

VALIDATION OF A CORRECTIONAL CLASSIFICATION SYSTEM

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INTRODUCTION

A parolee is given constraints on where he can live, whom he can see, the rules he must follow, and the number of contacts required with his agent. The Illinois Workload Management System rejects the traditional caseload concept that all community supervision and parole cases are equal in requirement for the parole agent's time, the client's needs, and the probability of client failure. Research has shown that the number of contacts *alone* is unrelated to the success of parole. Therefore, the classification system must identify factors which indicate the parolee's potential for successful parole completion, so that *effective* services can be provided. This is done by analyzing the client's risk and need levels.

Risk assesment measures dimensions of behavior such as the client's stability or violence in order to define the minimal amount of supervision required to protect public safety while helping the client to succeed in completing parole. *Needs assesment* measures the client's basic needs, such as living conditions, food, clothing, education, and the client's personal problems, such as drug abuse and emotional instability, in order to identify program needs.

Scales for the risk and needs levels were developed from survey data gathered from all Illinois parole agents on the entire parolee population. Input was also gathered from district supervisors. Forms were then designed with the items shown in Figure 1, to permit scoring to establish low, medium, and high levels for risk, and for needs, to indicate necessary supervision level. The classification level for each client comes from these two forms, with a rating of low, medium, or high. To determine a parolee's overall risk level, the agent assesses the propensity for rule and law violations. Two forms are used. The A Form is established from the client's history prior to incarceration, as an initial evaluation, completed 30 days after release from prison to parole status. The B Form is based on current information during parole, with reevaluations every 60 to 90 days.

Each item on each of the four forms is

weighted to the maxima shown in Figure 1 with grade levels for low, medium, and high for risk and for needs. These scores determine the parolee's classification level, which determines how much time the agent will spend with the parolee, and the level of services which the agent will try to provide. However, all parolees are classified *high* for the first 30 days until the agent is well acquainted with the case. After 30 days, the parole agent again evaluates the parolee's risk and needs levels, and reevaluates each case every 60 or 90 days. The system is then designed to determine the probability of successful termination of parole, and to assist agents in developing effective case action strategies. This validation study examines the extent to which these instruments can accurately predict parole outcome.

RESULTS

The data base contained 1168 terminated cases of a total of 4000 cases as of March 1982. Of the terminated cases, 368 were from Cook County, and 800 were from elsewhere in Illinois.

Six factors emerged from the research.

- 1) The risk, scorebased casework level, and final casework levels of the reevaluation instruments were better predictors than initial risk evaluations.
- 2) There is some hope of predicting short-term outcomes from knowledge of the supervision level. The outcome of 2/3 of the cases was appropriate to their classification. The reevaluation risk scale alone does an excellent job of identifying clients most likely to succeed, but does not distinguish well among the rest.
- 3) Demographic information does not have a strong relation to termination type, nor does it add significantly to the variance explained by the scales. The most useful of the demographic items was age, meaning that older clients do better on parole, at least in the short term.
- 4) Two further analyses of termination types were conducted. The best results were obtained with the following order of negative termination from most serious to least serious:

new felony, technical violation, new misdemeanor, and those absent without permission.

5) Independently, the risk and needs scales hold some predictive power, but the B-Risk scale is the best, accounting for 31% of the variance in termination type, as shown in Figure 2. For the possible combinations, the B-Risk and A-Needs combination has the best potential, explaining 48% of the variance. The client's pre-incarceration service needs and the most recent supervised assessment best identify the propensity for parole failure or success. This combination provides very few mispredictions for either the low or the high end of the scale.

6) These results can be used not only for continuous validation, but also for refinement of present instruments into administrative prediction scales comparable to adult institution dangerousness and adjustment scales. It would also be well to construct and test a third scale of the client preincarceration environment, to distinguish the home and community setting from offender characteristics.

TERMINATION TYPE REANALYSIS

Regression analysis was repeated with a new coding of termination types, from least to most serious (1 - 6) in the order: *discharge recommended; discharge expiration; absent without leave; technical violation; new misdemeanor; new felony.* All other terminations, including transfers, were excluded.

Statewide, there were 241 cases with an "A" form completed and terminated. With term types so coded, the A-Risk items explained 13% of the variance, compared to 11% in the previous analysis. *Agent's impression of client attitude* was the first entry, explaining 7% of the variance in the stepwise regression analysis. Remaining items brought the multiple R² to .13.

On the A-Needs scale, *agent's impression of needs* explained 8% of the variance. *Living arrangements* were next in stepwise regression, and brought the R² to .09. (See Figure 2.) *Academic/vocational* and *psychosocial adjustment* items were next, and brought the R² to .10. The effect of the other four variables was negligible.

For the statewide B-Risk scale, *compliance with the parole agreement, social interaction,*

FIGURE 1: EVALUATION SCALES

A-Risk Preincarceration Scale

Item	Maximum Weight
Prior felony convictions	4
Prior probation periods	4
Probation/parole revocations	4
Age, 1st conviction	4
Alcohol abuse history	4
Other substance abuse	4
Percent of time employed	2
Address changes past year	3
Agent appraisal of attitude	5
Robbery, burglary, assaults	4
Score range: 0-40	

B-Risk Parole Evaluation Scale

Item	Maximum Weight
Total felony convictions	3
Probation/parole revocations	2
Age at 1st conviction	2
Current alcohol abuse	5
Current abuse, other substance	3
Time employed, or in school	2
Address changes	3
Current interperson problems	5
Social interaction	3
Comply on parole agreement	5
Use community resources	4
Burglary, robbery assault	3
Score Range: 0 - 40	

A & B Needs Scales

Item	Maximum Weight
Basic needs	7
Living arrangements	6
Emotional instability	8
Mental ability	6
Psychosocial adjustment	6
Substance abuse, all:	7
Academic/vocational	7
Agent impression of client need	7
Score Range: 0 - 54	

FIGURE 2: EVALUATION VARIABLE RANKING BY STEPWISE REGRESSION

(* indicates significant predictors; F-ratio 2.49 or more.)

A-Risk, Preincarceration

- *Attitude
- *Age, 1st conviction
- Alcohol abuse
- Prior convictions
- Time employed, 12 months
- Felony convictions

B-Needs, Preincarceration

- *Impression of client needs
- Living arrangements
- Academic/vocational
- Psychosexual
- Emotional instability
- Substance abuse

N = 241; Explained variance = 14%

B-Risk, During Parole

- *Keep parole agreement
- *Social interaction
- *Employment, 12 months
- *Prior convictions
- Age, 1st conviction
- Felony convictions

B-Needs, During Parole

- *Impression of client needs
- *Substance abuse
- *Living arrangements
- Academic/vocational

N = 541; Explained variance 35%

TABLE 1: CORRECT OUTCOME PREDICTIONS BY TIME OF EVALUATION (%)

Instrument	Parolee Scores:		Low		Medium		High		Predictive Accuracy %	Total Cases N
	Outcome, predict:		Success		Success		Failure			
	n	%	n	%	n	%	n	%		
Preincarceration:										
A-Risk Level	11	92	30	81	100	44	46		278	
A-Needs Level	113	69	45	51	15	56	67		278	
During Parole:										
B-Risk Level	281	96	321	85	116	56	79		877	
B-Needs Level	590	86	85	55	22	55	85		877	
Combinations:										
A-Risk + A-Needs	11	92	30	81	100	44	46		278	
A-Risk + B-Needs	8	89	20	91	54	39	42		169	
B-Risk + B-Needs	281	96	322	85	116	53	79		877	
B-Risk + A-Needs	34	95	63	81	40	74	82		169	

and *employment* items explained 30% of the variance in termination type. *Address change* and *interpersonal problems* had less predictive power than in the first analysis. On the B-Needs scale, all items explained 25% of the variance in termination type. In recoding termination type, making *absent without leave* less serious and removing extraneous terminations, most A-Risk and B-Risk items gained predictive power, and the scales gained slightly in predictive power.

There were 541 cases which had a B Form completed before termination according to the evaluation code, with a loss of 60 cases from

the previous total of 601 cases. The *compliance with parole agreement*, *social interactions*, *prior felony convictions*, and *employment* items entered the stepwise regression in that order, and accounted for 33.4% of the variance in termination type. *Prior revocations*, *interspersonal problems*, *alcohol abuse*, *address change*, and *offence* items added little to the predictability of termination type. For all items except *agent's impression of client needs* and *substance abuse*, the independent multiple R²'s decreased in the second analysis, but all items together accounted for 27% of the variance. Since there

was some difference in analysis results comparing the Cook County (Chicago) results with the remainder of the state, it is recommended that scales should be constructed and tested separately for each jurisdiction at this state of the art.

ASSESSMENT: COMBINED INSTRUMENTS

The risk and needs scales held some predictive power when used independently. Little added variance was accounted for when client characteristics were included in the regression models. The A-Risk and B-Risk and the A- and B-Needs scales were combined to find the predictive power of conjoined instruments. At this point, the B-Risk scale had the best predictive power. The 12 items accounted for 31.4% of the explained variance in termination type. The B-Needs items explained 25.4% of the variance, and A-Risk and A-Needs items accounted for 13.3% and 10% of the variance respectively.

The combination of the B-Risk scale with the A-Needs scale held the greatest predictive potential, explaining 48.2% of the variance. The Needs items of compliance with parole and social interaction, and the risk item, substance abuse were the only significant variables. The employment and the agent's impression of client needs items entered second and third, but did not independently reach significant F-ratios. The two Risk scales combined to explain 46% of the variance in the outcome variable. Both prior felony conviction items had significant F values, and compliance with the parole agreement and the employment items from the B-Risk scale were significant. Except for age at first conviction from the A-Risk scale and social interactions from the B-Risk scale, remaining items had only negligible effect on the predictability of the parole outcome.

Separately, the A- and B-Needs scales accounted for only 25% of the variance, but when combined, they accounted for 44.7%. Of the 6 significant items, 5 were on the reevaluation scale. These, in order, were *agent's impression of client needs, academic/vocational, living arrangements, alcohol or drug abuse, and psychosocial adjustment*. These, with the sixth variable, *emotional stability*, from the A-Risk scale explained 42.2% of the variance.

The combination of the A-Risk and A-Needs scales produced the least powerful results, explaining only 17% of the outcome variance. The results were about the same with the combination of the B-Risk and the B-Needs scales. The combination of A-Risk and B-Needs scales, and the B-Risk with the A-Needs scales were used to examine the levels of successful and unsuccessful outcomes.

Three points must be made here. 1) The risk scale still guides the calculation of the scorebased casework level. Only in the situation where a client is scored high on the needs and low in the risk scales, will the needs level be taken into account. 2) Because the agents did not participate in this analysis, the casework level was represented by the matrix calculation only. 3) Only those who were evaluated with both an initial and a reevaluation were included in the interinstrument calculations.

For all cases, the B-Risk and the A-Needs unity identified the lowest percentage of false positives, which was 5% of all low parole evaluations. The B-Risk - B-Need combination identified 4.4% unsuccessful lows, and recognized 2% more successful high evaluated parolees. The B-Risk - A-Needs combination misidentified only 16 of 169 clients. The A-Risk - B-Needs combination misclassified 61% of their high clients. Despite the smaller number of cases, the B-Risk - A-Needs statistics were highest in explained variation. Some support was generated for the B-Risk - A-Needs scales to aid in predicting outcome.

Through the various analyses, the B-Risk instrument seemed to provide the most useful predictive potential. It had almost equal power to identify misclassified clients when used with both needs instruments. Joining the various instruments did contribute to the predictive accuracy of the scales.

ASSESSMENT OF PREDICTIVE RESULTS

The seriousness of misprediction and its potential hazard to public safety must be examined. If the instruments or combination of instruments are classifying clients as *low* or *medium*, and these clients are actually committing serious violations, such as new felonies or technical violations, there could be societal danger. Clients classified *low* should

be eligible for early discharge. These decisions cannot be made effectively if many parolees are returning to prison for serious offenses. Further, if a large proportion of clients rated at a high casework level are not violating the law, or return to custody with only minor offenses, a great deal of agent time and energy will have been wasted. In times of limited resources, rising rates of violent crime, public concern, and political pressure, great care must be taken when implementing classification system decisions.

To test the seriousness of both misprediction and predictive accuracy, the specific types of positive and negative terminations were examined. Termination type frequencies were calculated for each casework client level, *low*, *medium*, and *high*, for successful and unsuccessful outcomes, and crosstabulated for all instruments and combinations. Results of interest are shown in Table 1. The incidence of correct and mispredictions should be noted for all scale trials.

When the A-Risk scale was combined with the B-Needs scale ($n = 169$), results were similar to those of the individual instruments. There were few unsuccessful lows and mediums, but most of the accurately classified highs violated parole guidelines, or were convicted of a felony. Of all three levels, 65% who terminated successfully were discharged from supervision via expiration of sentence. The hypothesis that the B-Risk - A-Needs combination provides the most predictive accuracy gained further support in this more precise analysis. About 75% of the negatively terminated mediums and highs were terminated for the more serious violations. Conversely, there were 2 misrepresented lows, with the less serious outcomes of absent without leave and a misdemeanor offense. Results were also impressive for those successful cases. A larger percent of lows was recommended for discharge than of mediums and highs. With other positive terminations removed, 41% of the lows and 15% of the mediums were recommended for discharge. None of the 8 highs were recommended to the parole board for early discharge.

Prediction of outcome for the combination of the B-Risk and A-Needs scales was more accurate than those projections made from the scales individually. Few highs and mediums

were recommended for early release. All clients who were recommended and received an early discharge were classified as *low* or *medium*. On the other end of the continuum, the more serious violators were classified *high* while no *low* rated clients committed the more serious offenses. With this scale combination, the clients classified at the low end of the scale were usually successful, many being recommended for early discharge. *All of the serious violators were rated as either medium or high on the B-Risk - A-Needs scales combination.*

Thus, if predictions for recommendations for early discharge are to be made, and those clients with the most potential to commit the more serious offenses are to be identified, the B-Risk - A-Needs combination should provide a start toward accurate projections. This combination has already provided few mispredictions at both ends of the parolee rating scale. It has demonstrated that the offenders with the greatest potential for committing the least serious and the most serious offenses can be identified in most cases. Parole review board members should find these instruments for recommending low or medium classified clients for discharge and for testing results of such use.