UP TO SPEED

A Review of Research for Practitioners

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Practitioners' Guide to Understanding the Basis of Assessing Offender Risk

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The problem of predicting offender risk is fundamental to decision making at various stages of the criminal justice process. It has been addressed in several areas of criminal justice research and practice (Gottfredson & Gottfredson, 1980; Gottfredson & Gottfredson, 1986). The first objective and standardized instrument to predict risk was developed in 1928 by Bruce and his associates and was based on the records of 3,000 Illinois parolees. Then, beginning in the early 1970s and building on the seminal work of Bruce (1928), Glaser (1962), and Gottfredson (1967), investigators constructed quantitative instruments to help decision makers with a variety of judgments, including parole and bail release (Goldkamp & Gottfredson, 1985; Gottfredson, Wilkins, & Hoffman, 1978), sentencing (Hagen & Bumiller, 1983; Kress, 1980; Wilkins, Kress, Gottfredson, Calpen & Gelman, 1978), and prosecution (Williams & Farrell, 1990). In this article, we explore several issues related to the selection and use of risk classification tools, and we discuss the importance of classification systems to the success or failure of correctional judgments.

Use of Risk Classification

Prediction tools are widely used in adult and juvenile probation supervision, and they are a central component of case classification systems in these areas (Baird, 1981; Clear & Gallagher, 1985; Farrington & Tarling, 1985; Petersilia & Turner, 1987). Fifteen years ago, Clear and Gallagher (1985, p. 424) observed that "the vast majority of [probation agencies] have some form of paper-driven offender classification." A recent national survey found that over 81 percent of adult probation and parole agencies use objective and standardized risk classification tools (Jones, Johnson, Latessa, & Travis 1999).

Although risk classification tools are less prevalent in the juvenile probation field, in which much more emphasis is placed on rehabilitation and practitioner discretion, evidence suggests that tools used for risk prediction are being adopted with greater frequency to assess juveniles. For example, Barton and Gorsuch (1989) surveyed juvenile correctional agency officials and found that 47 percent reported using formal risk assessment tools in making classification decisions, 30 percent reported using formal classification procedures without a risk assessment component, and 23 percent reported that they used neither formal assessment nor case classification systems.

Actuarial Risk Classification

To apply actuarial (i.e., data-based) classification systems, probation officers score offenders on a risk scale usually comprised of variables that are statistically related to a criterion or outcome such as rearrest. Officers then apply the scale's composite, or summary score, to categorize probationers into different levels of contact or service reflecting the likelihood that particular cases will fail or recidivate.

Case classification systems assume that what probation officers learn about offenders through intake assessment tools will help them devise effective supervision plans. In addition, they assume that because an individual offender matches a larger group on background characteristics, that individual offender will also match that group's performance on the criterion variable. Actuarial analysis categorizes offenders according to base rates, that is, the proportions or percentages of subgroups that have exhibited the predicted behavior, such as recidivism. It should be noted, however, that recidivism can be measured in many different ways, some more useful than others (see Latessa & Holsinger 1998).

One of the major benefits of case classification systems is that they allow agencies to allocate resources and staff hours more optimally and effectively. Department staff have designed risk scales to identify probationers who require a great deal of surveillance as well as those who require minimal surveillance. In most models, cases assessed as highly likely to fail are placed on maximum supervision and those cases assessed as least likely to fail, on minimum supervision (Bohnstedt & Geiser, 1979; Clear & Gallagher, 1985).

In community corrections, structured risk assessment tools typically focus on the probability that an offender will recidivate. As we indicated earlier, on the basis of that determination, offenders are often placed into supervision categories (e.g., minimum, medium, and maximum risk) that are tied to differential case management strategies dictating the frequency and intensity of monitoring activities (e.g., in-office reports, field visits, arrest checks, urinalysis). High-risk offenders are usually monitored more closely than are medium and low-risk offenders. Simply put, risk classification specifies the quantity of contacts; in more general terms, risk classification "exists to promote the differential treatment" of offenders (Clear, 1985).

Advantages of Objective Risk Assessment

One of the major advantages of standardized and objective classification is that it replaces "gut feelings" with informed judgments. Although most current prediction models consist of standard procedures and guidelines, they might also involve an informal and somewhat haphazard process grounded in decision makers' personal judgments and subjective reactions to cases. A reliance on clinical judgment often leads to "erroneous, inconsistent, and inequitable decisions and lacks accountability as a result of the invisible rationale and criteria used by the decision maker" (OJJDP, 1995, p. 190) (see also Baird, 1984; Clear, 1987; Glaser, 1987).

Statistically based instruments, or scales, have long been touted as more useful and accurate alternatives to officers' subjective judgments. Much research suggests that data-based or actuarial prediction methods are far superior to subjective or clinical prediction methods (Hanson & Bussiere, 1998; Andrews & Bonta, 1998; also see Clear, 1987 and Gottfredson, 1987 for reviews). Specifically, statistical approaches result in more accurate and consistent decisions. Several reasons account for the superiority of statistical methods (Gottfredson, 1987). For example, human decision makers are quite limited in their capacity to use information reliably or to combine information from a variety of sources. Furthermore, because of cognitive errors and perceptual biases, they might give inappropriate weight to factors or might regard them as predictive when they are actually uncorrelated with outcomes. In short, "in virtually every decision-making situation for which the issue has been studied, it has been found that statistically developed prediction devices outperform human judgments" (Gottfredson, 1987, p. 36).

Statistical, or actuarial, assessment tools are based on empirical evidence from large random samples of cases that contain variation on a variety of offender characteristics. Statistically generated tools result in objective and fair decisions that are applicable to entire populations. Statistically based tools standardize and structure judgments by yielding the best (i.e., most valid) set of predictor variables on the basis of quantitative evidence. They allow probation officers to make uniform and reliable decisions about outcomes. "The same factors are taken into account by all decision makers in all cases, creating greater consistency in the assessment process" (OJJDP, 1995, p. 191). Without the guidance of standardized assessment tools, judgments are idiosyncratic (i.e., different officers use different case characteristics to render subjective decisions), are susceptible to officers' biases and preconceived notions about risk indicators, and are influenced by their personal philosophies and experiences (Wagner, 1992). The variables that officers select for risk assessment can be intuitively appealing but bear no statistical relationships to the predicted outcomes. In such instances, officers would be using variables that have, at best, only spurious connections to predictor variables.

Officers are limited in their capacities to consider more than one factor at the same time. Risk scales, on the other hand, are predicated on multivariate frameworks, containing several factors that can be handled simultaneously during the classification process. Finally, because objective risk classification models have clearly stated rationales that make the criteria for each decision explicit and measurable, both probation officers and agencies become more accountable (OJJDP, 1995).

Statistical Risk Assessment Errors

However strong a case we might make for statistical risk assessment, it is not a perfect science. Although statistical risk assessment reduces uncertainty about offenders' future probable conduct, it is subject to errors and should be regarded as advisory rather than peremptory (Clear, 1987). Even with the benefit of large data sets and advanced analytic techniques, the best models are usually able to predict recidivism with about only 70 percent accuracy (Petersilia & Turner, 1987). Moreover, statistical risk assessment devices rarely explain more than 20 percent of the variance (i.e., differences among offenders) in criterion measures (Gottfredson & Gottfredson, 1986).

Officers are invariably susceptible to two types of classification errors: false positives and false negatives. False positives occur when offenders who are predicted to fail actually succeed, whereas false negatives occur when predicted successes actually fail. False negatives are more visible and damaging because they can involve new offenses that cause harm to victims and jeopardize public safety. False negatives are potentially very costly; hence, most classification strategies err on the conservative side and are more likely to recommend supervising closely criminals who pose minimal or no risk of recidivism. This common practice results in unfair constraints being placed on low-risk offenders and wasted departmental resources. Therefore, it is crucial to consider the consequences of false positives and false negatives; both must be controlled to maximize the utility of case classification practices (Farrington, 1987).

Properties of Scales

The essential properties of case classification models are validity, reliability, equity, and utility (Lurigio, 1993; OJJDP, 1995). Validity is a fundamental concept in testing and evaluation and refers generally to the accuracy of a risk assessment tool (i.e., whether it predicts what it purports to predict). A tool designed to predict rearrest while on probation should differentiate between probationers who are actually rearrested and those who are not. In other words, if a risk tool is valid, then the probationers it assigns to category X (high risk) should be—in terms of their likely or actual performance—demonstrably different from those it assigns to category Y (low risk). A valid instrument consists of factors (i.e., predictors scored at another entry point for cases) that are significantly correlated with outcomes (i.e., the behaviors that officers are trying to predict); it also accurately distinguishes among offenders on the predicted criterion.

Reliability refers to the consistency of a case classification tool. A reliable tool results in the same decisions being made about the same kinds of offenders (i.e., those with similar characteristics) irrespective of who is using the tool. The reliability of a system is diminished when "widespread discretion and nonstandardized criteria" are allowed into the procedures (OJJDP, 1995). If an instrument is measuring inconsistently (i.e., unreliably), then it cannot be valid. On the other hand, it can measure traits or characteristics consistently without being valid. That is, a tool can yield similar or identical results on different occasions or among different users without providing accurate or useful findings. For example, an invalid, but reliable, scale might consistently misclassify low-risk offenders as high-risk offenders. Equity refers to the fairness of a case classification scheme. A fair tool does not discriminate against offenders on the basis of enduring personal traits (e.g., race, gender, or age) and permits offenders equal access to services and treatment. Finally, utility refers to the practicality, or "user friendliness," of a case classification system. Tools that contain obscure factors and are difficult, cumbersome, and time-consuming to score

and analyze will be rejected by staff and will result in faulty and inconsistent decisions.

Guidelines for Implementing Case Classification Systems

The following guidelines are considered important when developing and implementing case classification systems. First, corrections staff should regularly explore the criminal justice and criminological literatures to remain current with state-of-the-art risk assessment strategies. Different agencies have different needs and goals. There are likely to be several instruments or tools that can potentially meet those needs. Examining what is known about the use, reliability, and validity of a particular tool or process will be helpful in making a decision about instrument adoption. It might also be beneficial to involve line staff in this process to gain their professional investment and to reduce their resistance. For example, staff involvement could entail joining a risk assessment committee. Staff who are invested in the adoption of a classification system are more likely to adhere to it after it is put into practice.

Second, a classification tool should be validated on the population for which it is being used. There are several widely used actuarial instruments available for the juvenile and adult populations, and as a rule, major risk factors (e.g., criminal history and peer associates) change little from jurisdiction to jurisdiction. Nonetheless, agency staff should analyze assessment results based on the population for which the tool is being used. Validation research will help demonstrate how well an instrument predicts risk in a particular population and will also permit benchmarking (i.e., creating risk categories that are germane to specific jurisdictions or correctional strategies). In addition, changes in sentencing laws and practices can result in changes in the local offender population. Accordingly, classification systems should be validated periodically (e.g., every five years or so) in order to verify that the instrument is providing information in expected ways and is predictive of outcomes.

Third, regardless of the particular classification tool or process, staff should be thoroughly trained on the rationale and use of a risk classification scheme. Proper training will ensure that staff understand the advantages of case classification and that they use the tool in an appropriate and consistent manner. The amount and level of staff "buy-in" (see below) can drastically affect the level of success a program or jurisdiction experiences with a particular classification method.

Finally, classification tools should give staff the discretion to override risk assessment decisions in particular cases that warrant movement up or down because of factors missing from the tool. This will permit officers to retain some control over decision making, which can be a critical factor in overcoming staff resistance to case classification systems.

Static and Dynamic Factors

Various versions of actuarial risk and needs assessment instruments have taken steps to quantifiably separate criminogenic risk from criminogenic needs, most notably the Wisconsin Risk Needs Instrument. On the surface, the reason for doing this appears logical: the risk portion of the instrument instructs practitioners on how often clients should be seen or how secure an environment they should be in; the needs portion of the instrument informs practitioners how assessed clients might benefit from various treatment options offered by the agency, institution, or community-based treatment facility. In practice, agencies often focus on the risk factors and either ignore the needs factors or discontinue assessing the needs factors altogether.

Meta-analysis has shown that assessing needs is actually measuring risk of reoffending or committing antisocial behavior, whether it be a minor technical violation or a serious offense. The criminal justice and criminological literatures have indicated that most useful risk predictors include both static factors, such as prior criminal behavior, and dynamic factors, such as current significant relationships, social support, substance abuse, and thinking patterns. Whether clients have a high number of static risk factors or a high number of dynamic needs factors, or perhaps some of both, they are at a specific and quantifiable level of risk in general. Therefore, both risk and needs factors must be considered when assessing offenders and making classification decisions.

Development of Risk Assessment Tools

Although Clear (1995) is correct to point out that the transferability of risk assessment tools is a problem across jurisdictions, the fault likely lies with factors other than the instruments themselves. One of the more common ways that assessment tools are developed is by using an agency's records to conduct an outcome study to identify factors significantly correlated with criterion measures. This process is used by many agencies to develop their own, custom-made risk instruments. Development is often constrained by the quality and availability of the data that are contained in the files. For example, if the files are missing information on offenders' peer association, then this factor will be missing from the prediction model despite all the evidence showing that negative peer associations are a significant predictor of risk. Similarly, if the files have no information on offenders' attitudes, values, and beliefs, these factors will be omitted from the tool. Because most offender records contain a great deal of information on criminal history, it is easy to understand why many of the "home-grown" tools are so heavily weighted toward static predictors.

Factors that are predictive of criminal behavior have been identified in many different studies employing meta-analysis (Simourd & Andrews 1994; Gendreau, Little, & Goggin, 1996). In turn, these risk factors have become incorporated—albeit in various formats through various methods—into several actuarial risk and needs assessments instruments, including the Correctional Offender Management Profiles for Alternative Sentences (COMPAS) and the Level of Service Inventory-Revised, (LSI-R). Both the LSI-R and COMPAS are based on reviews of research that have identified sets of major and minor predictors. These instruments have been validated on offender populations and have produced higher predictive validity than more static instruments (Northpointe Institute for Public Management, 1998; Motiuk, Motiuk, & Bonta, 1992). Hence, it would appear that the age of the "home-grown" risk assessment tools has passed.

Levels of Supervision

When implemented properly, actuarial case classification drives the level of supervision accorded to specific cases, incorporating the risk principle, which states that the most supervision and intense treatment are reserved for the highest- risk offenders (i.e., those who can benefit most from what an agency or program has to offer). In fact, it is possible to offer a client too much of a "good thing," creating "penal harm" (i.e., doing more harm through the intervention than good) (Clear 1995). The adoption of a system in which supervision is based on actuarial risk assessment might require organizational restructuring to accommodate existing rules such as offense-specific, decision-making mechanisms. In

such instances, actuarial risk and needs assessment will increase but professional discretion will become more structured.

Levels of Treatment

Actuarial risk assessment also concentrates treatment resources for those who will benefit most from services and programs. Correctional treatment programs are frequently squandered on clients who either have no needs or are not ready for the potential benefits of interventions. Actuarial risk and needs assessment instruments often compartmentalize the scores into several areas that target specific criminogenic needs. Based on this compartmentalization, services can be assigned accordingly, and offenders will be directed into programs that they will benefit from, making the correctional continuum more efficient. Again, however, this additional application of the risk principle rests on the assumption that the corrections professional will have the discretionary power to make such decisions, which might necessitate changing the ways in which treatment is mandated (e.g., from the judge's bench).

Implementation Issues

Thorough and consistent training is essential to the implementation of any case classification system or risk and needs assessment tool. On-the-job training or brief orientation sessions are no substitute for comprehensive and professional training sessions. Offender assessment involves a number of skills, including investigatory and interviewing abilities and an understanding of how to score the tool. Agencies that provide inadequate training on case management and classification typically experience a range of problems, including unreliable assessments, staff disillusionment with the tools, and inappropriate offender placements.

Following case classification training, agency administrators should establish some form of quality control regarding the use of risk and needs assessment instruments. Quality control initially could come in the form of follow-up training but ultimately it must go beyond mere retraining. Implementation should involve a strategy to ensure quality and a well-constructed follow-up study designed to test instrument reliability and validity.

The appointment of an in-house quality assurance committee should be considered. The purpose and functions of this committee would be primarily to monitor the implementation of the assessment tool and how it fits into the overall classification scheme. Two procedures are paramount: Consistent review of the actual assessment process and case-file reviews to ensure that proper case planning is occurring with the assessment process.

Staff Buy-In

In addition to training on the use of the classification system itself, efforts should be made to encourage practitioner buy-in. The implementation of an actuarial risk and needs assessment instrument can benefit an agency and a jurisdiction. On the individual case-level, however, each assessment is only as good as the professional conducting it. Agency-wide faith in the system results in practitioner faith in the system, which, in turn, leads to valid and reliable assessments.

Administrator Buy-In

In a similar fashion to staff buy-in, it might be necessary to encourage administrative buy-in. Ideally, supervisors and other administrators should understand and support the case management system. At minimum, supervising officers should know the staff who are actually using the new classification system. The introduction of an actuarial classification system into any jurisdiction or agency regardless of size will probably require at least a reorganization of resources, most notably staff time. Staff should be given enough time to conduct the assessment properly and to obtain collateral information. The failure of administration to support staff's use of a case classification system is one of several causes of breakdowns in instrument reliability and validity.

Final Comments

According to national and international professional corrections organizations, classification is a component of best practices (see NIC, APPA, and ICCA). When done properly and with integrity, actuarial offender classification, using a standardized, objective risk and needs assessment instrument, can greatly enhance the delivery of supervision and treatment services. Decision making undoubtedly is the essence of criminal justice system practice. Wherever possible, objective criteria should be used in decision making to reduce the influence of extra-legal variables. Actuarial risk and needs assessment tools represent one mechanism by which objective criteria can be used to greatly enhance the legitimacy and power of decisions made in correctional programs in both supervision and treatment settings.

The implementation of an actuarial risk and needs assessment tool is a daunting task, particularly in large jurisdictions with many correctional options. The decision of what instrument or process to use can be perplexing enough without the focus on issues of consistency, reliability, and validity, which must be addressed after the system is implemented. The potential benefits of using a classification instrument far outweigh the costs, particularly over a long period of time.

In general, the following components might be considered in a formula regarding the implementation of an actuarial instrument: making an organizational-wide (gaining consensus and buy-in) decision on what to use; conducting initial and follow-up training; ensuring the process is being allowed to drive treatment and supervision (i.e., permitting correctional professionals to make decisions based on the assessment process); and applying periodic and consistent quality control strategies (i.e., ensuring the process is being done properly, according to design, and is indeed having a significant contribution to case planning). Following these steps will increase the probability that valuable resources will be allocated properly, allowing for better management of the offender population. Finally, the offender base as a whole will be exposed to various appropriate correctional options, thereby encouraging their prosocial behavior after release from an institution or community supervision program.

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