DIFFERENTIAL CLASSIFICATION AND SUPERVISION OF PROBATIONERS: IS THERE AN EFFECT ON OUTCOME?

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ABSTRACT

Needs/Risk Assessment scales are increasingly being used by criminal justice agencies for decision making. While validation studies indicate that many instruments are transferable, most previous studies ignore assessing the effects of classification assignment and supervision content on probationers' behavior. In order to address the concerns of probation officials, a 19 month longitudinal study of 901 adults involving statistical prediction was conducted. As hypothesized, the analysis showed high interrelation between two classification instruments and that the risk scale is a greater determinant of supervision level than the needs scale. The analysis also demonstrated that reassessment more often lowers than raises the level of supervision prescribed by the initial assessment. Unexpectedly, the findings rejected the hypothesis that the Iowa risk scale had higher predictive efficiency than the Wisconsin or Georgia instruments. As predicted, probationers with high risk scores were found more likely to have their probation revoked than those with low risk scores. The data supported the major hypothesis that among those probationers classified as maximum risk, those with high contact with officers have higher success rates than a comparison group with low contact. In contrast, contact did not appear to be related to outcome for medium and minimum risk offenders. As hypothesized, the results also confirmed that the reassessment instrument had higher predictive efficiency than the initial assessment. Finally the report presents findings on time to recidivism and a summary of factors useful for predicting probation outcome in Harris County, Texas.

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Considerable resources and money have been expended on developing valid instruments which identify the likelihood of recidivism of probationers. However, predictive validation studies generally fail to examine the impact of actual frequency of officer/probationer contact and the relationship of time at risk to probation outcome. This project attempts to compensate for these past deficiencies by employing a controlled longitudinal research design which analyzes the relationship of officer/probationer contact and supervision assignments to recidivism. Moreover, this report examines the validity of reassessment procedures and their implications for probation supervision strategy. It also analyzes the relationship of time at risk to specific types of outcome. Finally, this report discusses factors useful in predicting probation outcome in Harris County.

In view of the fact that classification criteria and service contacts are used by many probation departments to establish workload standards, it is critical that services be accurately defined and their effects on outcome understood. The results of this study contribute both to this understanding and to the development of valid predictive instruments useful for probation departments serving urban areas.

PREFACE

This study is part of Harris County Adult Probation Department's continuing analysis of its classification system and supervision strategies for probationers. Because current research has questioned the universal application of classification systems, our agency deemed it appropriate to conduct a comparative evaluation and validity study of three instruments, two of which are currently used by this department. Another objective of this project was understanding the effects of differential classification and supervision on probation outcome. This aspect of the study addressed the issue of face-to-face officer/probationer contact in relation to recidivism and the relationship between risk level and time to probation outcome. Finally this analysis identified the most predictive outcome variables for the purpose of developing a valid and efficient risk assessment device for this jurisdiction in the future.

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EXECTIVE SUMMARY

Historically, only a minority of probation departments have completed validation studies of their own risk assessment instruments. Most large agencies employing a classification system have borrowed from other jurisdictions. In some instances, these programs have adopted parts of other instruments or added items to meet local policy needs. While the merits of establishing valid screening mechanisms to determine appropriate supervision strategy and case management objectives for probationers is widely accepted, serious questions have been raised about the universal application of such classification systems. Confronted with shifting criminal justice priorities from the community to prisons, it is imperative that limited resources available to probation be effectively utilized to protect the public and rehabilitate offenders. Given the growing controversy over adult probation, any measures which enhance service credibility and administrative efficiency will be welcomed by a budget conscious public and advocates of community corrections.

Unfortunately, past research offers minimal assistance to policy makers. The majority of classification studies have been confined to the descriptive level, with poor control over documentation of supervision activity such as frequency of officer/probationer contact and outcome. Moreover, the role of reassessment has been ignored as well as evaluation of time to recidivism for different risk levels of probationers. The study described in this report attempts to address some of the basic issues that criminal justice policy makers have with respect to the effective employment of classification models for persons placed on probation in large urban jurisdictions:

- How much intercorrelation is there among different classification models in supervision level assignments?
- How well do classification instruments identify high and low risk probationers?
- Are risk factors more important in determining supervision assignments than needs factors?
- Does reassessment alter supervision strategy?
- Does the reassessment instrument have higher predictive efficiency than the initial assessment device?
- Does the frequency of officer/probationer contact have differing effects on outcome for varying risk categories?
- Is there any relationship between time on probation and recidivism?

To explore these issues, we conducted several types of statistical analyses including cross tabulations, chi square, means cost ratings, coefficient of predictive efficiency and Kendall's tau. The study population consisted of 901 Harris County felony and misdemeanor adult probationers randomly selected between May 14, 1984 and August 6, 1984. This represented 15 percent of the total probationers processed by the Harris County Adult Probation Department during this period. These cases were tracked through December 15, 1985.

Although the data are limited to Harris County, we believe our findings have implications for other jurisdictions. In view of the fact that this research project evaluated the (Wisconsin) classification model adopted by the Texas Adult Probation Commission for the state's probation departments, of which Harris County is the largest, we believe the results have special significance to this state.

MAJOR FINDINGS AND CONCLUSIONS

Seven major hypotheses directed this study.

Hypothesis I: There Is High Intercorrelation Between The Wisconsin And Georgia Risk/Needs Assessment Instruments But Relatively Low Intercorrelation Between The Iowa Risk Assessment Instrument And Each Of These Instruments.

The results supported this hypothesis. The Georgia and Wisconsin classification models are more likely to make the same risk/needs assessment for a probationer than the combination of Iowa and Wisconsin or Iowa and Georgia models. That is, the Wisconsin and Georgia instruments are likely to assign the same population of probationers to similar risk levels or supervision categories. This means that for all practical purposes the two instruments are interchangeable if we are concerned about staff workload distribution. It should be noted that the Wisconsin scale assigned a larger proportion of probationers to the maximum risk category (17.6 percent) compared to the Georgia instrument (11 percent). Both scales assigned 31 percent of probationers to medium risk supervision level. The majority of probationers were assigned to minimum risk supervision (Georgia=57.9 percent; Wisconsin=50.9 percent). The Iowa scale placed 80 percent in the minimum risk category, only 7 percent in medium and 12.5 percent in the maximum level of supervision.

Hypothesis II: The Risk Scale Is A Greater Determinant Of Supervision Level Assignment Than Needs Scale For Both Georgia And Wisconsin Instruments.

Because the risk items contained in the scales are associated with criminal history factors more than the needs items, and supervision assignment is dictated by the higher of the two scores, we predicted the former would influence supervision assignment more than the latter. This assertion was strongly supported by the data. The needs scale only affected supervision assignment for 6 to 7 percent of classified offenders. This means that if efficiency is a priority in the administration of either the Georgia or Wisconsin instrument, the needs component of the scale could be eliminated without jeopardizing the validity of supervision assignment based on probation risk.

Hypothesis III: Regardless Of Model, Reassessment Will More Often Lower Than Raise The Level Of Supervision Prescribed By The Initial Assessment.

We found strong empirical evidence that the reassessment process results in reducing the supervision requirements of medium and maximum risk probationers. Of all cases in which the level of supervision changed, 65 percent of those reassessed by the Georgia model and 73 percent of those reevaluated by the Wisconsin model were assigned to lower supervision levels. This means that between 18 percent and 24 percent of the total probation population were reassigned lower supervision levels as a result of reassessment. This compares to only 9 percent whose supervision requirements increased as a result of reassessment.

By identfying reduced risk offenders, reevaluation could allow for reallocation of supervision resources for high risk offenders. These findings clearly demonstrated the benefits of reassessment to differential case management for a large probation department. If probationers were reevaluated every 90 days in Harris County, approximately 33 percent of 31,000 direct supervision cases (10,230) could be reassessed each month. In the absence of reassessment, approximately 2,000 probationers could be overclassified each month, while over 900 would be underclassified or subject to lower supervision than justified by their risk to the community.

Hypothesis IV: The Iowa Risk Assessment Instrument Has Higher Predictive Efficiency Than Either The Wisconsin Or Georgia Risk/Needs Assessment Instrument

The classification process assumes that people assigned to the minimum risk category will exhibit a lower percentage of unsatisfactory outcome than those assigned to the medium or maximum risk categories. Conversely, probationers identified as maximum risk are expected to demonstrate the highest failure rate. This hypothesis stems from our impression that criminal history factors found in the Iowa scale are more important predictors of outcome than social factors which characterized the Wisconsin and Georgia instruments. Surprisingly, the findings showed that the Iowa model identified the highest proportion of probationers who actually demonstrated favorable outcomes as minimum risk (82.8 percent), but the lowest percentage of probationers with unfavorable outcomes as maximum risk (20.9 percent). The Wisconsin model best identified potential failures (24.5 percent of the cases that failed were initially classified as maximum risk), but was least discriminating in assigning persons with favorable outcomes to the minimum risk category (only 54.5 percent of successful cases were classified minimum risk). The Georgia model was second best at both extremes, identifying 62.2 percent of successful cases as minimum risk and 21.0 percent of failure cases as maximum risk.

Further analyses employing standard measures to ascertain statistical predictive power revealed that the Iowa model had the lowest predictive efficiency of the three models evaluated. This finding was attributable to overassigning probationers to the minimum risk supervision level. Over 80 percent of probationers were assigned to minimum risk supervision by this model, confirming that the Iowa model failed to discriminate for medium and high risk offenders. These results compelled us to conclude that this model is not appropriate for this jurisdiction because it could result in undersupervision of medium and maximum risk probationers.

Hypothesis V-A: Regardless Of Model, Probationers With High Risk Scores Are More Likely To Have Their Probation Revoked Than Those With Low Risk Scores.

Regardless of classification model, we found that revocation rates were significantly higher for the extreme high risk categories than for the extreme low risk categories. This was particularly true for the Georgia model. Twenty-two percent of probationers with a risk score of 21 or over had their probation revoked. This compares to only 5 percent of those with a risk score of 5 or less. Given this definition of low and high risk, 28 percent of the probation population could possibly be placed on mail-in status while 10 percent could be placed under maximum or intensive supervision.

This pattern was also demonstrated when we examined the relationship of risk scores to technical violations. Approximately 45 percent of probationers

assessed by the Wisconsin and Georgia models who fell in the highest risk category exhibited a technical violation (e.g., failure to report, delinquent supervision fees). This compared to a 16 percent technical violation rate for persons in the lowest risk score category.

Because some persons are convicted for another crime while on probation but do not have their probation revoked, we examined the relationship of risk score to law violation.

The findings revealed that high risk probationers had two to three times more law violations than the low risk probationers. (Georgia: 20 percent vs. 7 percent; Wisconsin: 17 percent vs. 8 percent; Iowa: 21 percent vs. 10 percent).

Hypothesis VI-A: Probationers Classified Maximum Risk Level By The Georgia Or Wisconsin Instruments Who Have High Direct Contact With Officers Have A Higher Success Rate Than A Comparison Group With Low Direct Contact.

Heretofore, probation administration has been governed by a combination of surveillance and treatment models. In one respect, we expect that the more intensely persons are supervised on probation the more likely it is that violations will be detected. At the same time, we hope that rehabilitation associated with intervention will reduce recidivism. Ideally we hope that intensive treatment will make a positive difference among high risk groups, as this is the group most likely to violate probation and be sentenced to jail.

Until now, only one study, conducted by the Wisconsin Division of Corrections (1979), offered empirical evidence that frequency of contact reduced recidivism for maximum risk probationers. Because this has important implications on practice in Harris County, this question was explored.

The research findings were promising. For probationers assessed by the Georgia classification model, we found that those assigned to maximum risk level with "high" (1.46 average contacts per month or higher) officer contact had significantly higher success rates (77 percent) than their "low" (.91 and below) contact counterparts (38 percent). The use of a new approach which estimated failure times and statistically compared low to high contact groups substantiated our earlier conclusions. However, among cases classified maximum by the Wisconsin model we found no significant difference in success rate between "high" (75 percent) and "low" contact (76 percent) groups. While these results are mixed, the findings on the Georgia model support the hypothesis. The reader should note, however, that a correlational study such as this cannot conclusively determine causation in this relationship. Two interpretations are possible. It may be that a treatment model is appropriate for maximum-risk cases and these probationers benefit more from high officer contact than low officer contact. A second explanation may be that those probationers who fail are also those most difficult to contact, and therefore they have lower contact because of their lack of cooperation.

A corollary to this hypothesis helps to distinguish which of these explanations is likely to be correct. If the latter explanation is operative, minimum and medium risk probationers who are uncooperative and tend to recidivate should also experience lower officer contact. On the other hand, if a treatment model is appropriate for maximum risk cases and not appropriate for lower risk cases, then we expect no relationship between officer contact and recidivism for medium and minimum risk cases.

Therefore, we tested a corollary hypothesis that frequency of officer/probationer contact will not be related to outcome for cases classified minimum and medium level of supervision.

Regardless of model, this hypothesis was supported, indicating that the surveillance model may be more appropriate for minimum and medium risk probationers than those assigned to maximum risk.

This also lends support to a treatment model applied to high risk probationers. This result has important implications for advocates of intensive probation services and community based corrections.

Using a lower range of "high" (.89 contacts per month or higher) and "low" (.49 contacts or below) contacts derived from only Georgia classified minimum cases, additional analyses showed a higher failure rate for the "high" contact group (22 percent) than for the "low" contact probationers (14 percent). This reinforces the argument that the more minimum risk cases are monitored the more violations will be detected.

Hypothesis VII: The Risk/Needs Reassessment Instruments Have Higher Predictive Efficiency Than The Initial Risk/Needs Assessment Instruments.

As previously discussed, supervision standards should be modified to reflect the changing risk levels for approximately 27 percent to 33 percent of total reassessed probationers. Because officers have had more time to evaluate the probationer's adjustment in the community, it is assumed that the reassessment process will more accurately measure risk than the initial assessment. To determine which procedure had higher predictive efficiency, we compared the means cost rating (MCR) and coefficient of predictive efficiency (CPE) values for the initial and reassessment instruments for the Georgia and Wisconsin models. The results showed significant improvement of predictive efficiency for both models.

These results affirm the benefits of reassessment for probationers. In regards to this study population, most of the reassessments occurred within 90 days of initial evaluation. The procedure involved only a few minutes per case and had the net effect of freeing resources for supervising high risk probationers. Many probationers would be overclassified if reassessments were not performed. Finally, we observed that over 80 percent of probationers identified as minimum risk at reassessment had a favorable outcome. Identification of maximum risk cases was not appreciably improved.

OTHER RELEVANT FINDINGS

Relationship of Time to Probation Failure

Because the time a person recidivates has important implications for supervision strategy, this factor was examined. Defining failure as technical or law violation revocation and absconding, we found that over a 19 month followup period, virtually half of the violations happened within the first four months of probation supervision. For maximum risk probationers, 80 percent of law violations occurred during the first eight months. This compares to 68 percent for medium and 69 percent for minimum level probationers who fell in this category. This finding emphasizes the need for early and intense involvement with persons assigned to maximum supervision.

One of the most salient findings was the relationship of risk level and frequency of officer/probationer contact to law violation free days. The longest average violation free days measure (250) was associated with maximum risk probationers who had "high" supervision contact. The shortest violation free days measure (116) was associated with maximum cases that had "low" officer contact. For medium and minimum risk cases, the shortest violation free time was associated with probationers who had "high" officer contact. Statistical analysis of estimated failure times confirmed significant positive impact of contact for maximum risk probationers, no significant impact for medium risk cases, and significant negative impact of contact for minimum risk cases.

These results are consistent with our findings showing that contact was directly related to probation success for maximum but not medium or minimum risk cases. It also indicates that maximum risk probationers can respond to a treatment model. Apparently, a surveillance model may be more appropriate for lower risk offenders.

Relationship of Risk/Needs Factors to Outcome

Because we were interested in improving predictive efficiency as well as developing a streamlined risk assessment instrument, we analyzed individual scale items contained in the instruments with respect to outcome. The following variables were found to be significantly related to outcome:

Number of Address Changes
Time Employed
Academic/Vocational Skills
Age at Conviction
Number of Felony Convictions
Financial Management
Number of Jail Terms
Offense

POLICY IMPLICATIONS AND RECOMMENDATIONS

Choosing A Classification Model

The rationale for classification systems is assessing the rehabilitation needs of the offender and his risk to the public. While no perfect classification system exists, there are procedures for developing valid and efficient screening instruments for large probation departments. At this juncture, we recommend that Harris County take advantage of the present research findings and jointly take steps with the Texas Adult Probation Commission to refine either the Georgia or Wisconsin risk/needs scale. The development of streamlined classification procedures will both improve validity of case classification and significantly reduce unnecessary paperwork associated with probation supervision.

Improving Probation Supervision Strategy

In terms of protecting the public, early identification of high risk offenders will allow criminal justice administrators to immediately allocate and direct staff resources to high risk groups. Moreover, this process will enable officers to identify low risk offenders and assign services commensurate to their risk to the community. In this manner, supervision resources will not be wasted on those offenders least likely to violate conditions of probation, while

those most likely to recidivate receive adequate supervision. Case management strategy should also keep in mind the fact that probationers are inclined to violate probation during the first few months of supervision. Therefore a special effort should be made to assure optimal delivery of services during this initial period. This is particularly justified for maximum risk probationers.

The Benefits of Intensive Supervision Programs For Maximum Risk Offenders

The present study indicates that the maximum risk offender is the most likely to violate probation and that intensive supervision can reduce recidivism for these offenders on probation. The expansion of this strategy of supervision has important implications. This suggests that provided adequate resources, some high risk felony offenders could be diverted from prison and successfully supervised in the community. This possibility is quite attractive in light of the current overcrowding of Texas'prisons and the financial difficulties associated with easing the problem.

1. INTRODUCTION

Numerous risk/needs assessment instruments have emerged across the country since the introduction of actuarial devices for criminal justice decision making. The first national survey conducted in 1979 found that 105 probation and parole sites employed unique risk assessment instruments (National Institute of Corrections, 1979). That survey discovered that only 4 out of 23 agencies studied in detail had completed validation studies of their risk assessment instruments. Specifically, nearly a third (30 percent) of those jurisdictions surveyed "adopted parts of other instruments developed subjectively in accordance with local priorities and policy considerations" (p.9). Forty-four percent of the agencies borrowed instruments from other jurisdictions and 26 percent developed their own through local research programs.

While our review of contemporary research studies (Wisconsin Division of Corrections, 1979; Fischer, 1980; National Institute of Corrections, 1981; Los Angeles County Probation Department, 1983; Georgia Department of Offender Rehabilitation, 1984), shows significant improvements toward developing valid assessment models, these efforts continue to represent a small proportion of total instruments in use. In addition, these studies generally overlook the effects of supervision and classification assignment on outcome and the impact of reassessment on supervision level.

RISK ASSESSMENT IN PERSPECTIVE

The term "Risk Assessment Device" refers to a forecasting tool or actuarial device used to identify the likelihood of recidivism of offenders and enables administrators to justify program assignments and deployment of resources (Wisconsin Division of Corrections, 1979). The process uses uniform criteria in assessing the need for supervision by organizing clients into supervision categories based on the nature and severity of the convicted offense, prior criminal history and other personal characteristics.

The predictive power of a particular classification instrument is determined by the degree to which the outcome predicted for a group of clients corresponds to their actual outcome.

Notwithstanding the advantage of making the classification decision more objective and the decision criteria more explicit, the reliance on actuarial devices has limitations. Gottfredson, Wilkins and Hoffman (1978), responsible for developing the salient factor score used in federal parole decisions, point out the limitations of risk assessment instruments:

> Actuarial devices make predictive statements about outcome for groups and not individuals ... all that we will know is the percentage of inmates with similar characteristics who may be expected to succeed or fail on parole ...
>
> A second limitation is that actuarial devices may overlook other elements such as attitude or prison adjustment that may be relevant to parole success.
>
> A third limitation is that actuarial devices, are based primarily on information found in the inmates' institutions' files (1978:55-56).

Some of these limitations can be corrected by building in a "clinical override" in the guidelines and improving documentation (1978).

The Needs Assessment Scale

The Needs Assessment Scale represents an attempt to objectively assess problem areas of probationers and direct intervention or supervision accordingly. Consistency in needs assessment is important because some jurisdictions use this scale to classify clients to levels of supervision. The common practice is to assign the client to the highest level of supervision that is indicated by either the risk or needs scale. These instruments usually include 10 to 16 behavior and adjustment indicators. Reassessments are required and performed at three, six and twelve month intervals to reflect changes in the probationer's situation and service need. According to the National Institute of Corrections, "The system is designed to move clients to lower levels of supervision as their needs for services are met" (National Institute of Corrections 1981:23).

Both assessment and reassessment result in differential supervision based on risk factors. But, as Eaglin and Lombard point out, "classifications derived from a predictive model will not necessarily produce more uniform supervision than classifications made subjectively by probation officers" (1982:60). To accurately assess the effects of supervision, there must be uniformity in both classification procedures and documentation of services.

A BRIEF REVIEW OF CONTEMPORARY VALIDATION STUDIES

A review of recent validation studies of risk assessment instruments indicates varying degrees of predictive efficiency and transferability among classification models. To understand the state of the art of statistical prediction, we have reviewed six recent studies which focus on the construction and validation of classification models used in administering probation and parole caseloads.

The Wisconsin Experiment

The most elaborate and scientific risk/needs validation study was conducted by the Wisconsin Division of Corrections (1979). This study used a validated risk/needs assessment scale for matched experimental and control offender groups and took into account probation officer/client contacts.

The study reported that of those classified as maximum risk, those experiencing an average of one contact per month had nearly twice the revocation rate (20.4 percent) as the comparable experimental group (10.6 percent) that experienced an average of two contacts per month. As expected, the revocation rates were significantly lower in both the experimental and control groups classified as medium and minimum (4.2 percent vs. 5.6 percent; 5.2 percent vs. 6.9 percent respectively). Both groups averaged one agent contact per month. The study concluded that "assigning different levels of supervision based on identification of risk and needs factors is having a significant impact on outcomes in Wisconsin" (1979:29).

A Comparative Study of Risk Assessment Devices for Federal Offenders

The most recent study (1982) comparing the predictive power of different risk assessment devices was conducted by Eaglin and Lombard. Their sample consisted of 1,656 randomly selected probationers and parolees processed in 1974 at eight regionally representative federal probation districts. They compared four instruments: Revised Oregon, California BE61A, Salient Factor and U.S.D.C. 75.

Upon reviewing their findings, Eaglin and Lombard concluded that the Revised Oregon instrument was the best predictor. However, they recommended "the next-best predictor, the U.S.D.C. 75, be used to classify probation caseload," because its "administrative costs are considerably lower than those anticipated for use of the Revised Oregon; and the U.S.D.C. 75 contains few items that raise ethical questions" (1982:57).

A major weakness of this study was cited by the authors:

> We do not know, however, whether the supervision received by offenders classified as maximum risks in one district is the same as that received by those classified as maximum risks in another district ... We expect that there is considerable variation in the content of supervision programs for similarly classified offenders (p.60).

Iowa's Four Factor Risk Scale

The Iowa system employs a four-factor scoring system to determine the general risk level: 1) Substance abuse history, 2) current offense classification, 3) age at conviction and, 4) total volume of criminal record (Fischer, 1983). To compare the predictive efficiency of the risk assessment instrument, Fischer employed his own special measure, the coefficient of predictive efficiency (CPE) and the traditional mean cost rating (MCR). He reported that these values are higher for the Iowa system than other systems developed outside Iowa. If we compare Iowa's MCR value (.64) with the MCR values of the four risk assessment devices analyzed by Eaglin and Lombard, this assertion appears true: Revised Oregon = .62; California = .55; Salient Factor = .48; U.S.D.C. 75 = .56 (1982).

Fischer found a direct relationship between risk level and outcome on 9,387 adult offenders released from caseloads during 1977-1979. For example, only 8 percent of the "very low risk" category were rearrested compared to 88 percent for the "super recidivist" group (1981).

Georgia's Evaluation of Intensive Supervision

An analysis of 542 intensive supervision cases (Irwin, 1984) in this jurisdiction found that needs scores had a higher correlation to outcome than risk scores for maximum supervision level cases but not minimum supervision level cases. Fifty percent of ISP participants in the category of highest needs scores had a positive outcome. This compares to a 67 percent success rate for the highest risk score category. For those cases falling in the lowest needs score category, 81 percent had a positive outcome compared to 85 percent in the lowest risk score category.

Irwin also evaluated the relationship of outcomes with probation officer/client contact. But her findings, based on one year of supervision

"do not demonstrate any significant relationship between the variations of frequency of contact which occurred within the program standards and the rate of negative outcome" (p.33).

Los Angeles County's Risk Assessment Validation Study

Another recent study (1983) on probation classification systems was conducted in the Los Angeles County Probation Department. Funded in 1981 by the National Institute of Corrections, the purpose of the project was to test the "Wisconsin System" with "the objective of developing a classification approach that would be applicable department wide" (1983:2). Utilizing two comparable districts as experimental and control groups, the analysis examined the relationship of outcome and risk scores for randomly selected cases supervised for one year.

> One of the objectives of the operational phase of the project was to see if there would be a reduction of recidivism in MAX cases at the test site over MAX cases in the control cohort. If this occurred, it would demonstrate the instruments more accurately identified cases that required intensive supervision and directed special supervision strategies to those cases with more favorable results than the control group cases, which operate as before with no special procedures or strategies. (p.5).

Unexpectedly, the data showed little difference in outcome between the control and experimental groups except in minimum cases. Over twice as many of the experimental minimum cases (18 percent) had unfavorable outcomes compared to seven percent for their control counterparts. Only one percent difference was observed in unfavorable outcome between the experimental (55 percent) and control (56 percent) groups classified maximum. Both groups classified as medium risk showed a 30 percent recidivism rate.

The evaluation attributed the lower recidivism rate for minimum cases in the control group to the fact that almost 100 of these cases were supervised as medium cases.

> While this is a misappropriation of supervision effort as far as the purpose of a classification system, it does suggest that more supervision can have a favorable influence on case outcome (1983:6).

The difference between objective and subjective classification procedures is clearly demonstrated in comparing the risk score outcome to predictions of probation officers. Only 12 percent of the maximum cases identified by probation officers had an unfavorable outcome. This compares to 56 percent of the maximum group identified by the risk scale. Fifty-seven percent of the minimum cases classified by probation officers fell in the violation free category (1983). Over 90 percent of the minimum probationers classified by the risk scale fell in this category.

An Examination of New York City's Model System

Using a New York City's Probation study population consisting of 366 randomly selected subjects whose cases closed in 1980, Wright and Associates (1984) tested the assumption that "existing instruments predict virtually equally well on various populations" (p.115). Variables thought to relate to outcome, including the items from the Wisconsin model were evaluated.

Their findings showed that 7 of 18 variables were unrelated to outcome: address changes, percentage of time employed, alcohol usage, drug usage, prior periods of supervision, prior revocations, and prior conviction of any individual offense. Wisconsin variables - change orientation, responsibility, age at first conviction and number of prior revocations - were found to be related to outcome. The same is true for additional variables: probation officer's prognosis, living situation and employment situation.

Upon analyzing the actual distribution of case failure rates by salient factor point total for the Wisconsin model, the researchers reported: "The correlation between salient factor scores and success - failure was quite low" (p.119). Examining a collapsed distribution of four categories of grouped scores revealed the limited ability of the model to distinguish successes and failures beyond the lowest category (0-10, 22 percent failure; 11-20, 34 percent; 21-30, 30 percent; 31 or more, 51 percent).

The authors attributed these results to differences in population between New York and Wisconsin and the possible limitations of statistical prediction methods. They also asserted that "transfer of models is questionable put on the grounds of limited technology alone" (p.122).

MAJOR ASSUMPTIONS OF PREDICTIVE MODELS

Transferability

Research findings are mixed with regard to the transferability of risk assessment instruments. The Wisconsin model was shown to be a poor predictor of probation outcome in New York City but appeared to distinguish success from failure on probation in Los Angeles County and cases in Georgia. A comparative validation study of four devices used for Federal probationers suggested high intercorrelation among instruments.

Correspondence between Classification Risk Factors and Level of Supervision

It is often assumed that there is a direct relationship between risk score and supervision level. That is, a person assigned to maximum risk will receive more intensive supervision than someone assigned to medium or minimum risk. For example, the Los Angeles study attributed lower recidivism for minimum cases in the control group to the fact that many of these cases were supervised as medium cases. It is interesting that this finding directly contradicts the central findings of the Wisconsin study that the number of client contacts makes no difference in outcome for minimum and medium classified cases.

Impact of Reassessment on Supervision Assignment

Reassessment is designed to move clients to lower levels of supervision based on changes in the client's situation, service needs, and risk of continued criminal activity. The Wisconsin Division of Corrections reported: "While approximately 45% of new clients are initially placed in maximum supervision, about half move to lower supervision levels at subsequent evaluations" (1979, p.12). Heretofore this aspect of analysis had been overlooked in research evaluations and remains a relatively unproven assumption.

Outcome Predictability of Initial Classification versus Reassessment

The rationale for reassessment is to take into account new information related to any change in the client's situation or risk/needs factors and alter supervision accordingly. This indicates that probation officers are better able to assess risk and predict outcome after familiarization with the case than at the initial classification stage.

If this is true, the reassessment procedure should have higher predictive efficiency than initial classification. This assumption has never been tested.

Effects of Supervision on Outcome

Ideally, we hope that assigning more supervisory activity to high risk groups will result in increased protection for the community and rehabilitation for the offender. Conversely, it is maintained that provision of less intensive services for low risk probationers will not jeopardize public safety.

Unfortunately, only the Wisconsin study has demonstrated that differential supervision, as measured in average monthly officer/probationer contacts, is related to classification, level of supervision, or outcome.It found that increased supervision for offenders assigned to maximum level of supervision reduced revocation for this group. However, this was not true with regard to those assigned to medium and minimum supervision categories.

Given the comprehensive research procedures and results of the Wisconsin study, it is understandable why so many large probation departments facing budgetary problems have opted for this model.

OBJECTIVES OF HARRIS COUNTY STUDY

Purpose

The present study had two objectives. The first goal was to test the above major assumptions which evolved from previous research studies. The second goal was to identify probationers' legal and social characteristics which predict probation outcome in Harris County.

The first objective was accomplished by conducting a comparative validation and evaluation of three classification systems. These included the Wisconsin and Georgia risk/needs scales and the Iowa Four Factor Risk Scale. The second objective was made possible by analyzing predictive factors contained in each classification instrument and additional variables thought to contribute to probation outcome.

For the reader's convenience the remaining report is organized into five major sections. The next section outlines the methodology, hypotheses to be examined and a description of the study population. Chapter Three presents the findings on the major hypotheses. Chapter Four evaluates the validity of individual risk and needs factors contained in the Georgia and Wisconsin models. Chapter 5 focuses on the relationship of time and risk level to probation outcome. The final chapter discusses the policy and research implications of the findings.

2. THE HARRIS COUNTY CLASSIFICATION STUDY

In order to address the concerns of probation officials, an empirical investigation of major issues involving statistical predictions was conducted using data collected by The Harris County Adult Probation Department. The present project attempts to compensate for past research deficiencies, namely, the lack of information on supervision content. The unique feature of this investigation is that it employs a longitudinal research design which incorporates uniform documentation of supervision activity. Seven hypotheses directed this study.

HYPOTHESIS I: There Is A High Intercorrelation Between The Wisconsin And Georgia Risk/Needs Assessment Instruments But Relatively Low Intercorrelation Between The Iowa Risk Assessment Instrument And Each Of These Instruments.

This hypothesis is derived from the research findings of Eaglin and Lombard (1982). They observed that instruments using similar predictive items which are administered to identical populations will have a high intercorrelation. This suggests that instruments using different predictive factors will be less likely correlated.

HYPOTHESIS II: The Risk Scale Is A Greater Determinant Of Supervision Level Assignment Than Needs Scale For Both Georgia And Wisconsin Instruments.

This hypothesis is based on the results of the Los Angeles County study (1983) which found that needs classification scores accounted for a small proportion (2 percent) of supervision level assignments.

HYPOTHESIS III: Regardless Of Model, Reassessment Will More Often Lower Than Raise The Level Of Supervision Prescribed By The Initial Assessment.

The rationale for reassessment is to identify changes in a probationer's situation, and allocate supervision resources accordingly (National Institute of Corrections, 1981). If the probationer's risk to the community and service needs are correctly identified by the initial classification and subsequently provided, we assume that this will result in the probationer's positive adjustment -- and reduced need for supervision. If such movement occurs it demonstrates the benefits of reassessment to differential case management and further validates the classification process.

HYPOTHESIS IV: The Iowa Risk Assessment Instrument Has Higher Predictive Efficiency Than Either The Wisconsin Or Georgia Risk/Needs Assessment Instrument.

The above assertion stems from the extensive validation process associated with the Iowa model. Fischer (1981) has reported higher mean cost ratings values for the Iowa four factor risk scale than other devices. It is also our impression that the criminal history factors found in the Iowa scale are more important predictors of outcome than social factors which characterized the Wisconsin and Georgia instruments.

HYPOTHESIS V-A: Regardless Of Model, Probationers With High Risk Scores Are More Likely To Have Their Probation Revoked Than Those With Low Risk Scores.

HYPOTHESIS V-B: Of Probations Revoked, Individuals Classified As High Risk Are More Likely To Be Revoked Because Of Legal Violations Than Technical Violations.

HYPOTHESIS V-C: Probationers With High Risk Scores Are More Likely To Have Technical Or Legal Violations Than Those With Low Risk Scores.

The majority of previous studies consistently support the correlation between risk scores and outcome (Fischer, 1981, 1983; Banks, 1984; Irwin, 1984). In Iowa, Fischer reported 64.3 percent recidivism rate for offenders rated "super recidivist" and 3 percent for those classified as "very-low risk". Banks found a similar failure pattern for Georgia probationers (Maximum = 51 percent; Minimum = 6 percent). This was also supported by Irwin's analysis of Georgia intensive supervision probation cases. In this study, the lowest risk score category had a 15 percent negative outcome compared to 33 percent for the highest risk score group.

HYPOTHESIS VI-A: Probationers Classified Maximum Level By The Wisconsin Or Georgia Instrument Who Have High Direct Contact With Officers Have A Higher Success Rate Than A Comparison Group With Low Direct Contact.

HYPOTHESIS VI-B: Probationers Classified Minimum And Medium Level Of Supervision By The Wisconsin Or Georgia Instrument Who Have Low Direct Contact With Probation Officers Have No Different Success Rate Than A Comparison Group With High Direct Contact.

These hypotheses evolve from the Wisconsin study (National Institute of Corrections, 1979; Wisconsin Division of Corrections, 1979). There is evidence that the classification process as implemented has reduced the risk of additional misdemeanor arrests among maximum supervision offenders, without increasing the risk of recidivism among low-risk/low-needs clients who received less supervision (National Institute of Corrections, 1979:76).

Some past studies show no statistical relationship between frequency of probation officer/client contact and outcome. However, these studies do not control for classification risk level or supervision assignment (Irwin, 1984). The Wisconsin study demonstrated that given high risk classification (maximum supervision assignment), high direct contact is associated with low recidivism. But, given minimum or medium risk classification, number of contacts made no difference in outcome.

HYPOTHESIS VII: The Risk/Needs Reassessment Instruments Have Higher Predictive Efficiency Than The Initial Risk/Needs Assessment Instruments.

This aspect of classification models has not been investigated. We assume that reassessment scores and related risk levels better predict outcome because more information and history on the offender is available to the classifier than at the time of initial assessment. In the scheme of classification, the role of reassessment warrants greater examination. This is so because it is easily administered and can result in better matching of services to needs.

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Definition of Terms

To test these hypotheses, "supervision levels" were determined by the higher of the risk/needs score for the Wisconsin and Georgia probation classification instruments. The Iowa Four Factor Risk Scale was also used in this analysis. The following cut-off scores applied to Wisconsin needs: 30 and above is maximum; 15-29 is medium; 14 and below is minimum. Wisconsin risk: 15 and above is maximum; 8-14 is medium; 7 and below is minimum. Georgia risk/needs: 21 and over is maximum; 11-20 is medium; and 0-10 is minimum. Iowa Four Factor risk score: 3 and above is maximum; 2 is medium; and 0-1 is minimum. Probation outcome consists of six categories: a) under supervision for instant offense; b) successful termination; c) probation revoked because of technical violation (e.g., failure to pay supervision fees, positive drug test, failure to report); d) probation revoked due to conviction for legal violation; e) motion to revoke probation pending for legal or technical violation, and f) absconder.

"Success" on probation was defined as successful termination or continued supervision. Persons whose probation was revoked for either technical or legal violations or who absconded from the jurisdiction were classified as "failure."

"High" direct officer/probation contact cases consisted of probationers whose mean officer/probationer office and field contact per month was greater than half a standard deviation above the mean (1.45 contacts or above). "Low" contact cases consisted of probationers whose mean officer/probationer office and field contact per month was more than half a standard deviation below the mean (.92 contacts or below). This procedure placed approximately the top and bottom third of the total cases in the "high" and "low" contact categories.

Variables Studied

To test these hypotheses, the research department designed a data gathering instrument which included all the variables contained in the predictive instruments, outcome measures, supervision factors and program status. The risk/need and supervision variables are listed below.

1. Number of address changes
2. Time employed
3. Alcohol usage
4. Other drug usage
5. Attitude
6. Age at first conviction
7. Number of prior periods of probation/parole supervision
8. Prior probation/parole revocation
9. Prior felony convictions
10. Selected charge convictions
11. Assaultive offense last 5 years
12. Illicit drug abuse
13. Academic/Vocational skills
14. P.O.'s impression
15. Prior incarceration
16. Response to conditions of prob.
17. Use of community resources
18. Social and/or job related problem
19. Number of prior arrests
20. Iowa 4 factor score
21. Academic skills
22. Employment
23. Financial management
24. Marital/Family relationship
25. Companions
26. Emotional stability
27. Mental ability
28. Health
29. Average monthly office visits
30. Average monthly field visits
31. Average monthly combined office and field visits

Outcome for classification groups was measured by calculating the proportion of law and technical violations and law violation free time of probationers.

Sample

The study population consisted of 15 percent (N=901) of adult misdemeanor and felony probationers processed by the Harris County Adult Probation Department between May 14, 1984 through August 6, 1984. All cases were monitored by the research department by computer and direct contact with department probation officers.

Data Analysis

To determine intercorrelations among predictive instruments, correlation coefficients were calculated. Kendall's tau, means cost rating (MCR) and coefficient of predictive efficiency (CPE) analyses were performed to determine the predictive power of the instruments. Chi square analysis was used to assess effects of predictor items on outcome and relationship of supervision content to outcome.

DESCRIPTION OF CLASSIFICATION STUDY POPULATION

Because of the random nature of the selection process, we assume that our sample is representative of all the cases that were processed by the Adult Probation Department between May 14, 1984 and August 6, 1984. Data on legal and social characteristics were derived from court records, computerized criminal history files and the risk/needs assessment instruments.

Sex, Race, and Age

Eighty-four percent of the study sample were male (see Table 2-1). Over 60 percent of offenders processed by the probation department were white. Blacks and Hispanics make up 21 percent and 17 percent of the probation study population respectively. Less than 2 percent fell in the oriental or other category. Over a third of the total sample were 24 years old or younger.

Table 2-1
SOCIAL CHARACTERISTICS OF 901 HARRIS COUNTY ADULT PROBATIONERS

Sex	Frequency	Percent
Male	756	83.9
Female	145	16.1
Total	901	100%
Race		
White	544	60.3
Black	190	21.1
Hispanic	152	16.9
Other	15	1.7
Total	901	100%
Age		
17 or under	27	3.0
18 - 20	134	14.9
21 - 24	188	20.8
25 - 29	204	22.6
30 - 35	152	16.9
36 - 45	121	13.4
46 - 55	49	5.4
56 +	26	2.9
Total	901	100%

Only three percent of probationers are 17 and under.

Probation Offense

The majority (53.6 percent) of probationers processed by the Intake Department were convicted of Driving While Intoxicated (DWI) or Driving Under the Influence of Drugs (DUID). Theft ranked second (10.8 percent) in this sample. Only 5.4 percent of the total probation sample population fell in violent-type offense categories (see Table 2-2). Fifty-five percent of the total sample population were misdemeanor cases.

Table 2-2
OFFENSE DISTRIBUTION OF 901 HARRIS COUNTY ADULT PROBATIONERS

Offense	Frequency	Percent
DWI/DUID	483	53.6
Theft	97	10.8
Poss. of Drugs	43	4.8
Poss. of Marijuana	30	3.3
Other Burglary	24	2.7
Auto Theft	26	2.9
Burglary - Vehicle	20	2.2
Other	20	2.3
Drug Traffic	17	1.9
Forgery	15	1.7
Assault	15	1.7
Burg. - Habitation	13	1.4
Robbery	13	1.4
Drive w/Lic. Susp.	12	1.4
Credit Card Abuse	10	1.1
Unlawful Carry Weapon	10	1.1
Prostitution	6	.7
Agg. Robbery	6	.7
Sex Abuse Child	4	.4
Criminal Mischief	5	.6
Rape	3	.3
Resisting Arrest	3	.3
Invol. Manslaughter	3	.3
Crim. Neg. Homicide	3	.3
Unemploy. Comp. Vol.	3	.3
Trespass	3	.3
Fail. to Stop & Render Aid	3	.3
Arson	3	.3
Vol. Manslaughter	2	.2
Theft by Receiving	2	.2
Attempted Murder	3	.3
Attempted Capital Murder	1	.1
Total	901	100%*

* rounded

Criminal History

Table 2-3 shows that most (61 percent) probationers reported having no prior arrest history. Nearly 19 percent had only one prior arrest. Only 13.3 percent of the sample had been on probation prior to present offense. Less than five percent (4.5 percent) of the total sample had a history of probation or parole revocation. Our analysis also found that 7.5 percent of the sample probation population had experienced a jail term.

Table 2-3
PRIOR ARREST AND PROBATION HISTORY OF
901 HARRIS COUNTY PROBATIONERS BY PERCENT

Variable	Frequency	Percent
Prior Arrest		
0	549	60.9
1	167	18.5
2	88	9.8
3	40	4.4
4	22	2.4
5	13	1.4
6 & over	22	2.4
Total	901	100%
Prior Probation		
0	781	86.7
1	107	11.9
2	12	1.3
3	1	.1
Total	901	100%

Academic and Employment Characteristics

The following data was derived from information reported on the Georgia risk/needs assessment instrument. Nearly a third (31.1 percent) of probationers reported having some college experience (see Table 2-4). An equivalent number of persons had completed the 10th grade or less. Only 7 percent had less than an eighth grade education.

Table 2-4
ACADEMIC AND EMPLOYMENT DISTRIBUTION OF 870 HARRIS COUNTY PROBATIONERS BY PERCENT

Educational Level	Frequency	Percent
HS and Some College	271	31.1
High School	272	31.3
Vocational Training	39	4.5
10th Grade	138	15.9
8th Grade	91	10.5
< 8 years	59	6.8
Total	870	100%*
Employment		
2 years or more	289	33.2
1 to 2 years	311	35.7
Unemp. less 2 months	173	19.9
Unemp. more 6 months	81	9.3
Terminated	16	1.8
Total	870	100%*

* Rounded

Seventy percent of this sample were employed at time of arrest. Nearly half (48 percent) of this group reported having jobs two years or more. Only 2 percent of probationers reported losing their job through involuntary termination.

Community and Family Ties

Less than half (37.3 percent) of this sample reported an address change in the last 12 months. Twenty-one percent of probationers moved once within this period. The vast majority (78.1 percent) reported no problem in marital or family relationships. Less than five percent had been arrested for assaults against family members.

Drug and Alcohol Abuse

Nearly 49 percent of probationers reported one or more charges of Driving While Intoxicated or frequent abuse of alcohol. Eighty percent encountered no problems in illicit drug abuse.

Program Assignment

Organizationally, the Harris County Adult Probation Department consists of five regions (North, South, East, West and Central), Special Programs (Intensive Supervision, Interstate Compact Unit, Special Treatment Programs), Residential Programs and a Court Liaison section. For the purposes of the study, Intake was considered a program. Intake cases in this category was represented by probationers ordered by the court not to be supervised. Table 2-5 shows the initial program assignment distribution.

Table 2-5
INITIAL PROGRAM ASSIGNMENT DISTRIBUTION OF CLASSIFICATION STUDY POPULATION

Program	Frequency	Percent
North	120	13.3
South	146	16.2
East	117	13.0
West	198	22.0
Central*	181	19.7
Intensive Superv. Prog.	12	1.3
Interstate Compact Unit	46	5.1
Restitution Program	4	.4
Intake	49	5.4
Court Liaison	1	.1
Special Program	27	3.0
Total	901	100%**

* Includes Central Annex
** Rounded

In terms of regional caseload, the West Region had the largest representation (22.0 percent). The East Region had the smallest regional caseload (13.0 percent). Only 5 percent of the sample were assigned to the Interstate Compact Unit. A similar percentage (5.4 percent) of probationers were placed on an unsupervised caseload in the Intake program. Only 3 percent of the probationers were assigned to specialized caseloads (e.g., alcohol, family violence). Less than one percent of the sample were placed in residential programs or with the Court Liaison Officers.

The next section presents the research findings on the primary hypotheses.

3. VALIDATION AND COMPARATIVE EVALUATION OF THREE PREDICTIVE INSTRUMENTS USED FOR CLASSIFYING HARRIS COUNTY ADULT PROBATIONERS.

HYPOTHESIS I: There Is A High Intercorrelation Between The Wisconsin And Georgia Risk/Needs Assessment Instruments But Relatively Low Intercorrelation Between The Iowa Risk Assessment Instrument And Each Of These Instruments.

Table 3-1 shows the supervision level distribution by classification instruments.

Table 3-1
SUPERVISION LEVEL BY RISK/NEEDS ASSESSMENT INSTRUMENT FOR 754 HARRIS COUNTY ADULT PROBATIONERS*

Instrument	Supervision Level		
	Maximum	Medium	Minimum
Georgia	11.0 (N=83)	31.0 (N=234)	57.9 (N=437)
Wisconsin	17.6 (N=133)	31.4 (N=237)	50.9 (N=384)
Iowa	12.5 (N=94)	7.4 (N=56)	80.1 (N=604)

* Excludes 147 cases not classified because they were not direct supervision cases or transferred to another jurisdiction.

These data suggest greater correspondence between Georgia and Wisconsin models than between the Iowa 4 Factor Scale and these instruments. For example, we observed a nearly identical percentage of probationers assigned to "medium" level of supervision by the Georgia (31.0 percent) and Wisconsin instruments (31.4 percent), whereas, only 7.4 percent fell in this category in the Iowa instrument. This disparity was also found among "minimum" cases. Over 80 percent of Harris County probationers were assigned to a "minimum" level of supervision by the Iowa model compared to 57.9 percent and 50.9 percent by the Georgia and Wisconsin instruments respectively. It was only in the "maximum" supervision level category that the Iowa scale appeared to agree with the other classification instruments (assigning 12 percent, compared to 11 percent for the Georgia instrument).

Table 3-2 presents the intercorrelations of the models' supervision level assignments.

Table 3-2
INTERCORRELATION OF MODELS' SUPERVISION LEVEL ASSIGNMENTS
FOR 754 HARRIS COUNTY ADULT PROBATIONERS

Classification Method	Wisconsin	Iowa
Georgia	.71	.38
Iowa	.33	

Note: Kendall tau - B values are cited; p = < .001.

The findings support HYPOTHESES I. The Wisconsin and Georgia risk/needs instruments have the highest intercorrelation (.71). There is a similar intercorrelation between the Wisconsin and Iowa models (.33) and Georgia and Iowa instruments (.38). These data indicate that the Wisconsin and Georgia models are more likely to make the same risk assessment for a probationer than the Iowa model. These results reflect the similarities of items contained in the Wisconsin and Georgia risk/needs assessment instruments. The lower intercorrelations between the Iowa model and other instruments point out the fact that the Iowa model employs different criteria and significantly fewer scale items than the latter instruments.

The higher intercorrelations between the Wisconsin and Georgia models appear to be an inherent function of the instrument scale items. The instruments were administered independently within the same time frame by the probation officer assigned to the case and an officer specifically trained in the Wisconsin Classification System.

These results are consistent with Eaglin and Lombard's (1982) comparative study. They found high intercorrelations among models used to classify federal probationers (see Table 3-3). The salient factor model had the lowest intercorrelations with the other instruments (.53, .40, .38). The intercorrelations among the other models correspond with the intercorrelations found between the Georgia and Wisconsin risk/need assessment scales (.71).

Table 3-3
INTERCORRELATIONS OF MODEL CATEGORY ASSIGNMENTS

Classification Method	Revised Oregon	Calif. BE61A	Salient Factor
Calif. BE61A	.72		
Salient Factor	.53	.40	
U.S.D.C. 75	.65	.89	.38

Source: Eaglin and Lombard (1982).

HYPOTHESIS II: The Risk Scale Is A Greater Determinant Of Supervision Level Assignment Than Needs Scale For Both Georgia And Wisconsin Instruments.

Both the Wisconsin and Georgia classification instruments make separate assessments of probationers' risks and needs. The higher of the risk/needs

scores is used to assign level of supervision. In theory, needs are more subjective than risk items and are considered important factors for establishing supervision strategy. Since supervision level is assigned according to either the risk or needs classification (disagreement) or by both (agreement), it is of interest to ascertain the intercorrelation between the risk and needs scales and determine the extent to which each governs the assignment of supervision level. Also, from a practical point of view, we may find that employment of both risk and needs components at intake is inefficient and unnecessary.

Intercorrelation between the Georgia risk and needs scales was .50.

Table 3-4
GEORGIA RISK AND NEEDS SCALES SUPERVISION
ASSIGNMENTS FOR 742 HARRIS COUNTY ADULT PROBATIONERS

Classification Georgia Risk	Georgia Need Maximum	 Medium	 Minimum
Maximum	10	37	21
Medium	14	86	108
Minimum	0	38	428
Total	24	161	557
r = .50*			

* Note: Kendall tau - B values are cited; p = < .001.

Table 3-4 shows the distribution of risk and needs classifications for 742 cases assessed by the Georgia risk/needs instrument. Within the body of the table, cases on the main diagonal (10, 86, 428) are classified equally according to risk or needs (524 cases). Those cases above the diagonal (37,21,108) received higher risk classifications than needs classifications (166 cases). Hence, the levels of supervision in these cases were determined by the risk assessment. Similarly, cases below the diagonal (14,0,38) received higher needs classifications than risk classifications (52 cases), with supervision thus determined by the needs assessment. The most striking result of this analysis is that the needs assessment affects supervision level in a remarkably small percentage of cases (52 of 742, or 7.0 percent). In other words, if the needs assessment were eliminated entirely from the Georgia classification instrument, 93 percent of the cases in this sample (those on or above the diagonal) would still be assigned the same supervision level as with the entire instrument.

Intercorrelation between Wisconsin risk and needs scales supervision assignments was .38. Table 3-5 shows the distribution of risk and needs classifications for 746 cases assessed by this instrument.

Table 3-5
WISCONSIN RISK AND NEEDS CLASSIFICATION
ASSIGNMENTS FOR 746 HARRIS COUNTY ADULT PROBATIONERS

Classification Wisconsin Risk	Wisconsin Need Maximum	Medium	Minimum
Maximum	12	54	60
Medium	4	72	124
Minimum	3	39	378
Total	19	165	562

r = .38*

* Note: Kendall tau - B values are cited; p = < .001.

Risk and needs scales agree for the 462 cases on the diagonal, while the risk assessment determines supervision level for the 238 cases above the diagonal. Only the 46 cases below the diagonal (6 percent of the total) are supervised on the basis of the needs scale. Thus, for the Wisconsin instrument, 94 percent of cases in the sample would retain the same supervision level based on risk scale alone.

The above data support HYPOTHESES II. Supervision level can be determined by risk scale alone for 93 percent and 94 percent of cases for the Georgia and Wisconsin instruments respectively. These results are consistent with the Los Angeles County Probation Department Study (1983):

> The number of cases in this project in which the supervision level was increased by application of the Needs Scale was so small (2%) that it was decided to discontinue use of that scale (p.1).

HYPOTHESIS III: Regardless Of Model, Reassessment Will More Often Lower Than Raise The Level Of Supervision Prescribed By The Initial Assessment.

Two subsets of data were constructed. The first contained cases in which the probationer had been initially classified and first reassessed using the Georgia instrument. This set had 244 cases. The second subset consisted of all probationers who had an initial assessment and a first reassessment by the Wisconsin risk assessment instrument. This group had 233 cases.

Table 3-6 displays the change in risk/needs classification according to the Georgia reassessment and Table 3-7 displays similar information relative to the Wisconsin reassessment. In both tables the diagonal elements represent classifications which remained unchanged after reassessment. The elements above the diagonal represent cases in which the classification was reduced and elements below the diagonal represent the cases in which the classification was increased.

Table 3-6
INITIAL CLASSIFICATION BY REASSESSED CLASSIFICATION
(Georgia Instrument)

Initial	Reassessment			
	Maximum	Medium	Minimum	Total
Maximum	4	9	1	14
Medium	4	18	33	55
Minimum	3	16	156	175
Total	11	43	190	Grand Total = 244

Table 3-7
INITIAL CLASSIFICATION BY REASSESSED CLASSIFICATION
(Wisconsin Instrument)

Initial	Reassessment			
	Maximum	Medium	Minimum	Total
Maximum	4	7	14	25
Medium	6	22	34	62
Minimum	1	13	132	146
Total	11	42	180	Grand Total = 233

Table 3-6 indicates that 43 cases (9,1,33), or 17.6 percent of the total, received a lower classification when reassessed using the Georgia instrument. Thirty-three cases, initially classified as medium were reassessed at the minimum level. This represented 60 percent of all initial medium cases which experienced a classification change. Ten of fourteen initial maximum cases were reassessed to lower classifications. Cases which were reassessed at a lower risk comprised 65.2 percent of all cases which were reassessed at a different classification. Only 23 (4,3,16) or 9 percent of the total, received higher classifications upon reassessment. Most of this movement was the result of minimum cases (16) being reclassified medium.

Table 3-7 indicates a similar pattern. For the Wisconsin instrument 55 of the 233 cases, or 24 percent of the total, received a lower classification. Thirty-four of the 62 cases initially assessed medium risk were reassessed as minimum cases. Twenty-one of the 25 cases initially classified maximum cases were reassessed at lower categories. Only 20 cases (6,1,13) or 8.6 percent of the total cases reassessed received a higher classification. Again most of these cases were minimum cases changing to medium supervision level.

This follows the trend of the Georgia instrument. It is interesting to note the difference in the distribution of the reassessments within the maximum cases. Only one maximum case was reassessed by the Georgia instrument to the minimum level. Fourteen of the 21 maximum cases which were reassessed by the Wisconsin instrument and received a lower classification were reclassified as minimum cases. Nevertheless the two agree in the

general direction of reassessment. Cases which received a lower classification by the Wisconsin method comprised 73.3% of all cases which were reassessed to different classifications. Sixty-seven percent fall in this category for the Georgia instrument.

Regardless of the instrument used, the number of cases that received a lower classification was approximately twice the number of cases which received higher risk classifications. Georgia reassessed 43 to a lower category compared to 23 reassessed to higher categories. Wisconsin reassessed 55 cases to lower classifications and only 20 cases to higher categories.

HYPOTHESIS IV: The Iowa Risk Assessment Instrument Has Higher Predictive Efficiency Than Either the Wisconsin or Georgia Risk/Needs Assessment Scale.

Table 3-8 shows probation outcome for the total study population. These data reflect the status of probationers who have been on or continue to be on probation during the study period of 19 months.

Table 3-8
OUTCOME AT 19 MONTHS FOR 841
HARRIS COUNTY ADULT PROBATIONERS*

STATUS	N	PERCENT
Under Supervision	346	41.1
Successful Termination	336	40.0
Revoked - Tech. Violation	27	3.2
Revoked - Law Violation	77	9.2
Absconder	35	4.2
MRP Pending	20	2.4

*Excluded 60 cases transferred out of Harris County.

During the 19-month study period we found that 9 percent of the total population had their probations revoked because of a legal violation or conviction for another offense. Only 3 percent had probations revoked because of a technical violation such as failure to pay supervision fees or failure to report.

Four percent of the probationers absconded and 2 percent had a motion to revoke probation pending at the close of the study period. Over 80 percent of the probationers had either successfully completed probation or continued under probation supervision.

Table 3-9A shows the relationship of supervision level assignment and outcome for the Georgia, Wisconsin and Iowa Classification models.

Table 3-9A
RELATIONSHIP OF SUPERVISION LEVEL ASSIGNMENT AND OUTCOME FOR THREE CLASSIFICATION SYSTEMS

MODEL	OUTCOME			
	Success		Failure	
	Percent	N	Percent	N
Georgia				
Maximum	67.4	60	32.6	29
Medium	81.7	197	18.3	44
Minimum	86.7	422	13.3	65
Wisconsin				
Maximum	79.3	96	20.7	25
Medium	80.6	179	19.4	43
Minimum	90.4	329	9.6	34
Iowa				
Maximum	71.6	73	28.4	29
Medium	75.9	44	24.1	14
Minimum	85.5	565	14.5	96

*Excludes transfer and motion to revoke probation pending cases.

The assumption is that people assigned by the models to the minimum risk category will exhibit a lower percentage of unsatisfactory outcomes than those assigned to the medium or maximum risk categories. Conversely, probationers identified as maximum risk are expected to demonstrate a higher failure rate than those assigned to medium or minimum risk levels. For all models, the percentages of probationers with favorable outcomes follow the expected pattern. In general, successful outcome increases as the risk level decreases. However, only a one percent difference in success rate was observed between maximum and medium risk level probationers classified by the Wisconsin instrument.

The Models' Use of Extreme Categories

To better understand the differences in outcome among instruments, the three models were compared in terms of the appropriateness of their assignments of probationers to the extreme risk categories (see Table 3-9B).

Table 3-9B
COMPARATIVE ASSESSMENT OF THE APPROPRIATENESS OF MODEL RISK CATEGORY ASSIGNMENTS FOR HARRIS COUNTY ADULT PROBATIONERS

Model	Total Favor. Outcome	No. Favor. in Min.Risk Category	% Favor. in Min. Risk Category	Total Unfavor. Outcomes	No.Unfavor. in Max. Risk Category	% Unfavor. in Max. Risk Category
GA	679	422	62.2	138	29	21.0
WISC.	604	329	54.5	102	25	24.5
IOWA	682	565	82.8	139	29	20.9

The Iowa model identified the highest percentage (83 percent) of the probationers who actually demonstrated favorable outcomes as minimum risks. At the same time, it identified the lowest percent (20.9 percent) of those probationers with unfavorable outcomes as maximum risks (though the differences were slight). This model showed the best overall use of the minimum risk category and poorest use of the maximum risk category.

The second best model for identifying both minimum (62.2 percent successes) and maximum (21 percent failures) categories was the Georgia system. Wisconsin had the best (24.5 percent failures) use of the maximum risk category but it was the least discriminating in assigning persons with favorable outcomes to the minimum risk category (54.5 percent successes).

Overall Predictive Power

Table 3-10 compares the predictive efficiency of the three models based on risk/needs categories. Predictive efficiency is based on Mean Cost Ratings (MCR) and Coeffient of Predictive Efficiency (CPE) values. Both measure the degree of accuracy of risk assessment. The measures vary between 0 and 1, attaining 0 when there is no predictive accuracy whatsoever and 1 when prediction is perfect. Kendall's Tau was calculated as a correlation between classification level and probation outcome.

Table 3-10
COMPARISON OF TAU COEFFICIENTS; MEAN COST RATINGS (MCR) AND COEFFICIENTS OF PREDICTIVE EFFICIENCY (CPE) FOR GEORGIA, WISCONSIN AND IOWA MODELS

	Georgia	Wisconsin	Iowa
Tau*	.10	.11	---
MCR	.18	.22	.14
CPE	.12	.13	.09
(N)	(817)	(706)	(821)

* $p = <.01$

Although most of the coefficients are relatively low and some are similar, the Iowa model showed the lowest predictive power of the three instruments. In contrast, the Wisconsin model exhibited superior values for all calculations. It should be noted that the differences between Georgia and Wisconsin values were minimal.

These findings fail to support HYPOTHESIS IV. The Iowa model exhibited the lowest rather than the highest predictive efficiency of the three instruments evaluated.

HYPOTHESIS V-A: Regardless Of Model, Probationers With High Risk Scores Are More Likely To Have Their Probation Revoked Than Those With Low Risk Scores.

Tables 3-11, 3-12 and 3-13 show the relationship of the Georgia, Wisconsin and Iowa classification instruments' risk scores to probation revocation rate. Because the distribution on risk score was highly skewed the researcher used the Phi test, a symmetric measure for nominal data, which may be interpreted as the Pearson r. Chi Square was used to test the significance of Phi.

Table 3-11 shows a strong correlation between risk score and revocation for probationers assessed by the Georgia instrument. Only 5 percent of probationers in the lowest risk score category (0-5) had their probations revoked. This compared to a 22 percent revocation rate for probationers in the highest risk score category (21 and over). It was only in the second highest risk score category (16-20) that the rate of revocation (11 percent) was less than the rate for lower risk score categories. That is, we observed that the risk categories 6-10 (13 percent) and 11-15 (15 percent) had higher revocation rates than probationers who fell in the 16-20 risk score category. However this risk score category only represents eight percent of the total classified cases. Thus, for the most part there is strong statistical evidence supporting a positive relationship between risk score and revocation rate. The correlation was statistically significant; Phi = .16, P is less than .0003.

Table 3-11
RELATIONSHIP OF GEORGIA RISK SCORE TO REVOCATION RATE
FOR 865 HARRIS COUNTY ADULT PROBATIONERS*

Risk Score	Revocation Status	
	No	Yes
0-5	95% N=226	5% N=12
6-10	87% N=261	13% N=39
11-15	85% N=146	15% N=25
16-20	89% N=63	11% N=8
21 and over	78% N=66	22% N=19

Chi Square Value 21.1**
Phi .16

* Includes transfer and MRP pending cases.
**p = < .0003

An analysis of five risk categories shows a slight correlation between risk score and outcome for probationers classified by the Wisconsin scale (see Table 3-12). Only 5 percent of probationers who fell in the lowest Wisconsin instrument risk score category (0-5) had their probations revoked. This figure compares to 15 percent revocation rate in the risk score categories 6-10, 11-15 and 21 and over. Sixteen percent of probationers with a 16-20 risk score had their probations revoked. These differences were statistically significant; Phi = .15, P is less than .002. Further analysis revealed that probationers classified as having high risk scores (21 and over) by this model were no more likely to have their probation revoked than individuals classified as having lower risk scores. But people classified as having low risk (0-5) were less likely to have their probation revoked than those with higher risk scores, the Chi Square value was 10.68, significant at the 1 percent level. Thus, in terms of probation revocation outcome it appears that the Wisconsin instrument better discriminates for low risk than high risk probationers.

Table 3-12
RELATIONSHIP OF WISCONSIN RISK SCORE TO REVOCATION RATE FOR 746 HARRIS COUNTY ADULT PROBATIONERS*

Risk Score	Revocation Status	
	No	Yes
0-5	95% N=282	5% N=16
6-10	85% N=199	15% N=34
11-15	85% N=93	15% N=17
16-20	84% N=43	16% N=8
21 and over	85% N=46	15% N=8

Chi Square Value 16.72
Phi .15

* Includes transfer and MRP pending cases.
**p = < .002

Table 3-13 shows a direct relationship between risk score categories and revocation rate for probationers assessed by the Iowa Four Factor Risk Scale. Only 9 percent and 10 percent of probationers who fell in the 0-1 and 2 risk score categories had their probations revoked respectively. This compares to 21 percent in the highest risk score category (3). Risk scores and outcomes were significantly related. Phi = .14, P is less than .0001.

Table 3-13
RELATIONSHIP OF IOWA FOUR FACTOR SCORE TO REVOCATION RATE FOR 901 HARRIS COUNTY ADULT PROBATIONERS*

Risk Score	Revocation Status	
	No	Yes
0-1	91% N=569	9% N=58
2	90% N=96	10% N=11
3	79% N=132	21% N=35

Chi Square 17.8**
Phi .14

* Includes transfer and MRP pending cases.
**p < .0001

These findings support HYPOTHESIS V-A. All three instruments showed significant differences in revocation rates among their respective lowest and highest risk score categories. A trend toward higher revocation rates for higher risk score categories than low risk score categories was generally observed among probationers assessed by the Georgia and Iowa classification models. However, in the Wisconsin group, there were minimal differences in outcome among higher risk score categories.

HYPOTHESES V-B: Of Probationers Revoked, Individuals Classified As High Risk Are More Likely To Be Revoked Because Of Legal Violations Than Technical Violations.

Table 3-14 shows that regardless of classification instrument, high risk probationers were more likely to have their probations revoked because of a law violation than a technical violation. We observed that the vast majority of revocations for all three groups were in the law violation category (Georgia = 63 percent; Wisconsin = 67 percent; Iowa = 71 percent).

Table 3-14
RELATIONSHIP OF HIGH RISK SCORES TO TYPE OF REVOCATION FOR GEORGIA, WISCONSIN AND IOWA RISK ASSESSMENT MODELS*

Model	Revocation Type	
	Law	Technical
Georgia[a]	63% N=12	37% N=7
Wisconsin[b]	67% N=12	33% N=6
Iowa[c]	71% N=25	29% N=10

[a] High Risk = 21 and above
[b] High Risk = 15 and above
[c] High Risk = 3 and above
* Includes tranfer and MRP pending cases.

The data support HYPOTHESIS V-B. The revocation of probation for high risk probationers was generally the result of a law violation rather than a technical violation.

HYPOTHESES V-C: Probationers With High Risk Scores Are More Likely To Have Technical Or Legal Violations Than Those With Low Risk Scores.

Tables 3-15, 3-16 and 3-17 show the relationship of risk score to technical violation outcome for three classification instruments. Transfer cases were excluded because no information was available on this variable.

Table 3-15 revealed a strong correlation between risk score and technical violation for probationers assessed by the Georgia instrument. We observed a 17 percent violation rate in the lowest (0-5) risk score category. This category compares to a 46 percent technical violation rate in the highest risk score category (21 and over). It was only in the 16-20 risk score category that the outcome was inconsistent. This category had a lower violation rate (20 percent) than the 11-15 risk score category (35 percent) and the 6-10 group (23 percent). A Phi of .20, significant at the .0001 level, indicated that for this model, a greater proportion of high risk probationers have a technical violation than low risk probationers.

Table 3-15
RELATIONSHIP OF GEORGIA RISK SCORES AND TECHNICAL VIOLATION RATE FOR 806 HARRIS COUNTY ADULT PROBATIONERS*

Risk Score	Technical Violation Status	
	No	Yes
0-5	83% N=185	17% N=39
6-10	77% N=218	23% N=64
11-15	65% N=103	35% N=55
16-20	80% N=51	20% N=13
21 and over	54% N=42	46% N=36

Chi Square Value 34.3**
Phi .206

* Excludes transfer cases.
** p = < .0001

Table 3-16 shows the total distribution on technical outcome for probationers assessed by the Wisconsin instrument. We observed significant differences in outcome between the lowest (0-5) risk score category (17 percent) and the highest (21 and over) risk score category (44 percent). Phi = .18, significant at the .0001 level. The fact that the other risk score categories (6-10, 11-15, 16-20) had identical outcomes (29 percent) suggests that, in terms of technical violations, the Wisconsin instrument better identifies extreme risk categories than medium risk probationers.

TABLE 3-16
RELATIONSHIP OF WISCONSIN RISK SCORES AND TECHNICAL VIOLATION RATE FOR 717 HARRIS COUNTY ADULT PROBATIONERS*

Risk Score	Technical Violation Status	
	No	Yes
0-5	83% N=241	17% N=48
6-10	71% N=160	29% N=64
11-15	71% N=75	29% N=30
16-20	71% N=35	29% N=14
21 and over	56% N=28	44% N=22

Chi Square Value 23.1**
Phi .180

* Excludes transfer cases.
**p = < .0001

In contrast to the Georgia and Wisconsin assessed probationers, we observed the lowest (22 percent) technical violation rate in the middle (2) risk score category among probationers assessed by the Iowa scale (see Table 3-17). As expected the highest risk score category had the highest violation rate (35 percent). These differences were significant; Phi = .11, p is less than .009. These results indicate that the Iowa instrument can better discriminate for high risk than low risk probationers in terms of technical violations.

Table 3-17
RELATIONSHIP OF IOWA FOUR FACTOR RISK SCORES AND TECHNICAL VIOLATION RATE FOR 841 HARRIS COUNTY ADULT PROBATIONERS*

Risk Scores	Technical Violation Status	
	No	Yes
0-1	77% N=457	23% N=137
2	78% N=73	22% N=20
3 and above	65% N=100	35% N=54

Chi Square Value 10.08**
Phi .11

* Excludes transfer cases.
**p = < .009

Tables 3-18, 3-19 and 3-20 show the relationship of three instruments' risk scores to legal violations.

In regards to the Georgia model, we observed that the highest risk score category (21 and over) had nearly three times (20 percent) the legal violation rate as the lowest (0-5) risk score category (7 percent; see Table 3-18). But we observed only a 2 percent variation in violation among the other risk score categories. Overall, the relationship was statistically significant; Phi = .12, p is less than .01. These results suggest that this instrument was efficient in identifying extreme low and high risk probationers but seriously limited in discriminating risk for probationers whose risk scores fall between the extremes.

Table 3-18
RELATIONSHIP OF GEORGIA RISK SCORES AND LEGAL VIOLATION RATE FOR 865 HARRIS COUNTY ADULT PROBATIONERS*

Risk Scores	Legal Violation Status	
	No	Yes
0-5	93% N=221	7% N=17
6-10	87% N=260	13% N=40
11-15	85% N=145	15% N=26
16-20	87% N=62	13% N=9
21 and over	80% N=68	20% N=17

Chi Square Value 11.86**
Phi .117

* Includes transfer and MRP pending cases.
** p = < .01

Among probationers assessed by the Wisconsin scale, an inconsistent pattern was observed in outcome on legal violation (see Table 3-19). As expected, over twice the proportion (17 percent) of probationers in the highest risk score category (21 and over) had law violations as the lowest (0-5) risk score category (8 percent). However the highest violation rate (20 percent) was seen among the middle range group (11-15). The Phi value for this distribution was .13, p is less than .009. These data indicated that the Wisconsin instrument is better in identifying low legal violation risk probationers than high legal violation risk probationers.

Table 3-19
RELATIONSHIP OF WISCONSIN RISK SCORES AND LEGAL VIOLATION
FOR 746 HARRIS COUNTY ADULT PROBATIONERS*

Risk Score	Legal Violation Status	
	No	Yes
0-5	92% N=275	8% N=23
6-10	86% N=200	14% N=33
11-15	80% N=88	20% N=33
16-20	86% N=44	14% N=7
21 and over	83% N=45	17% N=9
Chi Square Value 13.3**		
Phi .134		

* Includes transfer and MRP pending cases.
**p = < .009

Table 3-20 shows a direct correlation between risk score and legal violation outcome for probationers evaluated by the Iowa instrument. Over twice (21 percent) the proportion of probationers that fell in the highest risk score category (3 and over) had a law violation as the lowest (0-1) group (10 percent). Fourteen percent of the middle risk score group showed a negative outcome. This correlation was significant; Phi = .14, p is less than .003.

Table 3-20
RELATIONSHIP OF IOWA FOUR FACTOR RISK SCORES AND LEGAL VIOLATION RATE FOR 901 HARRIS COUNTY ADULT PROBATIONERS*

Risk Score	Legal Violation Status	
	No	Yes
0-1	90% N=567	10% N=60
2	86% N=92	14% N=15
3 and over	79% N=132	21% N=35

Chi Square Value 16.33**
Phi .135

* Includes transfer and MRP pending cases.
** p = < .003

These data partially support HYPOTHESIS V-C. In terms of technical violations, probationers in the highest and lowest risk score categories showed expected outcomes. One instrument (Georgia) showed the strongest direct correlation. For risk score categories outside the extremes, minimal differences in outcome were observed among probationers assessed by the Wisconsin scale. Thus, in regards to technical violations, the hypothesis is supported, given that probationers are confined to the extreme high and low risk score categories.

In respect to legal violations, two of three instruments (Georgia, Iowa) identified extreme high and low probation risks. One instrument (Iowa) shows a direct correlation as hypothesized. But again, two instruments (Georgia, Wisconsin) failed to discriminate for probation risk outside the extreme high and low risk score categories. Moreover, the Wisconsin instrument only demonstrated an ability to identify low legal violation risk probationers. Therefore, in terms of legal violations, the hypothesis is supported with the similar qualification that probationers with "highest" risk scores are more likely to have a legal violations than those with "lowest" risk scores.

HYPOTHESIS VI-A: Probationers Classified Maximum Supervision Level By The Georgia And Wisconsin Instruments Who Have High Direct Contact With Officers Have A Higher Success Rate Than A Comparison Group With Low Direct Contact.

Comparisons for "high" and "low" officer/probationer direct contact were made by comparing outcome of probationers who fell in the top third average office and field contacts per month (> 1.45) against those who fell in the bottom third average monthly office and field contacts (< .92).

Table 3-21 shows that probationers assigned to maximum risk by the Georgia model with "high" direct officer contact performed significantly better than their "low" contact counterparts. Less than one fourth (23 percent) of probationers who had "high" contact in the maximum risk group had an unsatisfactory outcome. That is, their probation was not revoked nor had they absconded. This compares to 62 percent negative outcome for probationers experiencing "low" direct officer contact. These differences were statistically significant; Chi Square value = 7.88, significant at the 1 percent level.

Table 3-21
RELATIONSHIP OF OFFICER/PROBATIONER DIRECT CONTACT
AND OUTCOME FOR GEORGIA AND WISCONSIN MODELS' "MAXIMUM" CASES

Contact[a]	Outcome[b]	
	Georgia	
	Failure	Success
Low	62% N=16	38% N=10
High	23% N=6	77% N=20
Chi Square Value 7.88*		
	Wisconsin	
	Failure	Success
Low	24% N=11	76% N=35
High	25% N=7	75% N=21
Not Significant		

[a] Low = < 92 per month High = > 1.45 contacts per month.
[b] Failure includes revocations and absconders. Success includes cases that are under supervision or successfully terminated. This analysis excludes cases transferred outside Harris County and cases with Motion to Revoke Probation Pending.
* p = < .01

Unexpectedly, for cases classified by the Wisconsin Instrument there was only 1 percent difference in outcome between "low" (24 percent) and "high" (25 percent) contact groups. This difference was not statistically significant. These findings support HYPOTHESIS VI-A for those probationers classified as maximum risk by the Georgia risk/needs assessent instrument. They fail to support the hypothesis for maximum cases under the Wisconsin model.

HYPOTHESIS VI-B: Probationers Classified Minimum And Medium Level Of Supervision By The Wisconsin And Georgia Instrument Who Have Low Direct Contact With Probation Officers Have No Different Success Rate Than A Comparison Group With High Direct Contact.

Regardless of model we found no significant differences in outcome for medium and minimum risk classified probationers who received "high" and "low" officer contact (see Tables 3-22 and 3-23). For example, among medium cases there was only 4 percent variation in negative outcome in the Georgia group (high = 22 percent; low = 18 percent). Only 1 percent difference was seen among Wisconsin cases (low = 18 percent; high = 19 percent).

Table 3-22
RELATIONSHIP OF OFFICER/PROBATIONER DIRECT CONTACT
AND OUTCOME FOR GEORGIA AND WISCONSIN MODELS' "MEDIUM" CASES

Contact	Outcome	
	Georgia	
	Failure	Success
Low	18% N=21	82% N=95
High	22% N=5	78% N=18
Not Significant		
	Wisconsin	
	Failure	Success
Low	18% N=17	82% N=78
High	19% N=5	81% N=22
Not Significant		

Among Georgia minimum cases, we observed a lower success rate for the "high" contact probation group (80 percent) compared to the "low" contact group (90 percent; see Table 3-23). But this difference was not significant. For Wisconsin minimum cases, none of the "high" contact group fell in the failure category. Because the number of cases in the "high" contact category was too small to draw any statistical conclusion another analysis was conducted using the bottom (30 percent and below) and top (70 percent and above) average contacts per month for minimum cases (Georgia: low = less than .53; high = greater than .83; Wisconsin: low = less than .53; high = greater than .88 (see Table 3-24). This analysis revealed that probationers classified minimum risk by the Georgia scale who experienced "high" contact (greater than .83 average contacts per month) had a lower success rate (78 percent) than their "low" contact (less than .50) counterparts (86 percent). The Chi square value was not significant. No significant differences in outcome were observed in the Wisconsin group (high = 91 percent; low = 90 percent).

Table 3-23
RELATIONSHIP OF OFFICER/PROBATIONER DIRECT CONTACT
AND OUTCOME FOR GEORGIA AND WISCONSIN MODELS' "MINIMUM" CASES

Contact	Outcome	
	Georgia	
	Failure	Success
Low	10% N=34	90% N=304
High	20% N=3	80% N=12
Not Significant		
	Wisconsin	
	Failure	Success
Low	8% N=22	92% N=251
High	0% N=0	100% N=6
Chi square Not Significant		

Table 3-24
RELATIONSHIP OF OFFICER/PROBATIONER DIRECT CONTACT
AND OUTCOME FOR GEORGIA AND WISCONSIN MODELS "MINIMUM" CASES

Contact[a]	Outcome	
	Georgia	
	Failure	Success
Low	14% N=20	86% N=125
High	22% N=30	78% N=106
Not Significant		
	Wisconsin	
	Failure	Success
Low	8% N=9	92% N=98
High	9% N=11	91% N=107
Not Significant		

[a] Georgia's Low Contact = less than .50 average contact per month
" High Contact = greater than .88 " " " "
Wisconsin Low Contact = less than .53 " " " "
" High Contact = greater than .83 " " " "

These results support HYPOTHESIS VI-B. Frequency of direct officer/probationer contact did not appear to significantly impact success on probation for those classified as medium or minimum risk supervision level by the Georgia and Wisconsin risk/needs assessment scales. However, there was evidence, upon modifying the definition of "high" and "low" contact for minimum classified Georgia cases, that "high" contact is negatively correlated with outcome. This suggests, that for this group, a surveillance model may be at work.

HYPOTHESIS VII: The Risk/Needs Reassessment Instruments Have Higher Predictive Efficiency Than The Initial Risk/Needs Assessment Instruments.

Table 3-25 compares outcome for the initial and reassessment scales by supervision assignment for the Georgia and Wisconsin models. For the purpose of analysis, only cases which were both assessed and reassessed by these scales were included.

Table 3-25
RELATIONSHIP OF SUPERVISION LEVEL ASSIGNMENT AND OUTCOME
FOR GEORGIA AND WISCONSIN MODELS: INITIAL ASSESSMENT VS. REASSESSMENT

Model	Outcome			
	Success		Failure	
	Percent	N	Percent	N
GEORGIA				
(Initial)				
Maximum	42.9	9	57.1	12
Medium	75.8	50	24.2	16
Minimum	86.2	168	13.8	27
(Reassess)				
Maximum	31.3	5	68.8	11
Medium	55.4	31	44.6	25
Minimum	90.9	191	9.1	19
WISCONSIN				
(Initial)				
Maximum	62.5	20	37.5	12
Medium	69.9	51	30.1	22
Minimum	90.1	146	9.9	16
(Reassess)				
Maximum	47.1	8	52.9	9
Medium	55.8	29	44.2	23
Minimum	90.9	180	9.1	18

Regardless of instrument we observed a high correlation between risk level and outcome. As expected, as the risk level increased, the failure rate increased. The initial and reassessment instruments discriminated for the extreme risk level categories better than the initial assessments. For example, the Georgia model reassessment scale showed a higher percentage of minimum risk cases in the success category (90.9 percent) than the initial assessment (86.2 percent). For maximum cases, this pattern was also evident for failure rates (Initial = 57.1; Reassessed = 68.8 percent). However, the results for the Wisconsin model showed little difference between the initial (90.1 percent) and reassessed (90.9 percent) minimum risk probationers. The Wisconsin reassessment scale did identify a significantly higher percentage of maximum risk probationers (52.9 percent) compared to the initial scale (37.5 percent).

Initial vs. Reassessment Instruments' Use of Extreme Categories

To better understand the utility of reassessment, we compared the differences in outcome for the extreme categories for the initial and reassessment instruments for the Georgia and Wisconsin models (see Table 3-26).

Table 3-26

COMPARATIVE ASSESSMENT OF THE APPROPRIATENESS OF MODEL RISK CATEGORY ASSIGNMENTS: INITIAL VS. REASSESSMENT FOR GEORGIA AND WISCONSIN MODELS

Model	Total Favor. Outcome	No. Favor. in Min.Risk Category	% Favor. in Min.Risk Category	Total Unfavor. Outcome	No. Unfavor. in Max.Risk Category	% Unfavor. in Max.Risk Category
Georgia						
Initial	227	168	74.0	55	12	21.8
Reassess.	227	191	84.1	55	11	20.0
Wisconsin						
Initial	217	146	67.3	50	12	24.0
Reassess.	217	180	82.9	50	9	18.0

In this respect, we observed that both models significantly improved identification of minimum risk probationers. The Georgia model increased from 74 percent to 84.1 percent. The Wisconsin model changed from 67.3 percent to 82.9 percent. In terms of probationers who actually demonstrated unsatisfactory outcomes identified as maximum risk, we found negligible differences between initial and reassessment for the Georgia scale. However, for the Wisconsin model, a lower percentage (18 percent) of maximum risk probationers with unfavorable outcome were identified by the reassessment scale in comparison to the initial assessment scale (24 percent). These results suggest that reassessment improved predictive efficiency for minimum risk but not maximum risk probationers.

Table 3-27 shows that the reassessment scale had greater predictive power than the initial assessment instrument. We observed that the MCR for the Georgia scale increased from .29 (Initial) to .51 (Reassessed). For the Wisconsin scale, the MCR went up from .37 (Initial) to .48 (Reassessed). The same pattern appears for the CPE values.

Table 3-27
COMPARISON OF TAU COEFFICIENTS MEAN COST RATINGS (MCR), AND COEFFICIENT OF PREDICTIVE EFFICIENCY (CPE) FOR GEORGIA AND WISCONSIN MODELS: INITIAL ASSESSMENT VS. REASSESSMENT

	Georgia		Wisconsin	
	Initial	Reassess	Initial	Reassess
Tau*	.18	.32	.22	.29
MCR	.29	.51	.37	.48
CPE	.35	.91	.36	.77

P = < .01

These findings offer strong support for HYPOTHESIS VII with the following qualifications. Reassessment scales for the Georgia and Wisconsin classification systems showed a higher predictive efficiency in identifying lower risk probationers than their respective initial assessment scales.

4. ANALYSIS OF RISK/NEEDS FACTORS

Recognizing the limited duration of the followup period we attempted to evaluate the validity of individual risk and needs items contained in the Georgia and Wisconsin instruments. Because more cases were assessed by the Georgia model and its items were similar to Wisconsin's the results are based on this instrument. The evaluation of the scale items involved an examination of the relative strength of the relationship between each item contained in the Georgia instrument and the probation outcome. Each variable in its categorical form was crosstabulated with the primary criterion (favorable, unfavorable outcome) variable and the strength of the relationship was measured by Chi square.

EVALUATION OF RISK ASSESSMENT ITEMS

The results of the analyses are presented in Table 4-1. Of ten risk assessment items analyzed, five were found related to outcome: number of address changes, time employed, academic/vocational skills, age at first conviction and number of felony convictions. The remaining variables - alcohol/drug use, number of probation/parole revocations, assault convictions, number of prior periods of probation or parole and number of prior incarcerations - were found to be unrelated to outcome.

Table 4-1
PERCENTAGE FAILURE FOR ALL SALIENT FACTOR SCORES BY
RISK & NEED FACTORS

Percentage Failures for All Salient Factor Scores

Variables	-2	-1	0	1	2	3	4	5	6	7	15	N	x^2	Sign. Level
No.of Address Changes			14.3	16.9	14.6	33.8	100					792	21.80	.0002
Time Employed		13.2	12.1	12.5	25.8		27.8		28.6			792	21.32	.0007
Alcohol/ Druc Usage			18.7	17.2	24.5	12.0	28.6	14.2	14.3	25.8		792	10.06	.180
Academic/ Vocation..Skills	0.0	11.3	16.0	14.3	28.7	18.1	25.9					792	20.9	.002
Age at First Conviction			14.1		17.7		23.6					791	8.71	.013
No.Probation/ Parole Revocat.			17.3	66.7	0.0		16.3					791	5.77	.124
No. of Felony Convictions			13.8	25.4	24.0		22.2					792	15.36	.001
Assault			17.31								17.1	792	.002	.969
No. of Prior Periods Prob./Parole			16.4	0.0	100.0		21.8		17.4			792	6.90	.141
No. Prior Incarcerations			16.59	0.0	17.2		27.3					792	5.09	.165

NEED FACTORS

Variables	-4	-2	-1	0	1	2	3	4	5	6	7	8	N	x^2	Sign. Level
PO's Impres. of Needs	0.0		6.8	10.2		17.9		18.8		17.9		15.4	686	9.48	.148
Marital/ Family			11.7	13.9	21.1	19.2	10.0	33.3	0.0				697	5.22	.515
Emotional Stability		12.8	0.0	15.1	14.5	0.0	33.3	0.0	0.0	20.0			697	4.80	.779
Financial Management			15.2	11.8	17.7	38.5		25.0		25.0			697	11.87	.037

OTHER RELEVANT VARIABLES

Variables	Bond	Detention	Other	N	x^2	Sign. Level
Pretrial Status	17.25	14.29	14.0	820	.695	.707

Variables	0	1	2	3	7	N	x^2	Sign Level
No. of Jail Terms/Adult	15.6	30.9	28.57	75.0	50.0	821	19.40	.0007

Variables	DWI	Drugs	Theft	Violent	Other	N	x^2	Sign. Level
Offense	15.0	16.4	23.8	2.6	10.3	766	13.84	.008

Variables	0	1	2	3	4+	N	x^2	Sign. Level
No. of Pre.Arrests	15.0	20.1	17.1	25.7	26.0	719	6.74	.15

EVALUATION OF NEED FACTORS

Only one needs item, financial management, was found to be significantly related to probation outcome. None of the other needs factors (P.O.'s Impression of needs, marital/family relationships or emotional stability) were associated with outcome.

EVALUATION OF OTHER RELEVANT VARIABLES

Of four legal and criminal history related variables, only number of jail terms and probation offense were found related to outcome. Neither pretrial status (jail vs. bond) or number of previous arrests significantly affected outcome. In terms of offense, the highest failure rate (23.8 percent) was observed among those convicted of theft. The lowest failure rate appeared among probationers convicted of a violent crime.

CONCLUSION

The fact that the majority of the total factors evaluated were found unrelated to probation outcome underscores the problems inherent in statistical prediction. If we examine the distribution of case failure rates by salient factor score of those items found significantly related to outcome, serious inconsistencies appear (see Table 4-1). A similar pattern was observed between risk score categories and outcome (see Chapter 3).

To what do we attribute these discrepancies? The probation population of Harris County is significantly different than that found in Wisconsin.

Harris County (Houston) has a considerable minority population and a great deal of migration of citizens. It should also be noted that the Georgia model has not been extensively evaluated outside Georgia. Already the Wisconsin model has been shown to be a poor predictor of outcome for a New York probation population (Wright et al;1984).

This raises doubt about the transferability of classification models to populations which exhibit totally different risk characteristics. This also points to the need to improve statistical risk prediction for probation populations.

The above does not diminish the merits of a large urban base probation department or state jurisdiction adopting a validated classification system until they have the opportunity to evaluate the application of these instruments. The results of this study confirm the advantage of screening and reassessing probationers. However, further analyses and refinement of the risk/needs scales used in Harris County would significantly improve both the predictive validity and efficiency in administering these instruments. Presently, Harris County has the opportunity to continue evaluating this selected study sample and develop and test its own risk scale.

In this respect, if a decision were made to pursue developing a traditional risk/needs assessment model for this jurisdiction, the investigation would begin formulating and testing an instrument containing the following variables: number of address changes, time employed, academic/vocational skills, age at conviction, number of felony convictions, financial management, number of jail terms and offense.

5. RELATIONSHIP OF TIME AND RISK LEVEL TO PROBATION OUTCOME

The time it takes for different types of offenders to violate conditions of probation has important implications for strategies of supervision. We calcuated the time from the date probation was granted to the date of a specific violation for each risk level. For those with a law violation type revocation, the time was calculated from the date of probation to the date of law violation rather than the date of revocation. In a separate analysis we looked at all probationers who had a law violation regardless of revocation status. In that analysis, we calculated the days between the date of the probation grant and filing of new charge rather than the date of conviction. Time for absconders was determined by using the date of last official contact with the department. For technical violations the date of actual violation was used.

Time to Probation Failure During 19 Month Followup Period

Table 5-1 shows the cumulative percentage of probationers who fell in the categories of technical or legal revocation and absconder. During the followup period we observed that nearly a third of probationers classified as maximum risk failed probation. Almost half of these probationers (15.76 percent) violated conditions of probation during the first four months.

Table 5-1
RELATIONSHIP OF TIME TO PROBATION FAILURE[a] BY GEORGIA MODEL SUPERVISION ASSIGNMENT

Risk Level	Months				
	0-4	5-8	9-12	13-16	17 & over
	(Cumulative Percent)				
Maximum (N=89)	15.7	28.1	30.3	32.6	32.6
Medium (N=241)	8.7	12.9	14.5	17.8	17.8
Minimum (N=487)	7.4	10.5	12.1	13.1	13.1

[a] Failure = Technical/Legal Violation Revocation, Absconded

This same pattern appeared for medium and minimum risk level offenders. For all three groups, the majority of violations occurred within the first eight months of supervision. No violations appear after 16 months.

Table 5-2
RELATIONSHIP OF TIME TO TECHNICAL VIOLATION
REVOCATIONS BY GEORGIA MODEL SUPERVISION ASSIGNMENT

Risk Level	Months				
	0-4	5-8	9-12	13-16	17 & over
			(Cumulative Percent)		
Maximum (N=89)	5.6	7.9	8.9	8.9	8.9
Medium (N=241)	1.7	2.5	3.3	3.3	3.3
Minimum (N=487)	1.6	1.9	2.1	2.1	2.1

As expected, (see Table 5-2), we found that maximum risk probationers had the highest percentage of revocations from technical violations (8.9 percent). This compared to 3.3 percent for medium risk probationers and 2.1 percent for those assigned to minimum supervision. Most of the technical violations occurred during the first 4 months. Regardless of supervision or risk level no violations resulting in revocation were reported after 12 months.

In terms of time to law violation revocations, Table 5-3 indicates that almost an equal percentage of probationers commit a law violation during the second four months as the first four months of supervision. For example, among maximum risk probationers, the law violation revocation rate increased from 7.9 percent to 13.5 percent between 0-4 and 5-8 months respectively. Comparing supervision levels for the 5-8 month period we saw that the maximum risk offenders had the highest percentage of law revocations within 8 months (80 percent). This compares to 65 percent and 68 percent for medium and minimum risk supervision categories.

Table 5-3
RELATIONSHIP OF TIME TO LAW VIOLATION REVOCATION
BY GEORGIA MODEL SUPERVISION LEVEL*

Risk Level	Months				
	0-4	5-8	9-12	13-16	17 & over
	(Cumulative Percent)				
Maximum (N=89)	7.9	13.5	14.6	16.9	16.9
Medium (N=241)	4.6	7.1	7.5	10.8	10.8
Minimum (N=487)	2.9	4.9	6.4	7.2	7.2

* Excludes transfer and MRP pending cases.

Table 5-4 shows that twice the proportion (6.7 percent) of maximum risk probationers abscond as medium (3.7 percent) and minimum (3.9 percent). During the followup study period, literally all maximum risk probationers who absconded did so during the first 8 months. As expected, the other supervision levels peaked during this period. We also observed a small rise in absconders among minimum risk offenders during the 13-16 month supervision period. No absconders were reported after 12 months for maximum and medium risk probationers.

Table 5-4
RELATIONSHIP OF TIME TO ABSCONDER STATUS,
GEORGIA MODEL SUPERVISION LEVEL

Risk Level	Months				
	0-4	5-8	9-12	13-16	17 & over
	(Cumulative Percent)				
Maximum (N=89)	2.3	6.7	6.7	6.7	6.7
Medium (N=241)	2.5	3.3	3.7	3.7	3.7
Minimum (N=487)	2.9	3.7	3.7	3.9	3.9

* Excludes transfer and MRP pending Cases.

Some probationers are convicted for another law violation but are retained on probation. An additional analysis studied all violations including these. Table 5-5 shows that law violations to maximum risk cases reached their peak during the first 8 months of supervision. Nearly 80 percent of law violations for maximum risk cases happened within the first 8 months. This compares to 68.2 percent for medium risk offenders and 40.3 percent for those assigned to minimum supervision.

Table 5-5
RELATIONSHIP OF TIME TO LAW VIOLATION REGARDLESS OF REVOCATION STATUS[a] BY GEORGIA MODEL SUPERVISION ASSIGNMENT*

Risk Level	Months				
	0-4	5-8	9-12	13-16	17 & over
			(Cumulative Percent)		
Maximum (N=89)	7.9	13.5	14.6	16.9	16.9
Medium (N=241)	4.6	7.1	7.5	10.4	10.4
Minimum (N=487)	2.7	4.9	6.4	7.2	7.2

[a] Note that some probationers may be continued on probation after conviction for another offense.
* Excludes transfer and MRP pending cases.

These findings underscore the importance of providing appropriate supervision during the early stages of probation. Indeed, the first four months under supervision appears to be the critical period in Harris County. After eight months of probation supervision, only negligible change in outcome was observed.

Another dimension of average time to recidivism and risk level studied was violation free days (see Table 5-6). Because this study was interested in the effect of frequency of officer/probationer contact on outcome, this factor was examined. Remarkably, we found the longest measure of law violation free days (250 average days) was associated with maximum risk offenders who had "high" contact with probation officers. The shortest violation free days measure (116 average days) was seen among maximum probationers who had "low" contact with officers. The opposite trend was observed for medium and minimum risk probationers. In these groups, the shortest law violation free days measure was associated with persons who experienced "high" officer contact. This finding is consistent with one of the major hypotheses which indicated that a treatment model was more in evidence for maximum risk probationers, while a surveillance model appeared at work for lower risk probationers.

Table 5-6
RELATIONSHIP OF AVERAGE LAW VIOLATION FREE DAYS TO GEORGIA LEVEL OF SUPERVISION AND FREQUENCY OF OFFICER/PROBATIONER CONTACT*

Risk Level	Contact[a]	
	High	Low
Maximum	250 (avg.days) (N=7)	116 (N=7)
Medium	143 (N=14)	233 (N=8)
Minimum	187 (N=11)	241 (N=18)

[a] High = 1.2 average contacts per month and above
Low = .71 average contacts per month and below
* Excludes transfer and MRP pending cases.

This finding is encouraging given our concern to protect the community from the most dangerous group of offenders placed on probation.

At this junction in the followup period it is reasonable to assume that probationers are more likely to recidivate during the early months of probation. Given further analysis based on a longer followup period, a case may be made to link intensity of supervision for specific risk levels to time on probation. This measure would allow more resources for supervision during the most vulnerable period of probation - the first four to eight months.

FURTHER STATISTICAL SUPPORT

In addition to analyzing the data in terms of cumulative percentages the researchers estimated recidivism in terms of likelihood or probability of recidivism for different months. The probability a person will be a successful probationer to a specific month is estimated via the use of a "survival function." Survival functions recognize the unique features of recidivism data and enables the testing of the effect of officer/probationer contact on the time to recidivism. This determination is accomplished with the use of a chi square statistic.

A survival function was first estimated for each of the three risk categories. The results of the estimation are summarized in Table 5-7.

Table 5-7
ESTIMATES OF TIME TO PROBATION FAILURE
FROM SURVIVAL FUNCTION ESTIMATION

Risk Level	Months				
	0-4	5-8	9-12	13-16	17 & over
Maximum (N=89)	9.27	24.83	35.03	35.03	38.84
Medium (N=241)	6.22	13.34	17.90	22.51	24.20
Minimum (N=487)	5.71	10.18	12.71	16.73	16.73

A comparison of Table 5-7 to Table 5-1 indicates the estimation underestimates the number of failures during the early months, is much closer to the actual during the 5-8th months and generally overestimates the percentages for the later months. The procedure supports the earlier conclusion that the majority of failures occur in the first eight months.

The primary benefit of using this approach is the ability to statistically compare the survival functions and determine if any particular group fails at a different pace than others. The chi square statistic calculated for this comparison has the value of 20.76 and is significant at the 5 percent level. This indicates statistical differences among the failure rates of the various risk groups.

The procedure was also used to test for the effect of officer/probationer contact on time to failure. The three risk groups were subdivided further on the basis of contacts per month, using the same definitions for high and low contact as before. Tables 5-8a, 5-8b and 5-8c contain the estimates for high, medium and low risk probationers respectively.

Table 5-8a
ESTIMATES OF TIME TO PROBATION FAILURE VIA SURVIVAL FUNCTION FOR MAXIMUM RISK PROBATIONERS

Contact	Months				
	0-4	5-8	9-12	13-16	17 & over
High (N=26)	3.85	16.95	26.72	26.72	26.72
Moderate (N=34)	2.99	9.77	18.10	23.90	28.90
Low (N=26)	24.52	55.49	70.33	70.33	70.33

The findings in Table 5-8a clearly indicate much can be gained through officer/probationer contact for high risk clients. The Chi-Square value of 12.47 is significant at the 5 percent level and substantiates that officer/probationer contact has an effect on time to failure for high risk probationers.

Table 5-8b
ESTIMATES OF TIME TO PROBATION FAILURE VIA SURVIVAL FUNCTION FOR MEDIUM RISK PROBATIONERS

Contact	Months				
	0-4	5-8	9-12	13-16	17 & over
High (N=23)	9.76	22.65	22.65	32.32	32.32
Moderate (N=89)	8.84	14.72	18.15	22.93	22.93
Low (N=116)	3.64	10.55	15.84	20.12	23.41

The estimates from Table 5-8b present no clear picture regarding the effects of officer contact on failure time. The statistical test indicates that for medium risk clients, the frequency of officer/probationer contact has no effect on failure time.

Table 5-8c
ESTIMATES OF TIME TO PROBATION FAILURE VIA SURVIVAL FUNCTION FOR LOW RISK PROBATIONERS

Contact	Months				
	0-4	5-8	9-12	13-16	17 & over
High (N=15)	16.00	16.00	16.00	30.00	30.00
Moderate (N=101)	10.26	23.40	31.66	31.66	31.66
Low (N=338)	3.65	6.61	8.49	12.96	12.96

The estimates in Table 5-8c support earlier conclusions regarding a surveillance model. High and moderate contact groups have estimates consistently above the low contact group. During the later periods the moderate and high contact groups have estimates greater than twice the estimate of the low contact group. The Chi-Square statistic lends further support with a value of 20.68 which is significant at $p < .01$. This analysis indicates officer/probationer contact does affect failure time and in the case of minimum risk clients a surveillance model may be operative.

6. DISCUSSION AND IMPLICATIONS OF STUDY

Choosing A Classification Model

It is assumed that models which use similar predictive variables to classify offenders will show generally high intercorrelation when administered to an identical population. This conclusion was supported by our findings on HYPOTHESIS I. High (.71) intercorrelation was found between the Georgia and Wisconsin models. In contrast, significantly lower correlation was observed between the Iowa and Georgia (.38) and Iowa and Wisconsin (.33) models.

The high correlation between the Georgia and Wisconsin models indicates that, for the most part, it does not make a significant difference which instrument is adminstered to the Harris County Adult Probation population in terms of initial supervision level assignment. If this is the only criteria under consideration, selection of classification system can be based exclusively on economy or efficiency. In this respect, we observed that the Wisconsin model required more staff time to administer than the Georgia instrument. If efficiency is the primary question, we can also consider the advantages and disadvantages of administering both the risk and needs components of the assessment scale.

Necessity of Administering Both the Risk and Needs Scales

HYPOTHESIS II offered convincing evidence that the risk scale, rather than the needs scale, dictated supervision level assignment. Between 93 and 94 percent of the probationers' supervision level assignments were determined by the risk scale alone. From a practical point of view, we may find that employment of both risk and needs scales is unnecessary especially for obviously low risk probationers (e.g., misdemeanor first offenders).

The Importance of Reassessment Procedure

It is logical to assume that regardless of classification system employed, probation supervision strategy will be governed more by caution during the initial phase of service than later periods. The longer a probationer is supervised the more information is available to an officer to appropriately evaluate risk. This does not discount the possibility of detecting both negative and positive attributes of probationers over time. But previous studies have shown that assessed risk levels of probationers have been lowered by reassessment.

This pattern was confirmed with respect to HYPOTHESIS III. Approximately twice the number of probationers received a lower risk classification or supervision assignment than received a higher risk level.

Accepting the argument that the classification models are valid, this means that in the absence of reassessment, many probationers would be over classified and resources misdirected to low risk persons. In a large urban jurisdiction with scarce resources this is an important consideration. In Harris County, 18 percent of the probationers received a lower classification when reassessed by the Georgia instrument. This compares to nine percent of probationers whose supervision assignment was raised. In this jurisdiction, this translates into approximately 2,800 over-classified probationers.

The Issue of Low Predictive Efficiency For The Iowa Scale

The rationale for classifying probationers is directing resources in accordance with the rehabilitation needs of offenders and the safety of the public. Ideally, a classification procedure will facilitate this process by correctly identifying the needs and risk of offenders placed on probation. While we can not assume that a perfect classification system exists, there are methods to determine predictive power of these instruments. This study adopted two standard statistical procedures to measure predictive efficiency (Means Cost Ratings, Coefficient of Predictive Efficiency). Surprisingly, we found that of the three instruments evaluated, the Iowa Four Factor Scale had the lowest predictive efficiency. These results compelled the researchers to reject HYPOTHESIS IV. This finding appears influenced by the high proportion of cases assigned to minimum risk. This in turn was related to the heavy reliance by the Iowa model on criminal history factors to determine risk score. Thus, it appears that the Iowa instrument may be more appropriate to classify an offender population made up of those with a more serious criminal history background than persons found in the Harris County probation population. It should be noted that most of the validation studies of this instrument were conducted using imprisoned, rather than probation subjects.

The Advantage of Early Screening and Classification

In terms of protecting the public, early identification of high risk offenders will allow criminal justice administrators to immediately allocate and direct staff resources to high risk groups. At the same time, early identification of low risk groups will justify diverting resources from offenders who will benefit the least from intensive services. In regards to formulating a differential treatment model, the advantages are straight forward.

HYPOTHESES V-A, V-B and V-C offered strong evidence that knowledge of initial risk scores can be very helpful in targeting extreme high and extreme low risk offenders. For example, probationers assessed by the Georgia and Wisconsin instruments in the lowest risk score category had between two and three times less technical and law violations than their extreme high risk counterparts. In terms of probation revocations, the Georgia model indicated that over four times as many high risk offenders fell in this category as in the lowest risk score category. This information allows probation officials to assign 28 percent of probationers to minimum supervision status (e.g., mail in), while placing the highest risk group, made up of only 10 percent of the population to intensive supervision. Although the Georgia and Wisconsin classification systems had lower predictive efficiency than other similar instruments previously studied (Eaglin and Lombard, 1982; Fisher, 1983), rejecting their application or randomly assigning probationers to supervision categories would result in serious misapplication of agency resources.

The above raises the question of the merits of using this information to establish supervision standards.

Using Classification Procedures to Plan Supervision Strategy

For probation departments to meet the objectives of protecting the public and helping offenders succeed in the community, they must develop a com-

bination surveillance and treatment operations model. At best, supervision detects offender behavior that warrants stronger social intervention, including possible incarceration. We also hope probation services reduce recidivism. A valid classification system achieves both of these objectives if it can demonstrate that supervision or services correspond with the probationer's true risk to the community and that probation outcome is indeed positively affected by supervision strategy.

To a significant degree this pattern was confirmed by HYPOTHESES V-A and V-B. First, there was a direct relationship between supervision assignment and average monthly officer/probationer contact per month (maximum = 1.26; medium = .93; minimum = .71). That is, probationers classified as minimum risk, actually experienced lower contacts than those assigned to medium risk and medium risk persons had less contact than probationers placed in the maximum risk category. Furthermore, probation success rate followed the expected pattern.

From a surveillance model point of view, these results generally support the notion that the stronger the supervision, the more likely the probationer is to be caught violating conditions of probation. From a rehabilitation perspective, the Georgia classification system identified a group of maximum risk offenders that showed a significant positive relationship between officer contact and successful outcome. This result is consistent with the Wisconsin study (1979) and gives credence to supporting intensive supervision programs in conjunction with a valid classification system. Of equal importance, this study partially supports the hypothesis that frequency of officer/probationer contacts does not significantly affect outcome on medium and minimum risk level probationers. However, for minimum ses classified by the Georgia system, it was shown that changing the definition of "high" and "low" contact based on the range of contacts within the minimum supervision category produced opposite results. "High" contact was associated with high failure. This suggests that supervision strategy for minimum risk cases needs to be carefully evaluated. An arbitrary decision to abandon services for minimum risk probationers could result in compromising public safety. This still does not go against the argument that minimum risk probationers require considerably less services than higher risk persons. This is particularly true for extreme low risk probationers.

Early Interrvention Is Critical

Our analyses found that over a 19 month followup period, virtually half of the law and technical probation violations occurred within the first four months of probation supervision. Eighty percent of law violations for maximum risk probationers happened during the first eight months. This compared to 65 percent for medium and 68 percent for minimum risk probationers within this period. This finding emphasizes the need for both timely classification and early involvement with probationers, paricularly those classified as maximum risk.

The Transferability Of Classification Models

This brings us to the issue of transferability of risk assessment scales. Differential case management of probationers based on a valid classification system is essential for effective and efficient services. The negative consequences of the alternative for a large urban jurisdication with scarce resources are self-evident. This does not mean that in any given jurisdiction one validated classification instrument is as good as another. As we see in the present study, the predictive efficiency of the Iowa instrument compared to either the Georgia or Wisconsin device was lower than anticipated. In fact, the predictive efficiency for both the Wisconsin and Georgia instruments was lower than reported in previous studies on these devices.

This leads to the conclusion that no single instrument can claim universal applicability. This becomes more apparent when we examine the relationship of individual risk and needs factors contained in the scales to outcome. Only half of the risk factors and one needs factor were significantly related to probation outcome. Moreover, serious inconsistencies appeared in the distribution of case failure rate by salient factor score among those items found significantly related to outcome.

Research Implications

There is a strong argument for large urban probation departments adopting a validated classification system and evaluating it to determine if it is applicable to its offender population. In Harris County, this analysis was undertaken and revealed that eight variables were found significantly related to probation outcome: number of address changes, time employed, academic/vocational skills, age at conviction, number of felony convictions, financial management, number of jail terms and offense.

In order to eliminate waste and inefficiency and avoid misclassification of probationers, we strongly encourage this jurisdiction and the state of Texas to continue their research efforts in refining their risk/needs assessment instruments. With the present knowledge, Harris County could concentrate on testing a risk scale containing those factors found related to outcome in this jurisdiction. Presently, considerable officer time is devoted to gathering redundant and invalid information from probationers. At the same time this study confirms the wisdom in officers collecting valid information for the purpose of classification and planning supervision strategy.

Finally, the results strongly support the rationale for establishing intensive probation supervision programs (ISP) for felony offenders. For it was among the maximum risk group that high intervention correlated significantly with probation success and increased law violation free days for those who failed probation. This finding also points to the need to evaluate current intensive supervision programs to determine the most effective strategies of supervision.

1985-1986 HARRIS COUNTY ADULT PROBATION DEPARTMENT
CLASSIFICATION STUDY DATA COLLECTION FORM

SECTION I: I.D. INFORMATION

V1 NAME

V2 SPN

V3 CASE #

V4 DATE OF PROBATION

V5 INITIAL PROGRAM ASSIGNMENT

1 = North	7 = ISP
2 = South	8 = Spec. Prog.
3 = East	9 = Res. T.
4 = West	10 = Res. R.
5 = Central	11 = ICU
6 = Cen. Annex	12 = Other

V6 PROGRAM ASSIGN AT TERMINATION

1 = North	7 = ISP
2 = South	8 = Spec. Prog.
3 = East	9 = Res. T.
4 = West	10 = Res. R.
5 = Central	11 = ICU
6 = Cen. Annex	12 = Other
	13 = Unsupervised

V7 FREQUENCY OF PROGRAM CHANGE
1-6 = number of times transferred
7 = does not apply
9 = missing value

V8 CLASS. INSTRUMENT ASSIGNMENT

1 = WISC.	3 = Simulated
2 = GEORGIA	4 = Other

V9 Court _____

V10 DOB _____

V11 SEX 1 = M 2 = F

V12 RACE 1 = W 2 = B 3 = MA 4 = Other

SECTION II: NEEDS/RISK ASSESSMENT INFORMATION

V13 (R-W) Number of Address Changes
Score _____

V14 (R-W) Percent Time Employed
Score _____

V15 (R-W) Alcohol Usage
Score _____

V16 (R-W) Other Drug
Score _____

V17 (R-W) Attitude
Score _____

V18 (R-W) Age at first Adjudication of Guilt
Score _____

V19 (R-W) Number of Prior Periods of Prob/Parole
Score _____

V20 (R-W) Number of Prior Prob/Parole Revocations
Score _____

V21 (R-W) Number of Prior Felony Adj. of Guilt
Score _____

V22 (R-W) Adult or Juv. Adjudicate for Burg. etc.
Score _____

V23 (R-W) Adult or Juv. Assault Adjudication
Score _____

V24 (Total R-W)
Score _____

V25 (NW) Acadamic _____

V26 (NW) Employ _____

V27 (NW) Financial Mg. _____

V28 (NW) Marital/Family _____

V29 (NW) Comparison _____

V30 (NW) Emotional Status _____

V31 (NW) Alcohol Usage _____

V32 (NW) Other Drug _____

V33 (NW) Mental Ability _____

V34 (NW) Health _____

V35 (NW) Sexual Behavior _____

V36 (NW) PO Impression _____

V37 (NW) Total Needs Score _____

V38 (R/NW) Initial Supervision Level
1 = Maximum 3 = Minimum
2 = Medium 4 = Other

V39 (R-G) Alcohol/Drug Score _____

V40 (R-G) Employ Score _____

V41 (R-G) Academic Score _____

V42 (R-G) Number of Address Changes _____

V43 (R-G) Age at First Conviction _____

V44 (R-G) Number of Prob/Parole Revocations _____

V45 (R-G) Number of Felony Convictions including present _____

V46 (R-G) Convictions for Assaultive Offence within last 5 years _____

V47 (R-G) Number of Prior Periods of Probation/ Parole Supervision _____

V48 (R-G) Number of Prior Incarcerations _____

V49 (R-G) Conviction for _____

V50 (R-G) Total R Score _____

V51 (N-G) Health _____

V52 (N-G) Marital/Family _____

V53 (N-G) Mental Ability _____

V54 (N-G) Emotional Stability _____

V55 (N-G) Financial _____

V56 (N-G) Alcohol Usage _____

V57 (N-G) Illicit Drug _____

V58 (N-G) Employ _____

V59 (N-G) Academic/Vol. _____

V60 (N-G) PO's Imp. _____

V61 (N-G) Total Need Score _____

V62 (G) Initial Level of Supervision
1 = Maximum 3 = Minimum
2 = Medium 4 = Other

V63 Number of Classification Changes

_____

V64 Pretrial Status
1 = Bond 2 = Detention

V65 Current Offense
1 = Felony 2 = Misdemeanor
3 = Both

V66 Type of Offense

1 = Arson
2 = Attempt. Murder
3 = Burg. Hab.
4 = DWI
5 = Failure to stop and render aid
6 = Forgery
7 = Murder
8 = Rape
9 = Sexual Abuse of a Child
10 = Robbery
11 = Theft
12 = Auto Theft
13 = Sale of Drugs
14 = Delivery of Drugs
15 = Credit Card Abuse
16 = Assault
19 = Crim. Misd.
20 = Welfare Fraud
21 = Poss. Drugs
22 = Burg. Bldg.
23 = Kidnapping
24 = Poss. M.
26 = Sig. Viol.
27 = Prostitution
28 = Resisting Arrest
29 = Gambling
30 = Escape
31 = Vol. Manslaughter
32 = Invol. Manslaughter
35 = Neg. Homicide
36 = Weapon
37 = Unemployment violence
38 = Trespassing
39 = Driving w/o Liscense
42 = Burg. Vehicle
48 = Theft by Receiving
50 = Robbery deadly weapon
58 = Attempted Cap. Murder
64 = Burglary Other
65 = Other

V67 Number of Prior Arrests Not Including Present Offense _____

V68 (R-I) Number of Prior Arrest Score _____

(A. 1 pt. all arrests including JV-1)
(B. 1 pt. all probation including JV exclude unsupervised Misd.)
(C. 1 pt. for each city county jail time - no JV.)
(D. 3 pt. for each uvenile training school X 2)
(E. 3 pt. for each prior term X 2)

V69 (R-I) Number of Prior Probations _____

V70 (R-I) Number of Adult Jail Terms _____

V71 (R-I) Number of Juvenile Commitments _____

V72 (R-I) Number of Prior Adult Commitments _____

V73 (I) Total I Risk Score _____

V74 I 4 Factor Score _____

V75 First (R-W) Reassessment Score _____

V76 First (N-W) Reassessment Score _____

V77 First (R-G) Reassessment Score _____

V78 First (W) Reassessment Supervision Level
1 = Maximum 3 = Minimum 5 = Other
2 = Medium 4 = Same

V79 First (G) Reassessment Supervision Level
1 = Maximum 3 = Minimum 5 = Other
2 = Medium 4 = Same

V80 Second (R-W) Reassessment Score _____

V81 Second (N-W) Reassessment Score _____

V82 Second (R-G) Reassessment Score _____

V83 Second (W) Reassessment Supervision Level
1 = Maximum 3 = Minimum 5 = Other
2 = Medium 4 = Same

V84 Second (G) Reassessment Supervision Level
1 = Maximum 3 = Minimum 5 = Other
2 = Medium 4 = Same

V85 (W) More than two Reassessments?
1 = Yes 2 = No 3 = N/A

V86 (G) More than two Reassessments?
1 = Yes 2 = No 3 = N/A

V87 (W) Final Supervision Level
1 = Maximum 3 = Minimum
2 = Medium 4 = Other

V88 (G) Final Supervision Level
1 = Maximum 3 = Minimum
2 = Medium 4 = Other

V89 Number of officers involved in supervision for instant offense _____

SECTION III: OUTCOME DATA

V90 Offender's Probation Outcome
0 = under super. for instant conviction
1 = successful termination
2 = transfer out of county
3 = unsuccessful termination
4 = probation revoked because of technical violation
5 = probation revoked because of legal violation
6 = Absconder
7 = Other

V91 Number of technical violations

V92 Type of Technical Violation
0 = None
1 = Delinquent Sup/Rest. Fee
2 = Failure to secure employment
3 = Failure to support dependents
4 = Positive Urinalysis
5 = Failure to Report
6 = Absconder
7 = More than one
8 = Other

V93 Number of Times Failed to Report _____

V94 Failed to Pay Supervisory Fee?
1 = Yes 2 = No 3 = N/A

V95 Failed to Pay Fine or other Court costs other than Supervisory Fee?
1 = Yes 2 = No 3 = N/A

V96 Violation Free Time _____

V97 Average Monthly Office Visits by Probationer _____

V98 Average Monthly Visits (Office & Field) _____

V99 Average Monthly Successful Field Visits _____

V100 Extra Variable (Old Fees Variable) _____

V101 Total Days on Probation _____

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