

Relationship between drugs and crime



**ASSIGN
BUSTER**

Research Question

Research question: What is the relation between drug use and crime?

Introduction

A research design states the objectives and provides the guidelines of the research study in terms of what is being done so as to realize the objectives. Research design provides a pattern to the study by specifying the objectives, methods of collecting and analyzing data, costs, time, probable outcomes, responsibility and actions. Basically, research designs can be categorized into exploratory research design, experimental research design, and descriptive research design. Different research questions require different study designs. The choice of the research design to use is affected by pragmatic issues like patient considerations or funding.

The appropriate design to test the research hypothesis

When planning a scientific research study one of the most essential steps is specifying the research hypotheses.

To test whether drug use leads to criminal behaviors and whether the relationship is constant, the best study design will be cohort studies. Cohort study design involves the study of individuals exposed to the presumed risk factor and another group that is not exposed to the risk to determine the disease occurrence (Meirik, 2017). The comparison is made between the incidence of exposed and unexposed groups (Meirik, 2017). The incidence risk is used to evaluate whether the exposure and the disease are related (Meirik, 2017). Cohort studies can take retrospective or prospective form. A

retrospective cohort study is used to study both the outcome and the exposure which have already occurred before the outset of the study while in a prospective cohort study is where the study subjects have been followed for some time and the outcomes recorded (Meirik, 2017)..

To tackle the research question on the relationship between drug use and crime, a cohort study will be appropriate especially the retrospective cohort study since there is an available study on the relationship between drug use and criminal behaviors. Using this study design will help in determining the relationship between crime and drug use and whether available evidence to support the claim is sufficient.

Components of a cohort study

Cohort study incorporates several components. The first component is the selection of the study subjects. The aim of the study is to decide the study participants who are exposed to drug use. The participants should be free of the results under investigation, hence they should be potential to provide an outcome. A representative sample of the general population among the African American communities who have been exposed to drug use will be used as the study subjects. The next component of the cohort study is obtaining data on exposure. In the beginning, each individual level of exposure is measured and regular assessments are carried out at intervals during the follow-up period. In cases where the cohort study involves several exposures, they should be considered simultaneously. Data may be obtained through personal interviews or questionnaire, reviews of records, medical examination and environmental survey.

The next component is the selection of the comparison group. When the internal comparison is used the cohort study involves only one cohort or the study is subdivided. External comparison occurs when there is more than one cohort to be compared in the study. The study may also take a comparison with the general population where there is no comparison group available. Another component of the cohort study is a follow-up. The follow-up of this type of study is a major challenge which requires time and cost in ensuring regular updates from the cohort members on exposures and confounders are measured. Outcome data on follow-up can be obtained through the mailed questionnaire, periodical medical examination, telephone calls, reviewing records, personal interviews, and surveillance of death records. The last component is an analysis of the cohort studies which involve the use of rate ratio or risk of the disease to compare the exposed cohort with the unexposed cohort (Hansana, 2011).

Experimental or observational

Experimental study designs refer to instances where researchers have to introduce an intervention then study the effects. Some of the examples of experimental studies include a randomized controlled trial. Observational study designs are those where researchers do observe the effect of the treatment, risk factor or any other intervention without changing the individuals exposed or unexposed to it (Howick, 2002). A cohort study is used by the researcher to study group of people linked in some way, for instance, the relationship between people who use drugs and those involved in crime in a given time frame among African American communities.

Advantages and disadvantages of a cohort study

(Ahn, 2016) the main strength of a cohort study is that standardization of outcome or criteria is possible since the study minimize the influence of confounding variables given that subjects can be matched. The study allows for clarity of temporal sequence between the exposure and the outcome, this is so because subjects in cohort study are disease-free at the start of the observation before the exposure is established. The study allows for the calculation of incidence hence it is possible to calculate the relative risk or risk ratio, absolute risk, attributable proportion and risk difference (LaMorte, 2016). Using a cohort study it is possible to facilitate the study of rare exposures such as the adverse effects of drugs. Compared to case-control, a cohort study has minimum recall bias during enrollment.

Using the cohort method to study the relationship between drug use and crime have various limitations. The method is subject to losses to follow -up hence the outcome may be conclusive. Cohort study requires a large sample to provide a better link between the exposure and the outcome, hence failure to obtain willing individuals as cohorts for the research question may hinder its outcome. The method is time-consuming and costly to carry out as it requires follow-up which at times is prone to bias.

Types of bias in a cohort study

Cohort design is subject to different bias. The major source of bias is losses to follow-up whereby a cohort member may migrate, die or refuse to proceed with the study. Furthermore, losses to follow-up can also be associated with exposure or outcome. Selection bias is another type of bias prevalent in a

retrospective cohort study (LaMorfe, 2016). Selection bias is common in cases where individuals are required to submit informed consent to participate in the study. Selection bias can be introduced during the case ascertainment or completeness of follow-up, this type of bias can be minimized by making sure a high level of follow-up are made in all study groups. Another bias is the healthy worker effect which affects the occupational studies where disease rate among people of a given occupation group is compared with the outside population. This bias can be minimized by selecting a group of workers from different jobs at different locations.

Conclusion

When attempting the cause and effect relationship, true experimental design is often the best measure. The most difficult research in epidemiological research is assessing the associations between disease and exposure derived from observational studies. The study of the outcome of drug abuse to African American communities' leads to criminal behaviors is a good example of a cohort study. Using cohort study provide data pertaining to a cohort group that has been exposed to drug use and had an outcome of committing a crime and the cohort group involved in drug users who did not commit a crime.

References

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