programs, but the data will be obtained from public sources without explanation in most cases. The self-report subjects will be informed that the information is relevant to a study of property crimes, but should not require any further information, due to the non-harmful nature of the data collected. The doctors will be fully informed of the study's intent, design, and hypothesis; asking them to participate in a double-blind study would be harmful and medically negligent, not to mention fruitless.

    1. Civil authorities will be informed of the purpose of the study, and the expectation that it will provide information beneficial to combatting drug addiction and property crime. They will also be informed of medical figures on drug maintenance programs, and the beneficial effects they have had on property crimes in the United Kingdom.

2. The response rate from Californian communities is expected to be at least reasonably high, especially if recent trends towards decriminalization of marijuana continue. It is expected that the population of interest will not necessarily reflect the population of all Californian towns, but this is fundamentally unavoidable while staying true to principles of informed consent.
    a. To maximize response rate, the program will be highlighted as a significantly more cost-effective method of combatting drug addiction than the War on Drugs, especially during the current economic downturn. The use of trained doctors will also be highlighted to city leaders.
    b. To minimize subject attrition, political candidates at a municipal level will be consulted and 'pitched' on the program prior to elections, in the hope of maintaining the experiment despite changes in local government. If possible, state or federal collaboration should be supplemented with funds to participating local governments to encourage their continued acceptance of the experiment.
    c. Note: Major portions of the participation in this experiment are determinate upon current political trends. For this reason, the experiment may prove to be unfeasible in certain political climates (perhaps especially during those when it might prove most fruitful). This is an inherent difficulty to the proposal itself. As a potential alternative outside the scope of this study, the principles behind the hypothesis might be tested with communities in other states, or in another country entirely.

V. Procedure

A. Data collection for the study will be conducted through personal interviews for the measure of self-reported losses due to property crime, and the self-reported heroin and cocaine use, and through the analysis of publicly available police records and income tax records to determine the per-capita community income, and the arrest rate for property crimes.

    1. Data from human subjects (questionnaire responses)

        a. Subjects will be contacted through phone surveys and in-person surveys.

        b. There will be seven points of data collection. Data will be collected at multiple locations during each point.

        c. The planned data collection points will be annual, for three years of pre-tests before the experiment begins, the year of the experiment, and three years of post-tests after the experiment has begun.

        d. The data will be collected via interview schedules, for both phone and in-person interviews.

        e. Research assistants (preferably students with a sociological focus at this university) will be sought first for interview work, with the possibility of contracting a professional polling organization. Training will be minimal and in a group setting, focusing on neutral presentation of the interview and maintenance of confidentiality.

        f. Collected data will be organized into electronic databases, for analysis by the researchers at the end of the post-test period.

    2. Document Analysis data (publicly available data)

a. The police arrest rate documentation will be obtained from the police departments of the neighborhoods in question, through anonymous or electronic sources when possible. The income tax information will be gathered from local, state, or federal authorities in that order – data provided by journalism sources will also be accepted, although the sources for that data will then be checked.
b. There will be seven points of data collection.
c. The planned data collection points will be annual, for three years of pre-tests before the experiment begins, the year of the experiment, and three years of post-tests after the experiment has begun.
d. Document analysis will consist of creating annual summaries of the data in question, which will be measured by univariate distribution for central tendency and variation.
e. The data collection will be done by the researcher when possible, and by research assistants (preferably students with a sociological focus at this university) in cases where the overall data collection is too large or time consuming. These research assistants will be selected for their understanding of basic statistical methods, hopefully requiring no further training, although they will be informed of the selected methods of organization and data storage.
f. The collected data will be stored in an electronic database, then subject to univariate and bivariate analysis once the post-test period is completed.

B. Data Documentation: The data for each of the variables will be collected as follows

1. Independent Variable: Treatment Program. This variable will be known by the researchers, as it will be assigned as part of the experiment.
2. Background Variables
    a. Per-capita Community Income
        1) Data will be gathered from tax returns; other official reports of income will be considered in the event of data collection issues. Whenever possible, existing per-capita data will be sought instead of individual data. Per-capita data will be noted for each neighborhood. Individual data will be indexed by identity, compared against a list of registered voters in the neighborhood, then once parity between these lists has been achieved, the numbers will be used to calculate per-capita data.
        2) Data will be indexed as a per-capita number for each neighborhood at each point of data collection.
        3) The data on this variable is at the ratio level of measurement, and is continuous.
    b. Self-reported heroin and cocaine use
        1) The heroin or cocaine use will be measured by an open-ended question asking the respondent to estimate how much cocaine or heroin they have used in the past year, which will have a contingency in the form of two open-ended questions asking how many times the respondent has used cocaine or heroin in the past year, and how much cocaine or heroin the respondent used in each instance. In both these cases, heroin and cocaine use will be tracked separately.

2) Data will be noted as a per-capita ratio for the population (derived from an analysis of all the interviews, both in median and mean form), for each point of data collection.
3) The data on this variable is at the ratio level of measurement, and is continuous.

3. Dependent Variable: Amount of property crime. This variable will have two measures.
    a. Police arrest rate for property crime
        1) Continuous data based upon police records. Annual rates for the neighborhood in question will be sought; in their absence, annual rates for the city containing the neighborhood will be accepted.
        2) The arrest rate will be measured as a flat number of arrests, and as a percentage of all arrests during the year in question.
        3) The data on this variable is at the ratio level of measurement, and is continuous.
    b. Self-reported property crime losses, per capita
        1) Losses will be measured by a two open-ended questions asking the respondent to estimate the value of property lost to crime during the past year, both domestic and commercial property.
        2) Data will be tracked for domestic property losses, commercial property losses, and the combined property losses, noted as a per-capita ratio for the population (derived from an analysis of all the interviews, both in median and mean form), for each point of data collection.

3) The data on this variable is at the ratio level of measurement, and is continuous

Data Analysis Plan

I. Descriptive Statistics

A. Background Variables

1. Per-capita Community Income
    a. Analysis: measures of central tendency and dispersion
    b. Data Reported
        1) Measures of central tendency: mean, median, and mode
        2) Measures of dispersion: range and standard deviation
    c. Presentation: table
    d. Reasons:
        1) Continuous variable
        2) Efficient, clear presentation of the data
        3) Provides detail regarding the per-capita community income distribution
2. Self-reported heroin and cocaine use in the community
    a. Analysis: measures of central tendency and dispersion
    b. Data Reported
        1) Measures of central tendency: mean, median, and mode
        2) Measures of dispersion: range and standard deviation
    c. Presentation: table
    d. Reasons:
        1) Continuous variable
        2) Efficient, clear presentation of the data
        3) Provides detail regarding the self-reported heroin and cocaine use

distribution

B. Independent Variable: Treatment Program

1. Level 1: No treatment program
2. Level 2: Methadone treatment program
3. Level 3: Maintenance program with medicinal heroin and cocaine
    a. Analysis: frequency distribution
    b. Data Reported: number and percentage
    c. Presentation: table
    d. Reasons:
        1) Categorical variable
        2) Efficient, clear presentation of the data
        3) Provides detail regarding the distribution for the levels of the independent variable

C. Dependent Variable: Property crime (2 continuous measures)

1. DV measure$_1$: Annual police arrest rate for property crimes
2. DV measure$_2$: Annual self-reported property crime losses per-capita
    a. Analyses: measures of central tendency and dispersion
    b. Data Reported:
        1) Measures of central tendency: mean, median, and mode
        2) Measures of dispersion: range and standard deviation
    c. Presentation: table
    d. Reasons:
        1) Continuous measures

2) Efficient, clear presentation of the data
3) Provides detail regarding the distribution for the two measures of property crime

II. Bivariate and/or Multivariate Analysis

A. Variables: Per-capita community income (continuous) and two measures of property crime (continuous)

1. Per-capita community income and annual police arrest rate for property crime
   a. Analysis: Pearson product moment correlation
   b. Data reported:
      1) Alpha coefficient
      2) Probability value
   c. Presentation: Reported in-text under Results
   d. Reasons
      1) To determine whether per-capita community income has a statistically significant positive or negative relationship with the annual police arrest rate
      2) Per-capita community income is a continuous variable, the dependent measure is continuous
2. Per-capita community income and annual self-reported property crime losses per-capita
   a. Analysis: Pearson product moment correlation
   b. Data reported:
      1) Alpha coefficient

2) Probability value

c. Presentation: Reported in-text under Results

d. Reasons

1) To determine whether per-capita community income has a statistically significant positive or negative relationship with the annual self-reported property crime losses per-capita

2) Per-capita community income is a continuous variable, the dependent measure is continuous

B. Variables: Self-reported heroin and cocaine use in the community (continuous) and two measures of property crime (continuous)

1. Self-reported heroin and cocaine use in the community and annual police arrest rate for property crime

a. Analysis: Pearson product moment correlation

b. Data reported:

1) Alpha coefficient

2) Probability value

c. Presentation: Reported in-text under Results

d. Reasons

1) To determine whether self-reported heroin and cocaine use in the community has a statistically significant positive or negative relationship with the annual police arrest rate

2) self-reported heroin and cocaine use in the community is a continuous variable, the dependent measure is continuous

2. Self-reported heroin and cocaine use in the community and annual self-reported property crime losses per-capita
    a. Analysis: Pearson product moment correlation
    b. Data reported:
        1) Alpha coefficient
        2) Probability value
    c. Presentation: Reported in-text under Results
    d. Reasons
        1) To determine whether self-reported heroin and cocaine use in the community has a statistically significant positive or negative relationship with the annual self-reported property crime losses per-capita
        2) Self-reported heroin and cocaine use in the community is a continuous variable, the dependent measure is continuous

III. Test(s) of Hypothesis

A. Variables: Treatment program (categorical) and two measures of property crime (continuous)

1. Treatment program (2 levels) and annual police arrest rate for property crime
    a. Analysis: Analysis of Variance (ANOVA)
    b. Data Reported:
        1) Mean annual police arrest rate for the three levels of the independent variable
        2) F-value and probability value
    c. Presentation: Reported in-text under Results

d. Reasons

1) To determine whether there is a statistically significant difference between the mean annual police arrest arrest rate for the three levels of the independent variable

2) Three levels for treatment program, the dependent measure is continuous

2. Treatment program (2 levels) and annual self-reported property crime losses per-capita

a. Analysis: Analysis of Variance (ANOVA)

b. Data Reported:

1) Mean annual self-reported property crime losses per-capita for the three levels of the independent variable

2) F-value and probability value

c. Presentation: Reported in-text under Results

d. Reasons

1) To determine whether there is a statistically significant difference between the mean annual self-reported property crime losses per-capita for the three levels of the independent variable

2) Three levels for treatment program, the dependent measure is continuous

Reference

Ribeaud, D. (2004). Long-term impacts of the Swiss heroin prescription trials on crime of treated heroin users. *Journal of Drug Issues*, *34*(1), 163-194. Retrieved from Academic Search Premier database.

Appendix A

Self-reported Drug Use Survey

Heroin and Cocaine Use

Survey #

Research Assistant Directions: Number each survey. Ask the respondent to provide the answers to the best of his or her recollection.

1. How much cocaine (in grams or ounces) have you used during the last year?

   _____

2. How many times during the last year have you used cocaine?

   _____

3. How much cocaine (in grams or ounces) do you take each time you use it?

   _____

4. How much heroin (in grams or ounces) have you used during the last year?

   _____

5. How many times during the last year have you used heroin?

   _____

6. How much heroin (in grams or ounces) do you take each time you use it?

   _____

Appendix B

Self-reported Property Crime Victimization Survey

Losses to Property Crime

___

Survey #

Research Assistant Directions: Number each survey. Ask the respondent to provide the answers to the best of his or her recollection.

1. What is the dollar ($) value of property you have lost at your home or residence to crime in the past year? _____
2. If you own your own business, what is the dollar ($) value of property you have lost at your place of business to crime in the past year? _____

Appendix C

Community Per-Capita Income

Community Per-Capita Income

1. Community Name: _____
2. Independent Variable: □(1) L1: No program □(2) L2: Methadone program

   □(3) Heroin and cocaine maintenance program.
3. Community Population: _____
4. Average Community Per-Capita Income: _____
5. Median Community Per-Capita Income: _____

Appendix D

Annual Police Arrest Rates

Police Arrest Statistics

1. Community Name: _____
2. Years of Analysis: ____ to _____
3. Independent Variable: □(1) L1: No program □(2) L2: Methadone program

   □(3) Heroin and cocaine maintenance program.
4. Community Population: _____
5. Number of Arrests for Property Crimes during Year of Analysis: _____
6. Per-Capita Arrest Rate: _____