

# The Proper and Improper Use of Risk Assessment in Corrections



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## I. The Need to Manage Risk

Nearly 7 million adults are under some form of correctional supervision in the United States today as compared to 1.8 million in 1980. As depicted in Table 1 below, this represents a 270% increase in the number of adults under correctional supervision during this period. The largest number of offenders are on probation (nearly 4 million) followed by those in state and federal prison (1.4 million). Both the prison and jail populations have increased the fastest but there have also been significant increases in the probation and parole populations. Part of the reason for these increases have been increases in the size of the U.S. population — 29% — and in the number of persons arrested each year — an even higher 125% increase. However, specific policies have also tremendously impacted the size of the nation’s correctional populations.

- Increases in the so-called length of stay (LOS), which represents how long people are incarcerated: The LOS has grown as courts hand out longer prison terms or require prisoners to serve high proportions of their sentences via truth in sentencing laws.
- Increases in the number of probationers and parolees who have been sent to prison for technical violations: Such violations typically reflect a failure of the probationer or parolee to conform to the conditions of supervision, such as abstaining from alcohol or drugs, maintaining a job and residency, and paying supervision fees.

As the size and cost of this system have increased so have the costs and concerns about the effectiveness of placing so many individuals on some form of correctional supervision in order to control crime. Justice Kennedy, in his recent speech before the American Bar Association, directed attention to the “remarkable scale” of incarceration in the United States compared to other industrialized countries, the high proportion of African-American males incarcerated, and the high expenditures for prisons. He noted, “Our resources are misspent, our punishments too severe, our sentences too long.”<sup>1</sup>

Justice Kennedy’s lament about the rate of imprisonment has been well documented by the US Department of Justice. The federal government estimates that based

**Table 1  
Adult Correctional Populations 1980–2002**

Population	1980	2002	% Change
Probation	1,118,097	3,995,165	257%
Jail	163,994	665,475	306%
Prison	329,821	1,367,856	315%
Parole	220,438	753,141	242%
<b>Total Adults Under Corrections</b>	<b>1,832,350</b>	<b>6,781,637</b>	<b>270%</b>
<b>Adult Population</b>	<b>162.8 Million</b>	<b>209.4 million</b>	<b>29%</b>
<b>% of Adults Under Corrections</b>	<b>1.1%</b>	<b>3.2%</b>	<b>188%</b>
<b>Adult Arrests</b>	<b>5.8 million</b>	<b>13.7 million</b>	<b>125%</b>

on the current use of state and federal prisons, 5.6 million living adults have experienced prison. This represents 1 in every 37 U.S. adults.<sup>2</sup> Based on current criminal justice practices, 1 in every 15 Americans born today will be imprisoned during his or her life.

The likelihood of incarceration for Black and Hispanic males is even greater. Table 2 shows the life chances of being imprisoned in 1974, 1991 and 2001 as calculated by the U.S. Bureau of Justice Statistics. One of every three Black males will be sentenced to prison during his life. For Hispanic males the probability is 1 in 6 and for white males it is 1 in 17. While women have substantially lower rates of imprisonment, it is estimated that 1 in 55 (1.8%) will be imprisoned, with Black females having a probability of 1 in 19 (5.6%).

Another grave concern is the extent to which released prisoners and probationers are failing to successfully complete their terms of supervision and will be

**Table 2  
Life Chances of Being Imprisoned In the United States (1974–2001)**

	1974	1991	2001
<b>Total</b>	<b>1.9%</b>	<b>5.2%</b>	<b>6.6%</b>
<b>Males</b>			
White	3.6%	9.1%	11.3%
Black	13.4%	29.4%	32.2%
Hispanic	4.0%	16.3%	17.2%
<b>Females</b>	<b>0.3%</b>	<b>1.1%</b>	<b>1.8%</b>
White	0.2%	0.5%	0.9%
Black	1.1%	3.6%	5.6%
Hispanic	0.4%	1.5%	2.2%

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**Table 3**  
**U.S. Recidivism Study — 1983 Releases — 11 States**

Follow-Up Time Period	Re-Arrested	Re-Convicted	Re-Incarcerated
6 Months	25%	11%	8%
1 Year	39%	23%	19%
2 Years	55%	38%	33%
3 Years	63%	47%	41%

Source: Bureau of Justice Statistics, 1989.

re-imprisoned. Tables 3 and 4 summarize the most recent recidivism rates as certified by the U.S. Department of Justice. The data show that, by in large, there has been no change in the recidivism rates between prisoners released in 1983 and those released in 1994. While the return to prison rate is not as high as some might believe (about 40 percent), the data also show that over 60% of offenders are being re-arrested, albeit for mostly property and drug related crimes. Only about half of the returns to prison are for new felony convictions with the other half being for technical violations.

These trends and other concerns have encouraged states to re-examine their current sentencing and correctional policies. They are concerned that the use of imprisonment may be excessive and, as noted by James Q. Wilson, may have diminishing returns on the crime reduction agenda.<sup>3</sup> According to Wilson, judges have always been tough on violent offenders, incarcerating them with relatively long sentences. However, as states have expanded incarceration, they have dipped “deeper into the bucket of person eligible for prison, dredging up offenders with shorter and shorter criminal records.”<sup>4</sup> Thus, “lengthening time served beyond some point will, like increasing the proportion of convicted criminals sent to prison, encounter diminishing marginal returns” in terms of crime reductions.<sup>5</sup>

One option for reducing imprisonment that is receiving greater attention in the literature and in practice is the more expanded use of risk assessment instruments. These devices are used to identify prisoners by risk level which in turn can be used to better inform the decisions to incarcerate, release and supervise. As risk assessments take on greater use and credibility, the private and public sector offer a wide variety of such instruments. But do they work, for whom and under what conditions?

The primary objectives of this article are to provide the reader with an overview of these instruments and how best to use them. This is an important policy issue as risk

assessment can be of great value in correcting any major imbalances in the appropriate use of imprisonment and efforts to reduce recidivism rates.

## II. Some Basics About Criminal Behavior

One must understand a number of key attributes about criminal behavior that underpin the use of risk assessment. First and foremost, the vast majority of all major categories of crime occurring in the United States (and elsewhere) are committed by young males. Of the 13.7 million persons arrested in 2002, 60 percent are males between the ages of 13 and 39. The vast majority (nearly 40 percent) of these arrests are for drug and alcohol crimes (use, possession, sale, drunkenness, disorderly conduct).<sup>6</sup> Second, so-called criminal careers, in part because they are strongly associated with age, have both an initiation and termination phase.<sup>7</sup>

Third, most persons who commit crimes are not career criminals. Criminal behavior is acquired or learned over time based on how one is raised and the opportunities with which one is presented to either commit or refrain from crime. Moreover, most persons who commit serious crimes do not do so regularly but on an irregular or episodic basis.

Finally, changing the length of stay in prison (either increasing or reducing it) by a few months has no impact on recidivism rates or aggregate level crime rates within a state. The most recent study by the U.S. Department of Justice on recidivism cited earlier, found no relationship between length of stay and recidivism. Recent studies in Texas and Kentucky have come up with similar findings.<sup>8</sup> However, increases in the length of stay have had a major impact on the growth of the nation’s prison population. If the United States had the same length of stay today as in 1990 (22 months), the nation’s prison population would be reduced by 1/3 or about 400,000 prisoners.

## III. Implications for Risk Assessment

As the above discussion shows, there is considerable variance in criminal behavior, and persons under the control of our massive correctional system pose varying levels of risk to public safety. Yet there has been a tendency to adopt legislation and policies that discourage the application of risk assessment. Such reforms have sought to either eliminate or reduce discretion by adopting laws that require mandatory minimum sentencing, truth in sentencing,

**Table 4**  
**1994 Releases — 15 States**

Follow-Up Period	Re-Arrested	Re-Convicted	Re-Incarcerated	Re-Incarcerated New Sentence
6 Months	30%	11%	NA	5%
1 Year	44%	22%	NA	10%
2 Years	59%	36%	NA	19%
3 Years	69%	47%	52%-40%*	25%

Source: Bureau of Justice Statistics, 2002.

\*Includes rates with (52%) and without California (40%).

and the abolition of indeterminate sentencing with discretionary parole release powers. Fortunately, most states still have broad discretionary powers at the key decision points of sentencing, release and supervision. When applied properly, risk assessment can and should serve as a major method for managing correctional populations.

In corrections, the primary “risk” to be managed is public safety. By studying the attributes of persons who commit crimes with those who do not, it is possible to reduce criminal incidents. Those who pose a “high” risk for re-offending should be assigned to the more restrictive and most treatment based forms of intervention. This can be achieved by either enhancing the security surrounding the high-risk prisoner or by exposing the prisoner to treatment services that will result in the prisoner suppressing or negating her tendencies to act out in the future. Conversely, those that pose the least level of risk should experience the least restrictive and expensive forms of intervention. The key assumption is that we can identify high-risk inmates or offenders and that by responding to that risk, public safety is enhanced.

Failing to use risk assessment properly will endanger public safety in two distinct ways. First, and most obviously, high risk offenders, those who are very likely to commit new crimes will either be released from prison before they should or when they are released will not receive the proper level of supervision and treatment. Supervision and treatment is most effective when it is applied to those who pose the highest risk to recidivate.

The second and least understood threat to public safety is when low risk offenders are subject to unnecessary levels of supervision or “dosages” of treatment. Not only are valuable and increasingly scarce resources being diverted from those who truly need them, several studies have shown that exposing low risk offenders to treatment actually increases their recidivism rates.<sup>9</sup> Why this occurs is not fully understood. It may be that the services were poorly delivered. But another explanation is that if low risk offenders are told via the treatment process that they are “sick” and are in need of treatment, they begin to accept and internalize criminal or deviant behavior.

#### IV. Limits on Risk Assessment

Much has been written on the ability to assess risk. Succinctly put, while there is evidence of the predictability of the behavior of groups (macro level behavior), it is very difficult, if not impossible, to predict the behavior of individuals within these groups (micro level behavior). In part, this is due to the fact that there are so many situational or environmental factors that are unpredictable in terms of how they impact human behavior.

The other two factors that limit our predictive capabilities pertain to the *accuracy* of our measurements and the *low frequency* or *base rates* of serious incidents or events. If we do not have accurate measurement of risk factors and the behavior to be predicted by risk, there will be a large amount of “noise” in our risk assessment

systems. Accuracy is the function of the dual concepts of reliability and validity. Reliability has to do with consistency by staff in making assessments (both inter and intra reliability)<sup>10</sup> Validity means that the risk factors are known to be associated with the behavior to be predicted.

One can assess risk through several means. First, one can use *professional clinical judgments*. Historically, this has been a very common methodology in corrections to assess prisoners for parole, security threat group membership, trustee positions, and placement in administrative segregation or protective custody. It has been favored simply because it is easy. All that is necessary for clinical judgment is a professional expert, who has the skill and experience to do the assessment. Generally no forms are required to be filled out, and no tests for reliability and validity are needed. Unfortunately, it has also been shown that professional judgments are, by far, the least accurate risk assessment method.<sup>11</sup> Too often, these judgments are no more than “gut” reactions that often vary from expert to expert on the very same offender. Ironically, corrections tend to rely upon this risk methodology for some of its most important decisions such as release to the community or placement in high security units.

Dissatisfaction with this approach has led to the development of what some have called *actuarial based assessments*. These methods are very common classification tools in correctional settings. Longitudinal studies on prisoners and offenders identify those prisoner attributes that are associated with misconduct, escapes, and recidivism. These risk factors are then translated into a scoring system, which produces a numeric score that can then be converted into a risk category. A major advantage of these methods is that it significantly enhances the level of reliability and validity associated with risk assessment. Further, the skill required to do the assessment is not as great as it is for professional judgment based methods.

One concern with these methods, however, is that they may be overly rigid and do not allow for any professional judgment. Clearly, risk assessment instruments are not foolproof. For these reasons, risk assessments should allow for modification and the addition of supplemental information that is not incorporated into the actual scoring system. Systems that allow for such adjustments are called *adjusted actuarial assessments*.

Finally, risk factors can be classified as either *static* or *dynamic*. Static factors tend to be historical and unchanging. For example, the age at first arrest, history of violent felony convictions, and the severity of the current crime are static risk factors that often appear in risk assessment measures. Dynamic factors are items associated with future behavior that can change over time. Current employment status, education level, and marital status are examples of dynamic factors that are situational in nature and can change rapidly. There is some indication that dynamic factors are more important in predicting risk than historical items, as the former better describe the individual’s current life situation.<sup>12</sup>

**V. Suggested Requirements for the Use of Risk Assessment Instruments**

Before a jurisdiction decides to adopt a risk assessment system, it needs to conduct the following levels of analysis to ensure the risk assessment instruments will work as designed. Unless these steps are completed, application of the risk assessment process is likely to prove more harmful than helpful as offenders will be improperly classified leading to higher recidivism rates and inefficient use of agency resources. These requirements are based on a number of studies conducted by the author and others for several correctional agencies that have agreed that risk assessment is critical but were uncertain on whether to develop their own process or purchase one that is commercially available.

**A. Risk Assessment Instruments Must Be Tested On the Specific Correctional Population**

Correctional agencies tend to borrow or simply buy another risk instrument system that has been developed on another population that may not reflect the attributes of its offender population. In research terms this issue has to do with the “external validity” of the instrument and the ability to generalize the findings of a single study upon which the instrument was based to other jurisdictions. Generally, if a risk assessment instrument has not been tested on multiple populations under varying conditions, it will not work well on populations on whom it has not been tested.

One example of this phenomenon is the widely advertised and commercially available LSI-R model that was developed in Canada on select correctional populations.<sup>13</sup> While many studies have found the system working well on Canadian populations, recent studies in Washington and Pennsylvania show that many factors used in the LSI-R scale are not predictive of re-offending behavior in those jurisdictions.<sup>14</sup>

**B. An Independent and Objective Researcher Must Conduct Inter-Reliability and Validity Tests**

Independent researchers who do not profit economically from proving the effectiveness of the instrument must complete both inter reliability and validity tests. One should expect the reliability and validity tests to take about 12 months.

The inter reliability test consists of taking a representative sample of offenders (a minimum of 100 cases) who will then be independently scored using the proposed instrument by two staff who have been trained in using the proposed instrument. Any item on the instrument that does not reach the 80% agreement level should be deleted. If the instrument does not demonstrate an agreement level of 90%, it should not be implemented.

The validity test consists of drawing a sample of offenders who were sentenced to probation or released from prison and tracking them for a period of 2–3 years. Since most jurisdictions are anxious to have the risk assess-

**Table 5  
Examples of Risk Factors That Predict Recidivism**

Static Factors	Relationship to Recidivism
Age at 1st Arrest	Earlier age means higher rates
Gender	Males have higher rates — more violence
Prior Supervision	Prior violations mean higher rates
Mental Health	Past problems mean higher rates
Current Offense	Robbery, burglary, theft have higher rates
Substance Abuse	Past problems mean higher rates
Alcohol Abuse	Past problems mean higher rates
Marital Status	Never married means higher rates
Education Level	Low education means higher rates
Past Employment	Poor past record means higher rates
Past Gang Affiliation	Involvement means higher rates
Criminal Peer Groups	Past involvement means higher rates
Dynamic Factors	Relationship to Recidivism
Current Age	Older (40+) means lower rates
Current Education Level	Higher achievement means lower rates
Current Marital Status	Single means higher rates
Prison Class Level	Lower Class Level means lower rates
Prisoner Conduct	Poor record means higher rates
Current Employment	Employed means lower rates
Financial Assistance	Assistance means lower rates
Current Peer Relations	Association with offenders means higher rates
Residency	Stable location means lower rates
Treatment	In treatment (if needed) means lower rates

ment instrument implemented as quickly as possible, the validation sample often consists of persons sentenced or released 2–3 years prior to the study being conducted. The research must then be able to perform a variety of bi-variate and multi-variate statistical tests to determine which items should be used, the weights assigned to each item and the proper risk level scale.

**C. The Instruments Must Allow for Dynamic and Static Factors that Have Been Well Accepted and Tested in a Number of Jurisdictions**

As noted above, the risk instrument should consist of static and dynamic risk items. Table 5 summarizes commonly used risk factors that a number of validation studies have repeatedly validated. These are separated into static and dynamic categories. The latter are generally the more powerful predictors as they reflect the person’s current social and economic environment. If an instrument does not employ dynamic factors, it is likely not to perform accurately.

**D. The Instruments Must Be Compatible With the Staff’s Skill Level**

A wide variety of risk assessment instruments are available to jurisdictions. However, they require very different skill levels. The more traditional risk assessment forms generally consist of no more than 10–12 items and are based on factual items that can be gleaned from court and case files and require minimal interpretation by staff trained in their use. Age at first arrest, current age, and number of probation violations within the past five years are examples of these types of factors. For these instruments staff needs little academic training to conduct an accurate assessment.

The more complicated risk assessment items require a well-structured interview and a review of all relevant case file data. These instruments often have 40–60 items with several sub-scales reflecting varying domain risk levels (e.g., domains reflecting criminal history, drug and alcohol usage). Such instruments are unlikely to achieve the minimal levels of reliability and validity unless the staff is highly skilled in the application of psychometric assessment forms. Unless the agency has such staff, the use of these instruments is not recommended. One should not be too alarmed or concerned if an agency decides to rely upon the more “basic” risk instrument. These tools are far easier to implement, are less expensive to use, and often have the same predictive capabilities as the so called more sophisticated instruments.

#### **E. There Must Be an Opportunity to Depart from Scored Risk Levels Based on a System of Structured Clinical Judgments**

No system should rely exclusively on a scored risk assessment to make a final risk determination. All instruments, regardless of their reliability and validity attributes, will result in what is referred to as false positives and false negatives. The former represents cases where the offender was predicted to recidivate but did not while the latter are those who were expected not to recidivate but did. Professional judgment, if properly exercised, can serve to reduce the number of false positives and negatives.

#### **F. The Risk Assessment Must Have “Face Validity” with Staff, Offenders and Policy Makers**

The instrument and the risk assessment process need to be credible with all of the parties who are directly impacted. Staff assigned to the risk assessment process must believe that the instrument actually works and will help inform the decision process for sentencing, release, and supervision decisions. The decision makers (judges, parole boards, and correctional administrators) must also have confidence in the risk assessment process and demonstrate through their decisions that they are using it. In particular, statistics should show that offenders assessed as low risk have lower rates of incarceration, have shorter sentences, have higher rates of being paroled and receive lower levels of supervision. High risk offenders should display the opposite trends.

Finally, the offender must believe that the process is credible and will be used by decision-makers. The process should be transparent so that the offender is aware of what factors are being used and how one is being scored. This is especially helpful for risk instruments that employ dynamic risk factors — items that can change based on the offender’s social and economic situation (employment, residency, and family relations). By understanding these dynamic risk factors, the offender can take actions or seek support that will actually reduce his risk to public safety.

## **VI. Conclusions**

The current fiscal crisis for most state and local government agencies is likely to continue for some time. Consequently, there will be increased pressures to cut correctional budgets which can be accomplished by either reducing the numbers of persons under correctional supervision or reducing the costs of how they are managed. These economic pressures are coupled with the realization that further increases in the record numbers of persons we now incarcerate or place on probation and parole would have diminishing returns on public safety. Put differently, we can no longer afford to treat all offenders the same way. Nor should we.

“Offenders” like any class of humans, reflect varying levels of risk to public safety which requires a more enlightened approach to intervention based on risk. The good news is that there is a large number of offenders who require little if any intensive supervision and treatment. Thanks to the powerful effects of maturation, most “criminals” naturally desist from their criminal activities and move on to a more conforming lifestyle. A considerable amount of tax dollars can be saved by simply “doing nothing”. For this group we need to significantly reduce periods of imprisonment, probation and parole supervision.<sup>5</sup>

But there is another significant group that poses a relatively high risk to public safety and demands the full attention of those correctional agencies charged with protecting the public from further victimization. Proper deployment of limited correctional resources cannot happen until we exploit the readily available technology of risk assessment. Until this happens, the public and policy makers will rightly have little confidence in the ability of corrections to manage risk and improve public safety.

## **Notes**

- <sup>1</sup> Anthony M. Kennedy, *Speech at the American Bar Association Annual Meeting: An Address by Anthony M. Kennedy, Associate Justice, Supreme Court of the United States*, Aug. 14, 2003.
- <sup>2</sup> U.S. Department of Justice, Bureau of Justice Statistics, *Prevalence of Imprisonment in the U.S. Population, 1974–2001* (Washington, D.C., Aug. 2003).
- <sup>3</sup> James Q. Wilson, *Crime and Public Policy*, in *CRIME: PUBLIC POLICIES FOR CRIME CONTROL 489–507* (James Q. Wilson & Joan Petersilia eds., 2002).
- <sup>4</sup> *Id.* at 501.
- <sup>5</sup> *Id.*
- <sup>6</sup> U.S. Department of Justice, Federal Bureau of Investigation, *Crime in the United States, 2002* (Washington, DC, 2003).
- <sup>7</sup> Robert J. Sampson & John H. Laub, *Life-Course Desisters: Trajectories of Crime Among Delinquent Boys Followed to Age 70*, 41(3) *CRIMINOLOGY* 555–592 (2003).
- <sup>8</sup> Kenneth McGinnis & James Austin, *Texas Board of Pardons and Paroles, Texas Board of Pardons and Paroles Guidelines Project* (Austin, TX, 2001); Kentucky Department of Corrections, *Recidivism in 1996–1998* (Frankfort, KY, 2001).
- <sup>9</sup> DON A. ANDREWS & JAMES BONTA, *THE PSYCHOLOGY OF CRIMINAL CONDUCT* 260 (Cincinnati, OH: Anderson Publ., 3rd ed., 2003).
- <sup>10</sup> In this context, inter-reliability means the ability of two persons to reach the same risk assessment for the same

offender; intra-reliability means that the same person used the same scoring process each time she scored an offender.

- <sup>11</sup> Stephen Gottfredson & Don Gottfredson, *Accuracy of Prediction Models*, in CRIMINAL CAREERS AND "CAREER CRIMINALS" 212–290 (Alfred Blumstein, Jacqueline Cohen, Jeffrey A. Roth & Christy A. Visher eds.) (Washington, DC: National Academy Press, 1986); Norval Morris & Marc Miller, *Predictions of Dangerousness*, in 6 CRIME AND JUSTICE: AN ANNUAL REVIEW OF RESEARCH 16 (Michael Tonry & Norval Morris eds., 1985).
- <sup>12</sup> Raymone Wood & Henry R. Cellini, *Assessing Risk of Recidivism in Adult Male Sexually Violent Offender*, 3(4) OFFENDER PROGRAMS REPORT 49–50, 60–61 (1999).
- <sup>13</sup> For a recent summary of the validity of the LSI-R and its history, see Lina Girard & J. Stephen Wormith, *The Predictive*

*Validity of the Level of Service Inventory — Ontario Revision on General and Violent Recidivism Among Various Offender Groups*, 31(2) CRIM. JUST. & BEHAV. 150–181 (2004).

- <sup>14</sup> Washington State Institute for Public Policy, *Washington's Offender Accountability Act: An Analysis of the Department of Corrections' Risk Assessment*, (Olympia, WA, Dec. 2003); James Austin, Dana Coleman, Kelly Dedel-Johnson & Johnette Payton, *Reliability and Validity of the LSI-R Risk Assessment Instrument* (The Institute on Crime, Justice and Corrections at the George Washington University, Washington, DC, 2003).
- <sup>15</sup> I argue that for low risk offenders, prison terms should be reduced, and, probation and parole terms either eliminated or limited to 3–6 months with a greater emphasis on fines and community service orders that can be completed in a few weeks.