



RESEARCH IN *Corrections*

Volume 1, Issue 1

March, 1988

Supported by the National Institute of Corrections and the Robert J. Kutak Foundation

Statistical
Methods in
Corrections

Clear, Ph.D.

reviews by
Wasson and
es Rowland



9556
L557
11355
11355
11355
11355

the results of applied research in corrections for administrators and practitioners

RESEARCH IN *Corrections*

Volume 1, Issue 1

March, 1988

Supported by the National Institute of Corrections and the Robert J. Kutak Foundation

U.S. Department of Justice
National Institute of Justice

113556
113557

This document has been reproduced exactly as received from the person or organization originating it. Points of view or opinions stated in this document are those of the authors and do not necessarily represent the official position or policies of the National Institute of Justice.

Permission to reproduce this ~~copyrighted~~ material has been granted by
Public Domain/NIC
U.S. Department of Justice

to the National Criminal Justice Reference Service (NCJRS).

Further reproduction outside of the NCJRS system requires permission of the ~~copyright~~ owner.

STATISTICAL PREDICTION IN CORRECTIONS

Todd Clear, Ph.D.

Page 1

[THE USE OF PREDICTION METHODS IN A COUNTY
CORRECTIONS SYSTEM Billy F. Wasson

113556

Page 41

[A REVIEW FROM THE PRACTITIONER'S PERSPECTIVE
James Rowland

113557

Page 47

NCJRS

SEP 1 1988

ACQUISITIONS

A REVIEW FROM THE PRACTITIONER'S PERSPECTIVE

James Rowland

Director, California Department of Corrections

SUMMARY

Dr. Todd Clear's paper, *Statistical Prediction in Corrections*, is a stimulating exploration of the use of prediction in the correctional field. It offers many insights and interesting considerations. The key points, from a practitioner's viewpoint, can be summarized as follows:

1. The development and implementation of a custom-designed risk management system would enhance the programming and security assignment of offenders.
2. The risk management model appears to be an excellent approach for controlling and minimizing inmate populations. It offers a conceptual framework for addressing the issues of spiraling numbers and costs associated with incarceration.
3. It is imperative that correctional administrators be pragmatic in planning and implementing a risk management model. Prediction instruments provide no miracles or panaceas. However, the use of a carefully thought-out instrument which incorporates the practitioner's judgment greatly reduces the probability of error in the categorical assignment of offenders.
4. The use of a risk management system will greatly aid an administration in the allocation of resources. The focus of such a system should be on those offenders most responsive to higher levels of programming.
5. A risk management model would help agencies to define and publicize their philosophy. It would help staff and the public, through a public education strategy, to better understand corrections' mission and function.
6. One of the key issues emanating from Dr. Clear's paper is that of the role predictions should have in policy, programming, and resource allocation.
7. It is to an agency's advantage to develop its own prediction instrument. If an instrument is borrowed, the instrument needs to be modified for adaption to the agency's particular demographics. In order to promote the successful use of a prediction instrument, the users must have a role in the instrument's development. Equally important, the staff must be well trained in the use of the instrument.
8. The education of the public and related agencies about the prediction instrument is a key factor in the success of its implementation. A conscientious prediction-instrument education program can provide the benefits of support, but with the public's involvement, there is the potential of additional resources becoming available to corrections departments.

9. A research design for the prediction instrument should be built into the process. Ongoing monitoring, with the provision for making modifications to the instrument when there appears to be an opportunity to improve it, is also important.

INTRODUCTION

Dr. Clear presents a comprehensive and thought-provoking paper on prediction methodology that should be useful to administrators, correctional policymakers, practitioners, and interested citizens. The fact that he writes in a nontechnical style is also helpful.

In his introductory section, Dr. Clear helps the reader grasp the nature, function, and challenges related to the use of prediction in corrections. His examples of overt, subtle, formal, and informal predictions illustrate that correctional practitioners use some form of prediction, whether they are aware of it or not. He successfully makes the case that there is a need to recognize this fact and to strive continuously to improve prediction and related methodologies.

The brief history of studying the problems of prediction-instrument reliability supports the importance of working toward improving that reliability. The adoption of a carefully thought-out, relevant prediction philosophy and instrument is a major step in the right direction.

PHILOSOPHICAL RAMIFICATIONS

As Dr. Clear states, the philosophical implications inherent in any prediction methodology is a crucial consideration for correctional administrators and policymakers. The failure to carefully consider the ramifications of the adoption and use of a prediction instrument could truly create confusion. Whether its users know it or not, an adopted prediction instrument is a statement of philosophy.

By comparing scientific, utilitarian, and nonutilitarian categorical prediction philosophies, the policymaker can define his or her philosophical position. Each category provides for in-depth discussion on how offenders are or should be viewed. Each approach also influences how the correctional system interacts with the public.

It is contradictory and not unusual for offenders to be confined for lengthy periods of time both because of the seriousness of their offense *and* to protect the public from the commission of the same type of crime in the future. Dr. Clear aptly describes how this may be unfair, in view of the statistical probability that a large number of serious offenders may not repeat their crimes. He reports that "one of the most common findings in the literature is that the *seri-*

ousness of the current offense and probability of a subsequent offense are statistically unrelated."

Utilizing a prediction instrument to determine an offender's length of confinement *and* applying a prescribed sentence because of the seriousness of the crime thus presents a dilemma. Although the available instruments are not yet sophisticated enough to resolve this dilemma, they still have considerable value for programming levels of supervision and security classification in the corrections system.

THE LIMITATIONS OF PREDICTION INSTRUMENTS

Prediction instruments may enable one to forecast the percentage of high-, moderate-, and low-risk offenders who will recidivate. However, as Dr. Clear and others report, the instruments are incapable of identifying specific individuals as highly potential recidivists, since the instruments address group tendencies.

Dr. Clear points out that the errors of predicting success are "invisible," since the offenders are incarcerated, whereas the released offenders who are predicted to succeed but fail are very "visible." This creates a tendency to overpredict and sentence in response to the public outcry about visible failures.

The use of risk assessment devices is an improvement over the use of prediction instruments alone. Although imperfect, the risk assessment approach does reduce the error in predicting individual success or failure. The more refined the instrument, the better its prediction capability for a subgroup.

No miracles are possible or should be expected from the use of screening devices and prediction instruments. They have inherent limitations, as Dr. Clear points out. However, the correctional policymaker who recognizes and guards against the limitations will be in a good position to utilize the instruments.

A wide range of criteria have been used in the different classification systems as indicators of future criminal activity, including social, economic, education, and employment factors. Experience and research support Dr. Clear's caution about examining the criteria very carefully. For example, many of these criteria have been shown to be discriminatory against ethnic minorities. It is imperative that policymakers be cognizant of and guard against these types of discrimination.

Another criterion used in many classification systems is the type of offense. Humans are by nature generally very reactive to heinous crimes. Consequently, these types of crimes usually preclude probation or early parole consideration for the offender. Moreover, a legislative trend toward reinforcing such responses to serious crimes has removed some discretion from the courts and parole authorities.

Some additional questions arise when evaluating risk assessment instruments. The basing of the categories of high, medium, and low risk on a point system and the further refinement into subgroups poses a problem. How confident can a practitioner be about forecasting the future criminality of an offender whose "score" is near the top or bottom of a scale, adjacent to the next category? Prediction validity of even the high-risk group is only 30 percent.

It is thus important to go beyond a reliance on labeling. The correctional practitioner must fully understand what the categories connote, recognize limitations, and use additional resources along with the prediction instrument.

PREDICTION INSTRUMENT ISSUES

Human nature and individual behavior being what they are, there is a built-in problem with an instrument that addresses only similarities with like groups and excludes individuality.

Dr. Clear cites an invaluable resource, i.e., the practitioner's judgment. The use of informed judgment enhances decisionmaking, no matter how good the practitioner's instruments are. It is extremely important that those involved in policymaking and program development have an investment in the product. In this case of risk assessment, involvement will improve results and reduce indifference to instrument application. A practitioner's judgment relates to outcome through a self-fulfilling-prophecy process.

Dr. Clear advises that the design of a risk assessment instrument that incorporates the practitioner's judgment should include an override component. The rate of review override in practice can help the correctional manager determine the practicality of the instrument, the degree of the practitioners' use of the instrument, and how much practitioner judgment is involved.

Studies and experience suggest that most risk management instruments identify low-risk offenders fairly well. This group presents a low payoff on resources invested, as studies suggest that low-risk offenders are the least responsive to intervention and intensive supervision resources. The low-risk category has a significantly lower recidivism rate than the high-risk group, which is generally much more responsive to intervention and intensive supervision programs. Accordingly, all concerned should concentrate the majority of resources and specialized programs on those identified as being in the high-risk group.

Incapacitation has become a popular response to the crime problem. Dr. Clear suggests that this approach has failed to significantly affect the crime rate. He suggests that this failure may be attributed to the relatively small percentage of offenders that are actually apprehended, prosecuted, and sentenced. Nonetheless, in the opinion of many, incarceration is valuable, simply because those who are incarcerated are not victimizing the public.

Another factor influencing the continued level of criminality is what Dr. Clear calls the "replacement effect." The majority of criminals commit offenses in groups, and consequently, although an offender who is responsible for many criminal acts may go to jail or prison, his group will recruit a replacement for him, and the rate of criminal activity will continue.

As jail and prison populations continue to grow because of the increasing trend toward incapacitation, the costs of construction and maintenance of facilities put a tremendous burden on the tax dollar. Fiscal pressure may reach a point where measures that are less costly than incarceration but still effective will have to be sought.

RISK MANAGEMENT MODEL RATIONALE

The rationale for using a risk management model is based upon three considerations: (1) By the time an offender has established a criminal behavior pattern, he or she may have "matured" out of criminal activity; (2) only a small percentage of the criminal population actually ends up incarcerated, and using their criminal activity as representative of those that are undetected may overestimate the criminal effect of undetected offenders; (3) the evaluation of a crime control policy is of more value if it is designed for future rather than past incidence of behavior, because the latter may be replete with problems.

Dr. Clear offers five premises to be considered when developing a risk management program. First, the risk assessment instruments should be designed and implemented in a way that makes prediction errors as visible as possible and thereby more manageable. Inclusion of this premise in the program requires careful monitoring. However, it lends credibility to the model and makes it more functional. The best approach is for each jurisdiction to develop its own instrument from the very beginning. This ensures relevance to the profile of the offender population and its unique characteristics and influences. It may be satisfactory to borrow a model from another jurisdiction, but the model must be adapted to meet the needs of the agency using it.

The second premise for the successful development of a risk management model is that a vast array of diversified programs must be available. It is helpful that the base rate for the low-risk category is low and that studies have shown a diminishing return for program investments for this category of offenders. These factors facilitate the redirection of resources toward programs for the high-risk group.

The separation of the punitive aspects of sentencing and correctional programs for the risk control aspects is the third premise to be considered in the development of a risk management model. In addition to the courts, legislature and parole authorities are becoming more involved in prescribing definite terms of incarceration. Laws have been enacted that relieve the courts of sentencing discretion. In turn, this "just desert" approach puts additional limitations on the

correctional administrator's programming flexibility. Nonetheless, there are many opportunities within these constraints for a correctional policymaker to meet the requirements of the "just desert" philosophy while incorporating a functional risk management model.

The fourth premise, that the initial program assignment should be made on the basis of the offender's level of risk, given the court's sentence, has much merit. Again, previous studies support this as a practical approach. In addition to humaneness, economics may soon dictate that this will be an important consideration in sentencing. Once the costs of incarceration reach a level that the public can no longer tolerate, there will be a demand for a more cost-effective approach. The use of a sound risk management model will definitely be of great value. Correctional policymakers should be proactive, immediately employing plans that will carry out justice, protect the public, and provide humane programs for offenders.

The fifth premise is that an offender's movement through the programs should be based on his or her performance and risk level. This premise can be helpful in its application with a classification system both for field supervision and within an institutional setting. It would facilitate the allocation of resources and the disbursement of probationers, parolees, and inmates. In addition, the system would benefit from an incorporated reclassification of the offenders at specific intervals as they progress through the programs.

The major challenges to the adoption of these premises and a risk management model will exist for correctional agencies that function with "just desert" laws and court sentences. These challenges could be addressed with a risk management model designed specifically for whatever flexibility might be within those laws and sentences. For example, it may be very difficult to redesign an institution, but with careful planning, the program could be modified to focus the majority of resources on the high-risk group.