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THE LEVEL OF SERVICE INVENTORY--ONTARIO REVISION:

RISK/NEED ASSESSMENT AND RECIDIVISM

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Abstract

The current research represents the first longitudinal study using the LSI-OR, which is a modified version of the LSI-VI, on a sample of 630 adult male offenders, namely, 454 inmates and 176 probationers. Subjects were administered the LSI-OR at intake, pretreatment, or for the purposes of internal programming and were followed for an average of 2.6 years. Any recidivism was defined as any reconviction for a new offence. Both general and violent recidivism were assessed by means of multiple follow-up sources.

Overall, the findings support the use of the LSI-OR as the risk/needs measure for institutional, community offenders as well as special offender groups, including females and young offenders. From a variety of psychometric analyses, the LSI-OR demonstrated more than adequate reliability estimates that were superior to those reported for the LSI-VI and the PCL-R. The additions and changes to the LSI were examined and there was more than ample support for the revisions. For example, the Specific Risk/Need Factor section, particularly, the History subscale, proved to be significant and specific to the prediction of violent recidivism (r = .36). The final risk level endorsed following the use of an override used in prediction analyses improved the prediction of recidivism, incrementally, across a variety of recidivism variables, albeit minimally. When the LSI-OR subscales were subjected to a principal components analysis, the General Risk/Need Factor section reduced to a 6-factor model, namely, the Criminal History, Education/Employment, Drug, Alcohol, Some Criminal Friends, and No Anticriminal Friends Factors.

Adult male offenders from the institutional sample were more likely to recidivate both generally (61.9% vs 35.2%) and violently (27.1% vs 16.5%) compared to adult males who were under community supervision. Institutional offenders were also known to reoffend sooner than their community counterparts as demonstrated through survival analyses. Using survival analyses, the LSI-OR risk levels also differentiated between recidivists and nonrecidivist groups. The large number of recidivism

variables were also subjected to an exploratory factor analysis. A 3-factor solution was produced consisting of a Sentence Length/Time Served Factor, an Offence Severity/Diversity Factor, and an Outstanding Charges Factor.

The General Risk/Need Factor section which samples the major risk/need predictors correlated with general recidivism very significantly(r = .39). The largest association with general recidivism was produced by the Criminal History subscale (r = .40). The largest correlates of recidivism were consistent with recent findings (Gendreau, Goggin & Little, 1996) and in addition to criminal history factors were achieved by the antisocial patterns, antisocial companions, substance abuse, procriminal attitudes, leisure/recreation, education/employment, as well as family/marital subscales for the combined adult male sample. The Other Mental Health Issues subscale and Special Repsonsivity Factors sections also correlated significantly with general and violent recidivism.

Special offender groups, namely, a mentally disordered, domestic violence, and sex offender group, were identified from LSI-OR items, and were subjected to several analyses. The General Risk/Need Factor total score and the Specific Risk/Need Factor section total scores differentiated recidivists and nonrecidivists for the special offender groups. Across the special offender groups, the General Risk/Need Factor section was superior in predicting general recidivism while the Specific Risk/Need Factor section was superior in predicting violent recidivism. This finding was similar to those with institutional and community groups. Therefore, the LSI-OR demonstrated to work equally well with special offender groups.

Several stepwise multiple regression analyses were examined using the General Risk/Need Factor and the Specific Risk/Need Factor subscales, the LSI-OR Factors, and all the sections of the LSI-OR as the independent variables in separate analyses. Recidivism as the dependent measure was used as a dichotomous and continuous variable. The recidivism factors were also used in the regressions. The general pattern of predictors for general recidivism included criminal history,

procriminal attitudes, and companions for the combined sample with a multiple R of .43. For the prediction of violent recidivism, the Antisocial Pattern and the History subscale contributed uniquely to the regression equation for the combined sample with a multiple R of .39. When testing the LSI-OR sections, the General Risk/Need Factor total score emerged as the only predictor for general recidivism with a multiple R of .39. For the prediction of violent recidivism, however, the Specific Risk/Need Factor section and the Other Mental Health Issues sections emerged as the predictors for the combined and institutional sample with multiple R's of .37 and .39, respectively. However, it was the absence of mental health problems which was related to violent reoffending. For probationers, the General Risk/Need Factor section was the only predictor that entered the regression equation for violent recidivism.

Acknowledgements

Table of Contents

List of Appendices

List of Tables

List of Figures

.

The Level of Service Inventory-Ontario Revision

Risk/Needs Assessment and Recidivism

Introduction

The Level of Service Inventory-Ontario Revision (LSI-OR; Andrews, Bonta, Wormith, 1995) is the actuarial classification instrument, which is currently used to assess provincial offenders in Ontario. Throughout correctional services, the LSI-OR is now a required assessment for all adult inmates undergoing any institutional classification or release decision, for all young offenders both in secure and open custody, and for all probationers and parolees (Ontario, 1997). Based on the findings of recent literature, the LSI-OR represents a modification of the LSI-VI. This study examines those revisions. While the specific focus of the instrument is on adult provincial offenders in community and institutional settings, it is expected that the measure will have more general application in the assessment of adults at risk for reoffending. In addition, there is the question of whether the instrument can be appropriately used for the assessment of young offenders. The purpose of this study is to evaluate the new instrument's psychometric properties and its predictive ability with provincial offenders from probation and institutional settings. The results will have important implications for treatment and rehabilitative purposes throughout the justice system.

Both the LSI-VI and the LSI-OR are derived from a general social learning theory which implicates a broad range of personal, contextual, and systemic variables in the determination and analysis of youthful and adult criminal activity (Andrews & Bonta, 1994; Andrews, Bonta & Hoge, 1990). The theory which has guided the development of the instruments is that developed by Andrews and his colleagues and includes a number of assumptions regarding the correlates, causes and treatment of criminal activity.

<u>The Psychology of Criminal Conduct Theory</u>

The notion of assessing offender risk and needs for the purpose of guiding correctional

supervision and treatment grows largely out of a social learning perspective of criminal conduct. After

reviewing the results from longitudinal and cross-sectional delinquency research studies, the

knowledge of the correlates and predictors of criminal behavior was synthesized and formulated into

the psychology of criminal conduct (Andrews & Bonta, 1996). Within this branch of psychology, criminal

behavior is understood as occurring within the immediate context of personal, interpersonal, and

community reinforcements (Andrews & Bonta, 1994). As such, behavior in any given situation, is

viewed as under the influence of antecedent and consequent events. Because of prior learning and

experiences, these antecedant and consequent events provide indicators as to the likely outcome of

certain actions. When the rewards associated with an antisocial behavior outweigh the costs, it is likely

the antisocial behavior will occur. The availability of nondeviant alternative behaviors and an

assessment of their rewards and costs are also considered intermediary factors that can influence the

chosen outcome.

The psychology of criminal conduct model suggests that there are a number of potential

pathways that can lead an individual to a particular situation and influence the evaluation of that

situation as favourable for crime. Some specific influential factors include features of the immediate

situation, developmental history, attributes of the family situation, personality, cognitive and behavioral

attributes, educational and employment experiences, peer group associations, and beliefs and attitudes

(Andrews & Bonta, 1994). Particular emphasis is given to antisocial attitudes, values, and beliefs,

which form the standards of conduct and generate the rationale for engaging in antisocial behavior.

Criminal associates are also afforded a central role in this model, since they provide the opportunity for

antisocial modelling to occur and help to govern the rewards and costs of such behavior. Although

there are multiple pathways to criminal behavior, as the number of risk factors increase for an

individual, so does the probability of delinquency.

The theory of criminal conduct also gives recognition to the broader social system for the development, maintenance, and modification of the contingencies that guide individual behavior. In other words, a variety of personal, interpersonal and community factors are involved in the creation of the immediate situation or context of action, as well as in influencing the responses which will occur.

Risk/Need Factors

A substantial body of research has been devoted to the identification of the specific personal, interpersonal, and circumstantial variables that influence the onset of criminal behavior and the likelihood of reoffending. A review of the correctional literature indicates that there is consistency with regard to risk factors, which are characteristics of the offender's past or present circumstances and behavior, that are predictive of future criminal behavior (Andrews, Bonta & Hoge, 1990). This research indicates that the predictors of adult recidivism include problems in the family of origin (such as criminality, rearing practices, and family structure), age, gender, past criminal history, history of antisocial behavior (such as early convictions, alcohol/drug abuse, aggressive behavior, conduct disorder, behavior problems at home and school, and delinquent friends), educational/vocational/socio-economic achievement (such as under average achieved level of education, unstable job record, reliance on welfare), antisocial personality/sociopathy/psychopathy, criminal associates (identification and socialization with offenders), criminogenic attitudes/beliefs/behavior, interpersonal conflict, and emotional/behavioral disturbance when combined with antisocial behavior (Andrews, 1989; Gendreau, Little & Goggin, 1996). These variables can be generally grouped together by offender characteristics (e.g., skills, personality, abilities, attitudes), environmental or societal factors (e.g., living arrangements, criminal associates), and individual circumstances (e.g., employment, finances, substance use/abuse).

Risk factors are classified into two categories: static and dynamic. Static risk factors such as age of first conviction, or previous convictions are aspects of the offender's past that are predictive of

recidivism but are not subject to change. On the other hand, dynamic risk factors or needs reflect the present circumstances and behavior of the offender, and, as such, are amenable to change. There are two types of offender needs: criminogenic and noncriminogenic. Examples of criminogenic needs are offenders' attitudes, cognitions, and behavior regarding employment, education, peers, authority, substance abuse and interpersonal relationships that lead to conflict with the law. In other words, a need factor, or criminogenic need, refers to a risk factor that is amenable to change, such that when the need is reduced, so is the likelihood of criminal behavior.

After reviewing 131 studies from 1970 to 1994, the results of a recent meta-analysis indicate that the largest relationships were found for adult criminal history, antisocial companions, antisocial attitudes supportive of antisocial lifestyle and behavior, and antisocial personality (r =.17 to .21; Gendreau, Goggin & Little, 1996). These are often referred to as the "Big Four" in the recidivism literature (Andrews and Bonta, 1996/98).

Similar results were reported in a meta-analysis of the young offender literature. Andrews and Simourd (1994) found that the most important risk factors were, in descending order, antisocial peers or attitudes, temperament or misconduct problems, educational difficulties, poor parent-child relations, and minor personality variables. Consistent with the adult review, personal distress, family structure, and lower social class were not strongly associated with delinquency.

These literature reviews and analyses provide valuable information about the predictors of recidivism and their relative importance. This information is useful for the purposes of criminal justice research and knowledge regarding the correlates of criminal conduct and of the moderators and mediators of that covariation (Andrews, Bonta & Hoge, 1990). Additionally, the knowledge of the correlates of recidivism has important practical implications for assessment related activities which may involve the integration of information from a wide range of contexts. Valid assessment information is essential for all areas of decision-making, whether that information is used for the purposes of offender

classification, case planning, targeting correctional treatment programming, (Andrews & Wormith, 1989), or evaluating the effectiveness of those treatment programs. In order to maximize the predictive validity of such decisions, assessments should be based on a broad range of risk, need and responsivity factors because these are the factors that have proven to be predictive.

The Principles of Offender Classification

Offenders, whether federal or provincial, sexual or violent, vary widely in their probability of reoffence and the degree of harm they do if they reoffend (Andrews & Bonta, 1994). Since the prediction of criminal behavior is central to the operations of criminal justice and correctional systems (Andrews & Bonta, 1994), it is important to be able to predict with a reasonable degree of accuracy the probability of reoffence, especially sexual or violent reoffence, among released offenders (Furr, 1995). Accurate prediction of the probability of reoffence is needed to assist in determining whether an offender should be released and to determine the level of supervision needed both within the correctional institution and in the community following release. Inaccurate prediction may, on the one hand, lead to a waste of resources on very low risk offenders or, on the other hand, failure to adequately supervise or treat higher risk offenders.

Andrews and his colleagues (Andrews, Bonta & Hodge, 1989) have developed a model for conceptualizing some of the important issues which are essential in the assessment of offenders and in the development of treatment programs for them. The model is based on four principles of classification for rehabilitation within the context of basic research and theory in the psychology of criminal conduct. The principles are as follows: (1) the risk principle states that higher risk cases should be assigned to higher levels of service or more intensive levels of supervision, including incarceration as a means of supervision, (2) the needs principle states that the specific needs of the offender must be targeted for treatment, specifically, those factors (criminogenic factors) which are functionally related to the commission of the offence, (3) the responsivity principle refers to the matching of the mode and style

of treatment to the offender, (4) the principle of professional discretion provides the assessor with the opportunity to use professional judgement to override the preceding principles of assessment in the event of unique cases.

The Risk Principle. There are two aspects of the risk principle. The first is that criminal behavior can be predicted based on the risk factors (Andrews & Bonta, 1994). The second aspect of the risk principle involves the idea of matching levels of treatment and supervision services to the risk level of the offender. This aspect provides the bridge between assessment, classification and treatment. Meta-analyses (Gendreau & Andrews, 1990; Lipsey, 1990) support the risk principle and show that augmented services do not reduce the recidivism rates of the lowest risk cases. In fact, in comparing the recidivism rates of low risk cases assigned to regular and augmented service, the rate of recidivism is actually greater for the augmented group (Andrews, 1995; Andrews, Zinger, Hoge, Bonta, Gendreau & Cullen, 1990; Andrews, Kiessling, Robinson and Mickus, 1996). In most cases, augmented services has no effect criminal reoffending of low risk cases (Andrews & Bonta, 1998).

In another meta-analysis study by Andrews (1995), a sample of 294 was used to test the risk principle. Within that sample, treatment provided in accordance with the risk principle produced greater results among higher-risk offenders than among lower-risk offenders. The higher-risk offenders were classified as such according to the extent of their involvement in the correctional system or because of their criminal record. The authors concluded that appropriate intervention is the most powerful in higher as opposed to lower risk samples. This finding is consistent in studies when treatment is appropriate according to the need and responsivity factors. The general principle, then, is that more intensive service is required for the high-risk offender and minimal or no intervention is sufficient for the low-risk offender (Andrews & Bonta, 1994).

The Need Principle. The need principle focuses on the distinction between criminogenic and noncriminogenic needs. Criminogenic needs are a subset of an offender's risk level (Andrews & Bonta,

1994) and are linked with criminal behavior. In other words, criminogenic needs are actually risk predictors, but they are dynamic in nature rather than static. They are dynamic in the sense that they are attributes of the offender. When these attributes are targeted for change and altered, they are associated with changes in the likelihood of recidivism. Noncriminogenic needs are also dynamic and changeable, but these changes are not necessarily associated with the probability of recidivism. Since the object of correctional rehabilitation is to reduce recidivism, the principle invokes that changes on criminogenic need factors are those to be encouraged and targeted whereas, changes in noncriminogenic needs are only to be targeted if they indirectly impact on a criminogenic need.

There has been, however, considerable controversy about and lack of interest in the general class of predictors that Andrews and Bonta (1994) defined as dynamic. The disputes centres around ideological/professional concerns, and methodological issues. Ideological concerns refer to the critics who argue that criminal behavior cannot be predicted. These critics propose that research into individual differences is misguided because social factors are reasoned to be the roots of crime. However, proponents of prediction research argue the importance of individual differences and the measurement of these factors in an objective manner.

Methodological issues centre around concerns of the unreliability of dynamic predictors because they may change over time. Another source of unreliability is that the measurement of dynamic variables involves a great deal of subjectivity. Unreliability in measurement leads to an underestimation of validity, therefore, this line of reasoning implies that dynamic variables must be weak predictors of criminal behavior in comparison to that of static predictors.

Bonta's (1996) response to such criticism is that in order to demonstrate the power of criminogenic needs, assessments and reassessments are required at different time points in the offenders' rehabilitation in order to then relate the changes to future criminal behavior. Changes between intake assessments and reassessments have been perceived as indicators of instability and

unreliability in the instrument, particularly, if the assessment tool comprises of only static variables. However, the difference in scores between intake and reassessment may actually reflect a change in the person and the person's situation. A multiwave study by Andrews and Robinson (1984) administered the Level of Supervision Inventory to probationers at intake and then again at six months later. LSI scores changed over the time interval for many offenders but these changes were associated with changes in recidivism. For example, probationers who tested in the "moderate" risk range at intake and showed no change six months later had a recidivism rate of 33%. The moderate-risk individuals who experienced more difficulties over the retest period and who increased their LSI scores also showed increased recidivism rates (40%). However, for those moderate-risk inmates who showed a reduction in risk level (low-risk at retest), the recidivism rate was 0%. These findings have important treatment implications for assessing changes in offenders' criminogenic needs to generate effective policies that will protect the public's interest in the case where there is an increase in offenders' risk level, and benefit the offender when risk levels decrease. These findings are also the basis for administering the LSI several times throughout an offender's incarceration and supervision period. Furthermore, future research would do well to review change scores and their correlations with recidivism. Conclusions from a meta-analysis by Gendreau and colleagues (1996) indicate that criminogenic needs, on average, in study after study, produced larger correlations with recidivism 64% of the time (Gendreau, Little & Goggin, 1996). Dynamic predictors proved to be as robust as their static counterparts in predicting recidivism. Clearly, criminogenic needs must be included in risk prediction protocols.

A major set of criminogenic needs that is widely supported by theories of crime is criminal attitudes. Assessments of procriminal attitudes have consistently evidenced significant associations with criminal behavior among adult criminals (Andrews, Wormith & Kiessling, 1985; Bonta, 1990), and young offenders (Shields & Ball, 1990; Shields & Whitehall, 1994). There is evidence of a positive

relationship between procriminal attitudes and recidivism. Increases in procriminal attitudes are associated with increased recidivism, and recidivism decreases when the offender holds fewer procriminal beliefs and attitudes (Andrews & Wormith, 1989). In contrast, traditional clinical treatment targets, such as anxiety and emotional empathy, consistently failed to demonstrate predictive validity (Gendreau, Little & Goggin, 1996). Continued research and development into the assessment of criminogenic needs will be important for the rehabilitation of offenders and the development of conceptual understanding of criminal behavior (Andrews & Bonta, 1994). Therefore, any comprehensive assessment of an offender must include an assessment of the offender's criminal attitudes.

The practical importance of criminogenic need factors is that they form the intermediate goals of treatment. According to Andrews (1996), meta-analysis research and multiwave longitudinal studies support the classification of risk factors as either major or minor. The major risk factors include antisocial/procriminal cognitions/attitudes, antisocial/procriminal associates, antisocial personality complex, and a history of antisocial/criminal behavior.

The Responsivity Principle. Treatment responsivity is a term that is used to describe client-based factors that influence the potential for positive treatment effects. The objective of the construct is to underscore the importance of allocating offenders to programs in the most effective manner and to delineate factors that might mediate the effectiveness of treatment services (Serin & Kennedy, 1997). The preferred mode and style of service in corrections involves social learning and cognitive behavioral approaches, and multi-modal intervention strategies (Andrews & Bonta, 1994; Andrews, 1985). The responsivity principle and related constructs usually refer to the treatability, motivation, and treatment responsivity of offenders. Rogers and Webster (1989) suggested that treatability refers to the clinical determination of which offenders, under what treatment modalities and environmental conditions will respond most favorably. Treatability refers to appropriateness (fit between treatment goals and

offender deficits), (b) response history (previous experience with the current form of treatment, (c) motivation, and (d) contraindications (Helbrun, Bennett, Evans, Offult, Reiff, White, 1992). Motivation and treatment readiness refer to factors which may influence a person's desire to change, which is viewed as an interactional and interpersonal process that can be influenced by the clinician. In this way, motivation is viewed as dynamic (Miller & Rollnick, 1991). Concepts such as amenability, motivation, compliance, treatment response, and treatment gain all contribute to the notion of responsivity. Ignoring these issues can significantly impede offenders' compliance with treatment, while failure to consider these factors may contribute to inaccurate assessment of the motivation or readiness of individuals referred for treatment. Therefore, treatment can be enhanced by effectively matching offenders' responsivity factors and therapists' different modes and styles of treatment service. Treatment readiness and responsivity must be assessed and considered in treatment planning if the maximum effectiveness of treatment programs is to be realized (Serin & Kennedy, 1997)

The Professional Discretion Principle. Regarding the principles of effective correctional treatment, the principles of risk, need, and responsivity do not provide the final word on offender assessment (Andrews & Bonta, 1994). The model of offender classification allows a central place for professional or clinical judgement, which can serve to "override" the principles of assessment when needed. In this way, overrides can be viewed as an opportunity to improve assessment. The correctional professional makes recommendations consistent with the quantitative findings generated by the risk/need assessment in conjunction with the broader and more unique aspects of the individual case, including the extent to which risk/need factors have been addressed through risk management or treatment (Andrews & Bonta, 1994). The principle of professional discretion touches upon the clinical-statistical controversy (Meehl, 1957). Essentially, the argument is between two modes of data combination for a predictive or diagnostic purpose. The clinical method relies on human judgement that is based on informal contemplation and, sometimes, discussion with others such as case conferences.

The mechanical method involves a formal, algorithmic, objective procedure such as an equation to reach the decision. The LSI-OR combines the two processes by allowing assessors the opportunity to override a risk level (based on the total risk/need score), either upward or downward based on the unique aspects of the case. One of the purposes of the present study was to examine whether the final risk level obtained following the use of the override improved the prediction of recidivism compared to the initial risk level prior to the use of the override.

The Utility of Risk/Need Assessment Instruments

Research results supporting the validity, and consequently, the utility of risk/needs assessment instruments have increased dramatically within the last twenty years (Bonta, 1996). One way of viewing the development of risk/need assessments through the years has been proposed by Bonta (1996). He has categorized risk measures into first, second, and third generation assessment techniques. First-generation offender assessments are assessments described by terms such as subjective assessment, professional judgement, and clinical intuition. First generation assessments have usually involved an unstructured interview with the client and a review of official documentation followed by some general conclusions and recommendations concerning the client usually with respect to the propensity for criminal behavior and treatment needs. The most serious weakness and source of criticism with this approach is that the rules for collecting the information and formulating interpretations of the data are subject to considerable personal discretion. Consequently, the correctional worker can easily overlook or overemphasize information based on personal knowledge of criminal behavior that may or may not be correct rather than on empirically defensible theories of crime. Decision-making based on these types of assessments makes accountability and fairness difficult when observers note that similar offenders are sometimes treated differently by different professionals. Research on the interrater reliability of professional judgements has frequently shown that professionals are just as likely to disagree on the key features of a case as they are to agree (Monahan, 1981; Wardlaw & Millier, 1978;

Goldstone & Wormith, 1984). It would be considered the least valid approach in spite of its wide use in corrections (Goldstone & Wormith, 1983).

Another source of criticism with first generation types of assessments comes from the evidence that the accuracy of how well clinicians and other experts can predict future criminal behavior based on their professional judgement is extremely limited and consequently, unacceptable (Andrews & Bonta, 1994; Gottfredson & Gottfredson, 1986; Monahan, 1981). An illustration can be found in a study by Menzies and his colleagues (Menzies, Webster, McMain, Stanley, & Scaglione, 1994) in which various professionals observed offenders receiving mental health status examinations. The observers were asked to rate the "dangerousness" of each offender, and their ratings were then correlated with measures of reoffence over a 6-year period. The results failed to demonstrate consistent predictions of dangerousness based on the professional judgements of observers. Results such as these only serve to fuel the critics who argue that criminal behavior cannot be predicted because the roots of crime are argued to be social factors. However, some prediction recidivism researchers continue to recognize the importance of individual differences and the objective measurement of these factors. As a result, second generation assessments were produced. In a review by Sawyer (1966) comparing the accuracy of clinical and statistical judgements, criminal recidivism was the predicted characteristic in six of these studies, of which four concluded that statistical methods were superior to clinical methods and the other two concluded that the statistical methods were as good as clinical judgement.

Second generation assessments are empirically based offender risk assessments and can be traced back to Burgess (1928) who identified 21 factors that differentiated parole successes from parole failures. These factors were, then, used to construct a risk scale by assigning a score of one if the risk factor was present, and the higher the score, the greater the likelihood of failure while on parole. From this he was able to gather risk information based on risk categories such as, those

offenders who fell in the highest risk category had a failure rate of 76% and those in the minimum

range had a failure rate of 1.5%. With the use of second-generation offender assessments, Glueck and

Glueck (1950) derived prediction tables which comprised of variables that differentiated delinquents

and nondelinquents. These tables formed the basis for empirically derived estimates of the probability

of delinquent behavior. The added technique at this point was the assignment of weights to different

items rather than the simple 0-1 scoring format by Burgess (1928).

Within the past 25 years, research on risk assessment has occurred at an exponential rate

resulting in risk assessment scales which are actuarial in nature, that is, they are based on

standardized, objective risk prediction instruments. The Salient Factor Score (SFS) (Hoffman, 1983)

used in the United States, is one such instrument. In Canada, the Statistical Index on Recidivism (SIR;

Nuffield, 1982) was developed. These risk scales were based on sound empirical research, and were

satisfactory in differentiating lower-risk offenders from the higher-risk offenders (Hann & Harman, 1992;

Nuffield, 1982). Their greatest limitation centres around the issue that they almost entirely rely on static

criminal history items such as age, and number of previous convictions. Consequently, they provided

little direction for treatment and allocation of services. The fixed nature of the items did not allow for

changes in the offenders' behavior to be reflected, thereby, limiting the direction for re-classification,

treatment allocation, and rehabilitation, in general. The notion of the measurement of change is what

fundamentally distinguished second-generation assessment tools from the third-generation tools

(Bonta, 1996).

Third generation assessment measures are referred to as risk/need assessment measures.

These classification instruments go beyond statistical risk prediction in which the major purpose is to

make decisions about the degree of freedom granted an offender. In order to manage the risk level of

an offender there is an understanding of the need to deliver rehabilitation services. Therefore, the

classification instruments must not only assess the risk factors that are present or absent, but also

assess the needs of the offender. Additionally, treatment cannot be rendered to everyone because of the cost involved. Neither can treatment be delivered at random but when it is offered it should be done so in accord with the responsivity factors of the offender.

The early third generation classification systems reflected a belief that needs assessments were fundamentally different from risk assessments, therefore, the assessment of an offenders' needs was rarely associated with the question of risk prediction. This was found to be the case with the Wisconsin classification system (Baird, 1981) which was widely used in the United States. Wisconsin's classification system is composed of three parts: risk assessment, needs assessment, and client management classification (CMC). The three parts operate rather independently and distinctly. The only overlap between the risk and needs scales is that the offender is assigned to supervision levels according to which scale he or she receives the highest score. In 1982, the province of Manitoba adopted the Wisconsin classification instrument and implemented it across the province without modification for use with probation services. Data was collected between 1986 and 1991 for over 14,000 probationers, and as expected, Bonta and colleagues found that the risk scale predicted failure on probation with correlations within the .30 range (Bonta, Parkinson, Pang & Barkwell, 1994). In addition, the predictive validity of the needs scale was also examined. The item scores on the needs assessment were summated to form one composite score, and then the summated needs score was correlated with failure while on probation for both technical violations and new offences. The combined scores of the needs assessment, nevertheless, did predict failure on probation with correlations in the .20 range. The relationship between changes in needs classification from intake to termination of probation and failure while on probation was examined. Bonta reported that individuals who increased in their needs level showed increased failure rates, whereas those who decreased in needs level showed decreased failure rates.

The Level of Supervision Inventory (Andrews, 1984), which is presently used in the province of

Ontario, the state of Colorado, and other jurisdictions, was designed to intentionally measure criminogenic needs. With the LSI-VI the criminogenic needs were integrated with the traditional risk items to form one scale instead of two independently scored scales. Scoring follows the Burgess 0 to 1 method, and scores are then summated to give a total risk-needs score. The LSI can be further analysed into its subcomponents, many of which reflect dynamic aspects of the offender's situation, for example an offender's living accommodations. High scores on the subcomponents suggest criminogenic needs or areas to target for intervention which contributes to a reduction in the risk/needs score. The importance of criminogenic needs or dynamic risk factors lies in the fact that they may serve as targets for correctional intervention. They form the treatment goals for staff who counsel offenders, run treatment programs, and in general, attempt to reduce the risk of future criminal behavior. Therein lies the great importance of third generation assessments because they are inextricably linked to rehabilitation and control effects. These assessments are concerned not only with questions such as who should be paroled or how closely an offender should be monitored but also with what must be changed about the offender or the offender's situation to minimize the risk of reoffending. This is not to minimize the importance of risk assessment. Once the risk level of an offender is determined, the assessment of criminogenic needs tells the assessor what needs to be changed. Third generation assessments recognize the types of offender needs that are related to criminal behavior and in this regard criminogenic needs are also risk predictors, but they are dynamic risk predictors.

Other third generation assessment instruments include the Community Risk/Needs Management Scale (Moituk, 1993) used by the Correctional Service of Canada, and the Level of Service Inventory (LSI-OR) (Andrews, Bonta & Wormith, 1995). Other assessment measures, although not referred to as third generation assessment measures, include personality test scales, such as the Socialization scale (Soc), California Personality Inventory (CPI), (Gough, 1957) and the Psychopathy Checklist (PCL-R), (Hare, 1991). Widely used scales include the MMPI Pd scale and the Megargee

MMPI classification system (Megargee & Bohn, 1979). A meta-analysis by Simourd, Bonta, Andrews, and Hoge (1991) indicated that the PCL-R and Soc scale of the CPI were better predictors of recidivism than the MMPI Pd scale. In a few within-subject prospective comparisons of risk instruments and personality scales, results indicated that risk measures in particular the SFS and LSI-R were better predictors of offender recidivism than were antisocial personality scales such as the MMPI Pd (Gendreau, Grant & Leipciger, 1979; Motiuk, Bonta & Andrews, 1986; Serin, Peters & Barbaree, 1990). However, the results from Gendreau and colleagues' meta-analysis in 1996, showed that composite measures of risk, which sample several predictor domains, produce higher correlations with recidivism than other scales or measures including antisocial personality scales. Amongst all the risk scales sampled in their meta-analysis, the LSI-R produced the highest correlation with recidivism (r = .35), and produced larger correlations with recidivism than did the SFS or the Wisconsin, more than 70% of the time.

Bonta (1996) hypothesized that the development of the fourth generation assessments has begun. One could surmise that the LSI-OR is one such assessment tool. Third generation assessment instruments have emphasized the importance of risk and needs assessment for the purposes of rehabilitation and prediction. A third aspect of assessment that has recently been recognized to be of significance in maximizing the effectiveness of treatment programming is the responsivity principle (Gilles & Grant, 1997; Serin, 1997). Offenders differ in motivation, personality, emotional, and cognitive factors and characteristics that can influence the offender's responsiveness to various therapists and treatment modalities. Factors such as anxiety, intelligence and level of self-esteem affect how well the offender will respond to the style and modes of therapy and necessitate a matching of client characteristics with treatment. The assessment of responsivity factors can guide the decisions necessary to match the style and mode of therapy. Consequently, fourth generation assessment tools will not only focus on risk and targeting the appropriate criminogenic needs but give added attention to

the specific factors which can interfere with or serve as a catalyst for treatment. The Level of Service Inventory-Ontario Revision is one such offender assessment instrument.

The History of the Level of Supervision Inventory

Over the last 20 years, the Level of Supervision Inventory (LSI) served as the classification system for probation and parole offices in Ontario because it assesses both an offender's risk level and needs (Andrews, 1982). The LSI-VI is a 58 item quantitative survey instrument, derived from an extensive review of the recidivism literature as well as through consultation with parole officers and can be found in Appendix A. The information necessary for completion of the LSI is gathered through a standardized interview and verified by a review of official records. Items are scored in a binary format and distributed across 10 subcomponents. The total LSI score is the summation of all checked items. The higher the score, the higher the risk for recidivism.

It was developed to aid case managers in supervision decisions concerning adult probationers and parolees. However, research has found that it has utility with both probationer and inmate samples (Bonta & Motiuk, 1990; 1992). Research with probationers has shown that the LSI has acceptable internal consistency (coefficient alpha r = .72), interrater reliability (r = .94), and temporal stability (r = .80). In addition, LSI subcomponent scores have demonstrated convergent validity with alternative measures of the same construct (Andrews, 1982; Andrews, Kiessling, Mickus & Robinson, 1986).

Research on Canadian provincially sentenced inmates serving sentences of less than two years (Bonta & Motiuk, 1985, 1987, 1990, 1992; Motiuk, Bonta & Andrews, 1986) has further supported the instrument's psychometric properties. Research with the LSI has focussed on community supervision issues such as probation and parole (Andrews, 1982) as well as with inmates placed into provincial halfway houses (Bonta & Motiuk, 1985; 1987; 1990). Total LSI scores on a sample of 561 probationers were predictive of in program recidivism, post-program recidivism, and severity of reoffence (Andrews et al., 1986). In view of the research, it is evident that the LSI has undergone

considerable empirical validation with respect to probation samples.

In studies looking at the classification of offenders for halfway houses, Bonta and Motiuk (1987; 1990) found that approximately two-thirds of inmates who were identified as low risk offenders were missed by traditional and more subjective classification procedures. As a result, these low risk offenders spent their entire sentence in custody. It was also shown that when the LSI was used to guide halfway house placement there was a significant decrease in "over classification". Furthermore, LSI scores were found to be significantly correlated to adjustment in a half-way house and reincarceration during a one-year follow-up (Bonta & Motiuk, 1985).

The LSI has also been used to predict adjustment to prison. Bonta and Motiuk (1992) found that LSI scores predicted both prison infractions and reincarceration for their selected sample of incarcerated offenders. Similarly, Motiuk (1991) reported that LSI scores were related to security classification, misconducts, days in segregation and early release.

Research on Canadian federally sentenced offenders serving sentences greater than two years (Loza & Simourd, 1994) also support the psychometric properties of the LSI. This research also has examined the LSI's validity on a variety of criterion measures. Moderate to strong relationships have been found with staff evaluations of case progress (r = .40), completion of sentences in halfway houses (r = .52), recidivism while on probation (r = .47), postprogram recidivism (r = .47), severity of reoffence (r = .39), and likelihood of reincarceration (r = .40).

Risk/Needs Assessment and the Young Offender

When investigating broad-based risk/need instruments used with young offenders, there is a wide range of assessment tools available, although most of them are narrow in scope, that is, they do not assess an adequate range of risk/need factors within the instrument. As already indicated, there have been several variations of the LSI used with young offenders. Specifically, these are the Youth Level of Service Inventory/Case Management Inventory (YLS/CMI) (Andrews & Hoge, 1994) and the

Young Offender-Level of Service Inventory (Shield, 1992).

The Youth Level of Service/Case Management Inventory (YLSI/CMI; Hoge & Andrews, 1994) represents an adaptation of the LSI that can be used with children and adolescent young offenders. Since it is a relatively new instrument only preliminary psychometric data are available (Hoge & Andrews, 1994, 1996). Similar to the LSI the completion of the assessment requires the integration of information from a broad range of sources which is believed to significantly improve the assessment process. As well, the instrument is intended to aid the child care professional in developing a detailed and comprehensive assessment of risk, need and responsivity factors within the client and in forming appropriate administrative and therapeutic decisions about the young offender. Furthermore, based on reviews of the delinquency literature (Loeber & Dishion, 1983) which indicate that a range of risk/need variables are linked with delinquent behavior, the risk/need variables which have been linked with delinquent behavior are broadly grouped according to characteristics of the persons, their home, parental attitudes, and practices, peer group, and school issues, similarly to the adult version. As an extension of the LSI , the YLS was developed to assess risk/need factors among youth. Like the LSI, the first major component of the YLS/CMI consists of a set of 42 risk/need items identified in the research literature as related to juvenile criminal activity. The eight subscales of the first part of the tool are as follows: (1) prior and current offences/dispositions, (2) family circumstances/parenting, (3) education/employment, (4) peer relations, (5) substance abuse, (6) leisure/recreation, (7) personality/behavior, and (8) attitudes/orientation. There is also the opportunity to indicate areas of strength. The six major components of the YLS/CMI are as follows: (1) Assessment of risk/need factors, (2) Summary of total and subscale risk/need scores, (3) Other needs/special considerations, (4) Case manager's assessment of risk/need level, (5) Placement Recommendations, and (6) Goals/case plan. The structure of the instrument is very similar to that of the LSI. Therefore, it is associated with a number of strengths when addressing the issue of appropriate qualitative instruments

to use in the assessment of the young offender. One of its strengths is associated with the sampling of a number of broad factors associated with youth crime. Furthermore, the instrument samples the need areas which should be targeted for intervention and treatment, as well as the responsivity factors and this information is obtained and represented in a systematic way. As with the adult version, the YLS/CMI was developed to provide an instrument which could produce a broad picture of the youth's characteristics and circumstances that could be of great value to the entire range of judgments involved in forensic decisions. Not only do such risk/need tools assist with the decision-making process, the tools provide a very complete picture of the personality, behavioral, attitudinal, and circumstantial characteristics of the young offender, and thus, have great potential value in forming judgements about the aggravating and mitigating factors, as well as the mental status of the young offender.

Since the YLS/CMI is a relatively new tool, little psychometric data is available. Although considerable predictive validity exists for the adult version, the results cannot be generalized to the adolescent. Preliminary data that does exist is positive. Scott (1985) examined the psychometric properties of the YLS using various recidivism measures on a sample of 84 youths having contact with the Ottawa juvenile probation offices. The results of this study showed the YLS had acceptable psychometric properties and was positively associated with both level of supervision and various measures of recidivism. In a study by Simourd, and colleagues (1994), the YLS proved acceptable levels of reliability and internal consistency.

Analyses based on an earlier version of the YLS (Youth Level of Service Inventory; Andrews & Hoge, 1984) indicated that seriousness of current offence and a history of offending constituted the major predictors of incarceration (Hoge, Andrews & Leschied, 1995). Shields and Simourd (1991) used a modified version of the LSI called the YO-LSI (Shields, 1990) to distinguish predators from nonpredators and showed satisfactory interobserver reliability and internal consistency. The results indicated that predators have more extensive criminal histories and criminal sentiments, as well as

more substance abuse, educational/employment, family, peer, and psychological problems than nonpredators.

One of the purposes of the current study was to gather preliminary data and determine how well the LSI-OR performed with the young offender population in terms of its ability to predict future offending with this group.

Modifications to the LSI

The changes to the LSI-VI were largely a result of the research and theoretical developments from the risk/need assessment literature within the last decade (Andrews, Bonta & Wormith, 1995; Andrews, 1995; Gendreau, Little & Goggin, 1996). In 1994, a major review of the LSI-VI was undertaken by the Ontario Ministry of the Solicitor General and Correctional Services. The results were produced in an unpublished document by Dr. Don Andrews and included a series of reanalyses of the LSI-VI data. This major review of the LSI-VI included over a dozen consultations with the major user groups, managerial staff, and parole boards throughout the province of Ontario. The content and format of the LSI-OR (see Appendix B & C) reflects the recommendations that were generated from the province wide review project (Wormith, 1998).

Some of the recommendations included improving the scoring of the instrument and giving greater importance to clinical judgement. The LSI-OR (Andrews, Bonta & Wormith, 1995), like the LSI-VI focuses on both the major and minor risk factors that have shown predictive criterion validity: a history of criminal behavior, procriminal cognitions and attitudes, procriminal associates, criminal personality, along with substance abuse and problems in the areas of home, leisure and school/work. The LSI-OR consists of eight sections plus an appendix for supplementary information. The pilot version of the LSI-OR can be found in Appendix B and the order of sections is as follows: A. General Risk/Need Factors, B. Specific Risk/Need factors, C. Risk/Need Summary, D. Institutional Factors, E. Risk/Need Profile, F. Other Client Issues, G. Special Responsivity Considerations, H.

Program/Placement Decision, Supplementary Information for Institutional Classification/ Reclassification, Release Planning, or Community Supervision. Prior to the implementation of the LSI-OR throughout the province of Ontario in January 1996, the order of the sections was changed to the following: A. General Risk/Need Factors, B. Specific Risk/Need Factors, C. Prison Experience: Institutional Factors, D. Risk/Need Summary, E. Risk/Need Profile, F. Other Client Issues, G. Special Responsivity Considerations, H. Program/Placement Decision, I. Disposition/Sentence Length, J. General and Specific Risk/Need Factors. The current version of the LSI-OR is in Appendix C. The name of the instrument has also been changed from "supervision" to "service" to reflect the research findings regarding effective correctional practice.

When comparing the LSI-VI and the LSI-OR, in addition to the changes in format and structure, there are eight major changes that were made to the LSI-VI to produce the current LSI-OR. The LSI-OR has fewer risk/need items than the LSI-VI. The Accommodation section and some of the items pertaining to the Recreation section were eliminated because they lacked predictive ability or were not criminogenic, consequently, the revised instrument has 43 items instead of 53, which are grouped into eight categories or subscales. The eight risk/need factors generated by the subscales of the General Risk/Need Factors (Section A) appear on the LSI-OR (with the subtotals) as follows: (1) criminal history (8 items), (2) education/employment, (9 items), (3) family/marital (4 items), (4) leisure/recreation (2 items), (5) companions (4 items), (6) procriminal attitude/orientation (4 items), (7) substance abuse (8 items), and (8) antisocial pattern (4 items). These same areas of risk/need are sampled on the Ministry of Correctional Services and the Solicitor General instrument used with young offenders. These eight risk/need factors reflect the risk/need factors supported by research findings as representing the major correlates of criminal behavior.

The scoring of the LSI-OR has also been changed from the LSI-VI so that the Total General Risk/Need score reflects a summary on the risk/need factors. The sum of checked items or the sum of

the subscale scores suggests a client's level and area of risk/need, and guides the level and area of service decisions. The total General Risk/Need Factors (Section A) score is the sum of checked items in Section A (minimum = 0, maximum = 43) and is used in the Risk/Need Summary (Section C), to arrive at a summary of risk/need level for a particular offender.

In addition, the LSI-OR gives greater importance to the subscale scores of the General Risk/Need Factors (Section A) than did the LSI-VI. These subscale scores are plotted in the Risk/Need Profile (Section E) to produce a visual clinical profile for the assessor of the general risk/need factors that apply to a specific offender. The purpose of the graphic profile is to promote identification of particular patterns of overall risk and criminogenic need. Furthermore, it allows the assessor to more easily make the links with programming, supervision, and case management decisions (Wormith, 1997).

Another change to the instrument is the number of risk levels. The number of risk levels has been increased from three (low, medium, high) on the LSI-VI to five on the LSI-OR by subdividing the low and high risk levels into low and very low, and high and very high. A five-level system of risk compared to a three-level system of the earlier versions of the LSI, allows the assessor to make a more precise decision regarding the classification and risk level of the offender. Since the research shows that a linear relationship exists between the risk level of an offender and the probability of recidivism even if the correlation representing that relationship is low, false positive and negative errors can be reduced by discriminating or separating lower- and higher-risk offender groups on the basis of small differences between the groups. This should result in the improvement in the prediction of recidivism.

In addition to the General Risk/Need Factors (Section A), which scores an offender's general level of risk/needs on the major eight factors, a supplementary section, Specific Risk/Need Factors (Section B), has been added to the LSI-OR which is devoted to specific risk/need items. This section is the result of consultations and experience with the Ministry of Correctional Services and the Solicitor

General instrument, experience with the Young Offender Management System, and the research literature. When these specific risk/needs are present, they may have significant clinical importance and affect the responsivity of a client to treatment or interventions, and consequently, these items may be used to override the actuarial-based risk level (Wormith, 1997) determined from the General Risk/Need Factors (Section A) of the LSI-OR. The Specific Risk/Need Factors (Section B) total scores are also to be recorded in the Risk/Need Summary (Section C), where they are expected to be integrated with the General Risk/Need Factors (Section A), along with Strength scores to determine the overall risk level of the offender.

One of the limitations of the LSI-VI is that it did not allow for the opportunity for correctional professionals to take into account an inmates' particular strengths or protective factors. It is hypothesized that consideration of strengths or protective factors may enhance predictive accuracy. The new LSI-OR includes a section for strengths in a structured way. The total strengths is the sum of strength notations checked in the General Risk/Need Factors (Section A) (minimum = 0, maximum = 8). Strength notations are possible for each of the eight risk/need areas on which offenders received a "very low" or "low" risk/need score. The assessor has the opportunity to summarize the areas of strengths and give positive reasons for lowering security/supervision levels or for releasing clients. In the same way, space is provided for the assessor to summarize added concerns or negative reasons for increasing security/supervision levels or not releasing clients. The addition of the strength notations reflects a recent shift in focus toward a broader concern with the question of resiliency to criminal activity (Luthar, 1993). The interest, in other words, is not only with the conditions contributing to negative outcomes but also with the "protective" factors that ensure that those same conditions do not produce negative outcomes. These factors, then, are considered compensatory factors and serve to ameliorate or otherwise modify the effects of the risk factors (Hoge, Andrews & Leschied, 1996). In a study with young offenders, Hoge and colleagues, found that the presence of the protective factors

(positive peer relations, good educational achievement, positive response to authority and effective use of leisure time) was associated with lower levels of reoffending and more positive overall adjustment. These preliminary results have important implications for both assessment and intervention activities. They suggest, first, that assessments should focus not only on the presence of risk factors, but should also consider potential areas of strength. Similarly, planning for intervention should give due consideration to the enhancement of factors which will help the individual deal with negative forces, particularly where those negative forces are not themselves very amenable to change.

Another important change to the LSI-OR is the concept of the clinical override. In practical terms this means that every assessment requires that the practitioner review the risk level generated by the General Risk/Needs subscales (Section A) in conjunction with the Specific Risk/Needs Factors (Section B) and the client's strengths. After careful review and integration of information from all of these areas, the assessor is then required to either endorse or modify the level of overall risk (Wormith, 1997). In this way, the LSI-OR is consistent with the principle of professional discretion which recognizes that empirically based decision making is, by definition, founded on existing evidence and that special conditions having to do with settings, offenders, workers, and managers may render that information less relevant than it is under routine conditions (Andrews & Bonta, 1990).

The introduction of Other Client Issues (Section F) is another important addition to the LSI-OR. This area is devoted to the identification of noncriminogenic needs. Consistent with the literature, attending to them can have an indirect impact on other treatment areas and, consequently, an indirect effect on recidivism or the probability of reoffending. Although these other clinical issues are not technically part of the risk/needs calculations, these issues must be given consideration in the broader case management of the offender.

In the same way, the Special Responsivity Considerations (Section G), is not counted in the risk/needs assessment. However, consistent with the responsivity principle, the much needed addition

of this section allows for the sampling of the responsivity factors that may affect the choice of the most appropriate style and mode of service for the offender. These important considerations, like the "other clinical issues" may indeed have an indirect impact on an offender's changing risk level. The mechanism of change in risk level is via a moderating effect on interventions as a result of the responsivity of the client. The intervention may be appropriate, however, by addressing a noncriminogenic need, the responsivity of the client to that intervention can be affected and the impact of the treatment/intervention maximized.

The LSI-OR also includes a number of supplementary pages for text related to offence information, case notes and discharge summaries, as well as sections for administrative decision making. All of these sections were introduced to maximize the connection between the offender's risk/needs assessment, the practitioner's case management, and the administrator's decision making (Wormith, 1997).

It should be noted that in January 1996, the current version of the LSI-OR (see Appendix C) was implemented throughout Ontario with a few minor changes to the pilot version of the LSI-OR. In addition to the change in the order of the sections, a few items have been added to the newer version of the LSI-OR. For example, to the Specific Risk/Need Factors section, a sexual assault item was added to the final version in order to differentiate between sexual assault extra familial and intra familial types. The Institutional Factors section has been moved to the first page of the current LSI-OR with one item, outstanding charges, deleted. Based on feedback during the pilot study, two items have been added to the Other Client Issues section which include learning disabilities and victim of emotional abuse.

Summary

The LSI-OR was expected to improve upon the LSI-VI by providing a comprehensive assessment of an offender's risk level, treatment needs, responsivity factors, protective factors and

classification. Moreover, the current LSI-OR is consistent with the principles of effective correctional treatment in that it incorporates historical and dynamic need factors. Secondly, the LSI-OR allows for both systematic, statistical assessment, and clinical judgement via the use of strengths and overrides. It is expected that these additions will improve the prediction of recidivism over the LSI-VI. Third, the LSI-OR measures both minor and major risk factors. Fourth, in attempts to maximize the reliability and consistency of the instrument, there have been province wide training sessions for the users of the LSI-OR prior to its implementation throughout the correctional system in Ontario in January 1996. Additionally, there is a training manual that accompanies the instrument for ongoing reference. The modifications to the LSI have been made on the basis of improving the assessment of an offender and making it as comprehensive as possible while at the same time assisting the assessor in treatment planning, security and release decisions, and related administrative decisions (Andrews, 1996).

Purpose of the Present Study

The primary purpose of the present research project was to conduct a large longitudinal study to review the modifications of the LSI-OR, that is, their overall and specific contributions to the prediction of both general and violent recidivism from both institutional and probation samples over an extended follow-up period. Through a series of statistical analyses attempts were made to describe the relationship between the General Risk/Need Factor section, the Specific Risk/Need Factor section, the strengths, the initial and final risk levels, and recidivism measures. Since the LSI-OR gives greater importance to the eight major risk factors measured by the General Risk/Need Factor subscales, their correlations with recidivism were examined to determine the best predictors of recidivism. More importantly, however, it was the purpose of this study to determine whether the General Risk/Need Factors subscales alone or in combination with the Specific Risk/Need Factors subscales and total strengths were predictive of recidivism.

Since there has been a current shift in focus to strengths and protective factors it was

important to examine whether the strengths were used to override and whether the addition of strengths improves the predictability of recidivism. It was speculated that an examination of the use of the override would reveal interesting patterns in the way staff used the override section. Furthermore, it was important to determine whether the final risk level endorsed by an assessor following the use of the override was a better predictor of reoffending than the initial risk level determined prior to the application of the override. Comparisons of the predictors would assess whether the use of the override actually adds any power to the prediction of recidivism. These findings may lend support to the value of clinical judgement in the risk/need assessment process.

Finally, it was also important to examine the performance of the LSI-OR with special offender groups, particularly, with institutional and community samples, females and young offenders, as well as mentally disordered, domestic violence, and sex offender samples.

Specific Hypotheses

1. Research indicates that the eight major risk factors are the strongest correlates of recidivism, the "Big Four" plus an additional minor set of risk factors. Since each of these factors is sampled in the General Risk/Need Factor section of the LSI-OR, it was hypothesized that the "Big Four", namely, Criminal History, Companions, Procriminal Attitudes, and Antisocial Pattern would have the strongest correlates with recidivism. Since the LSI-OR has been revised, it was hypothesized that predictions would exceed the 0.40 level. Additionally, the General Risk/Need Factor total section score will perform better than the Specific Risk/Need Factor, Institutional Factor, Other Mental Health Issues Factor, and Special Responsivity Factor total section score in the prediction of recidivism. It was expected that in regression analyses the Specific Risk/Need Factors section and the strengths would add to the prediction models, incrementally.

2. Recidivists and nonrecidivists within the institutional and community groups would be compared along various dimensions, including demographic, offence history, LSI-OR totals and subtotal

scores. Consistent with past research and theory that social, interpersonal, and economic factors affect involvement in crime, it was hypothesized that the recidivists would demonstrate more psychosocial problems, more extensive criminal histories, and higher LSI-OR scores (Section A total scores) associated with higher risk levels, and higher Specific Risk/Need Factor scores (Section B), as well as fewer strengths than nonrecidivists across groups.

3. Nonrecidivists would have more protective factors associated with risk/need factors in comparison to the recidivist group for both community and institutional groups, that is, nonrecidivists across groups would have higher mean number of strengths.

4. Little research has been conducted on the differences or similarities between institutional and community samples. It was hypothesized that the institutional recidivists would have the greatest number of problems (whether with criminogenic potential or other client issues) and the highest LSI-OR total scores given their more extensive criminal records, while the community recidivists would have less extensive problems than the institutional recidivists, but more than the institutional and community nonrecidivists.

5. Correlation coefficients between the Specific Risk/Need Factors with Criminogenic Potential (Section B) and the Responsivity Factors (Section G) would be performed in order to test the hypothesis that as the total number of Specific Risk/Needs increases, so does the total number of Responsivity Factors.

6. It was also hypothesized that the risk level endorsed following the use of an override would improve the prediction of recidivism compared to the initial risk level.

7. Correlations would also be computed to test whether the strength scores were positively correlated with the override. It was hypothesized that the association would be in the negative direction.

This study was unique in several ways. The large sample included both institutional and community samples that allowed for comparisons between the two groups to determine whether the groups differ in terms of risk for recidivism and whether they differ on any other pertinent variables. Previous research has focussed on primarily either community or institutional samples. Many studies employ cross-sectional research designs, however, longitudinal designs are preferred to cross-sectional designs because the correlates temporally precede the criterion or outcome variable, in this case, criminal behavior. Finally, the present study was the first study to examine whether the use of the override improves predictability of reoffence. The findings may have important implications for the guidelines for the use of the override. The project was also designed to determine whether the LSI-OR can predict recidivism beyond the 0.40 barrier. Traditional tools whether for the purposes of research or clinical practice have not been able to produce correlations between the predictive measure and the criterion greater than $r = 0.40$. This result is often referred to as the 0.40 barrier.

Methodology

<u>Subjects</u>

The total sample consisted of 698 provincial offenders serving sentences of less than two

years who were administered the pilot version of the LSI-OR between July 1995 to December 1995. All

offenders were assessed in both institutional and community settings within the eastern Region of

Ontario, particularly, the Ottawa-Carleton, Perth, and Pembroke areas. The Institutional group

consisted of 456 inmates, specifically, 455 males and one female, while the community group

consisted of 242 offenders, 200 males, 41 females. Included in the sample was a small group (n = 31)

of Phase II young offenders, 25 males and 6 females, 30 of which came from community settings and

1 from an institution. In total, there were 655 males and 43 females. Since the young offender and

female samples were significantly small in comparison to the adult male offender group (n = 630), all

analyses reported in the text were concerning the adult male group unless otherwise indicated.

Analyses for the female and young offender groups can be found in Appendix X and Y, respectively.

Eleven of the offenders died sometime during their follow-up time. Regardless, all offenders were

followed to the end of their follow-up time or their death date.

<u>Measures</u>

<u>Level of Service Inventory-Ontario Revision</u>. The LSI-OR is an actuarial survey of an offender's

personal and social history. It is Ministry policy to administer the LSI-OR at intake or admission for all

adult inmates undergoing any institutional classification or release decision, for all young offenders both

in secure and open custody and for all probationers and parolees. The LSI-OR is also required to be

re-administered every six months for any subsequent decisions related to the offender. The information

to score the instrument was obtained through a structured interview and validated through the use of

file information and official records. The General Risk/Need Factors yielded eight risk/need subscales,

namely, Criminal History (8 items), Education/Employment (9), Family/Marital (4), Leisure/Recreation

(2), Companions (4), Substance Abuse (8), Procriminal Attitude/Orientation (4), and Antisocial Pattern (4). The Antisocial Pattern subscale corresponds to a general pattern of antisocial behavior. Three of the four items can be considered subscales which are comprised of repeated items from the other subscales. A General Risk/Need Factor scale score and subscales scores were scored. A total strengths score, Initial Risk Level prior to the use of the override and Final Risk Level following the use of the override were also scored. A total Specific Risk/Need Factors score was scored and subscale scores for Personal Problems with Criminogenic Potential (14 items) and History (8) were coded by the researcher. Total scores were scored for the following sections of the LSI-OR: Institutional Factors (Section D), (10 items), Other Client Issues (Section F) (18), and Special Responsivity Considerations (Section G) (8). Regarding Program Placement Decision (Section H), institutional security/supervision level, whether minimum, medium or maximum, and method of release, whether to the community, parole, or straight were scored.

Since the LSI-OR was based on the LSI-VI which has demonstrated adequate reliability and validity, there was little reason to suspect that the LSI-OR's validity and reliability would depart from that of the LSI-VI. Preliminary research indicated that the LSI-OR has predictive validity for both male and female offenders for general and violent recidivism, reincarceration, and new offences (Andrews, 1994).

Recidivism. General recidivism was the dependent variable and was defined as any conviction for any number of new offences, or any number of custodial admissions due to a breach or to any number of technical violations of release conditions. Recidivism related information was obtained from the Offender Management System and the Royal Canadian Mounted Police's Canadian Information system (C-PIC). A dichotomous recidivism variable was scored based on whether there were any convictions. Other measures of recidivism included measures related to the first recidivating event as well as all recidivism events combined. Regarding the first set of recidivism, the following variables

were scored: the most serious offence severity according to the 26 offence severity categories which can be found in Table D1, Appendix D; Level of the most serious offence (Level 1 offences can be found in Table D2, Appendix D); the number of different types of offences; the total number of convictions; and sentence length. Regarding all recidivating events combined, the following recidivism variables were scored: the most serious recidivating event; Level of the most serious offence; total number of recidivating events which were referred to as sets; total number of different types of offences; total number of convictions; and total length of sentence. Other measures of recidivism that were scored from either of the two information systems were the following: total number of outstanding charges; the most serious outstanding charge severity; whether any of the outstanding charges were a Level I or Level II offence; total number of remands; total number of withdrawn charges; total number of charges; total time served; and a percentage of total time incarcerated as a function of total risk time. Violent recidivism was defined as any conviction for an offence involving crimes against a person, and robbery (Bonta & Hanson, 1996). According to the Ministry of Correctional Services' 26 offence categories the following eight are considered categories of violent offences: Homicide and Related Offences, Serious Violent Offences, Violent Sexual Offences, Nonviolent Sexual Offences, Weapons Offences, Miscellaneous Offences Against the Person, Assault and Related Offences, and Arson/Property Damage Offences. A violent recidivism dichotomous variable was also scored.

Follow-up Period. The follow-up period for all offenders in the study was variable. All offenders were followed to their C-PIC investigation, however, the start date of the follow-up varied according to group membership. For the community group the start date represented the date of the administration of the LSI-OR which took place between June and December 1995. For the institutional group, the start date represented the last potential discharge date, that is, the earliest date the offender was released to the community and, consequently, at risk for reoffence. The date was identified from the OMS, Activity Screen. The end of the follow-up period was coded as the C-PIC date. All C-PIC's

were completed by July 13, 1998, however, 3 C-PIC's were re-done because they were not an exact

match to the offender. As a result, they were completed on August 4 and 21, 1998. For the 11

offenders who died during the course of the study, the end of their follow-up period was represented by

their death date obtained from the C-PIC offender record sheet. The range of the follow-up time was

between 40 to 1272 ($\underline{M}$=934.375, $\underline{SD}$=122.182) days for the adult male sample, 40 to 1145

($\underline{M}$=907.828, $\underline{SD}$=123.593) days for the Institutional group, and 170 to 1102 days

($\underline{M}$=1002.852,$\underline{SD}$=87.017) for the community group.

    Time to Recidivate. Time to recidivate was calculated from the time that an offender was in the

community, and consequently, at risk for reoffence to the date of sentencing for the first recidivating

event as found on the C-PIC and verified by OMS data.

Procedure

    The data collection took place in three phases. The first phase involved gathering the original

LSI-OR's from the eastern Region of Ontario for the purpose of the research. The sites were chosen

because they were believed to be representative of the events and changes unfolding in the larger

provincial system at the time. The sites chosen were from the Ottawa-Carleton, Perth, and Pembroke

area. Specifically, they were as follows: the Ottawa-Centre Probation and Parole Office, which

included a satellite office in Smith Falls; the Rideau Correctional Treatment Centre, a correctional

institution in Ottawa; and the Pembroke Probation and Parole Office, which included the Pembroke Jail

and a satellite office in Perth.

    All probation and parole officers, classification officers, as well as any other officers

administering the LSI-OR, participated in a two-day training on the LSI-OR in June 1995 with Dr. Don

Andrews. Each classification officer and probation and parole officer collected LSI-OR's on a weekly

basis which were reviewed by the Area Manager for errors or missing information which was then

included. Completed LSI-OR's were then sent directly to the Risk/Need Management Co-ordination

Unit, Ministry of the Solicitor General and Correctional Services, North Bay, Ontario. The LSI-OR 's

were collected in this manner for this field study from June 1, 1995 to December 31, 1995. Eighteen

offenders were administered the LSI-OR on two occasions by different assessors for the purposes of

testing for interrater reliability.

Each offender who reported to a probation and parole office between June and December

1995, were administered the LSI-OR as already indicated by trained staff. Institutional offenders were

administered the LSI-OR as part of the intake process, pretreatment assessment, or part of the

discharge planning process.

Approximately, 50% of the inmate group was administered the LSI-OR for the purposes of

programming needs, 17.6% prior to community release, 14.3% for classification, 8.8% prior to parole

hearing, and 5.9% for reclassification. For the community group 64.8% of the LSI-OR's were

administered at probation intake, while 27.8% for probation and parole reassessment, 1.7 % for each of

parole intake and predisposition reports. About 4 percent of the contexts were left missing. It is the

Ministry policy that at the time of administration of the LSI-OR, clients were informed that the

information obtained from the inventory would be used for the purposes of research for the pilot project

of the LSI-OR. Clients had the opportunity to refuse to participate.

In order to enhance the validity and reliability of the LSI-OR's, they were reviewed by the

researcher for scoring errors. When an error occurred such as on the Substance Abuse subscale, if an

offender had a current alcohol problem scored but did not have the item indicating "alcohol problem,

ever" scored, verification was sought from files or other LSI-OR items and then the scoring error

adjusted, accordingly. Addition errors were also corrected. When inconsistencies occurred between C-

PIC and OMS data files, the OMS data was generally used following file verification.

Copies of all originally completed LSI-OR's were numbered and stored with the researcher.

From these copies of the LSI-OR, a master list with offender name, date of birth, Offender

Management System number and Finger Print Number was drafted in order to prepare for accessing the Ministry of the Solicitor General and Correctional Service's Offender Management System (OMS). A detailed coding manual, which can be found in Appendix E, was constructed and used to objectively define background, pre- and post- variables for each offender.

The second phase of the data collection involved using client identification numbers to locate the offender file on the Offender Management System (OMS) in order to verify client information and accuracy. In addition, the OMS was accessed with the assistance of Ministry staff in order to collect post-release data on each offender. The Regional Ontario Provincial Police Headquarters, North Bay, provided official offender record sheets from the Royal Canadian Mounted Police's Canadian Police Intelligence Computer (C-PIC) for each offender in the sample. These offender record sheets were delivered to the researcher. Information on both prior offences (criminal history) and recidivism information in the data set were gathered through official criminal record sheets from these two data bases which provide information on both provincial and federal criminal activity, including charges laid and convictions. The OMS data file was used to verify follow-up data from the C-PIC offender record sheets. When there were inconsistencies the most current information provided by OMS was obtained.

All information collected for the purpose of the study was kept confidential. Once record sheets were retrieved, the names of the offenders were replaced with appropriate numeric identifiers. Three types of variable sets were obtained from the LSI-OR's, OMS and C-PIC data bases: a client descriptive variable set which included demographics and legal items; a risk/need assessment variable data set; and an outcome data set.

The third phase of the procedure involved coding and transferring the data sets into an SPSS data file for statistical analysis. The master list was destroyed once all the data were collected and numeric codes assigned. At the end of the study, all LSI-OR's were returned to the Ministry office.

Three special offender groups were identified from the data set based on LSI-OR items. As a

result, it must be stressed that the special offender groups are not mutually exclusive. Therefore, a subject could qualify for one or more groups if he/she met the criteria.

The mentally disordered offender group was obtained by selecting all offenders who had the following Other Client Issues scored: "depression", "psychosis", "previous suicide attempts/threats", and "other evidence". The total sample size of mentally disordered offenders was 188 from the entire sample including females and youth, in order to obtain the largest sample available. The sample of 188, included 15 females and 5 young offenders. Sixty-six were under community supervision while 122 were institutional offenders.

The second special offender group was a domestic violence group, which was selected based on whether the Specific Risk/Need Factor item "physical assault intrafamilial" item was scored. The selection criteria yielded a subsample of 150, which included 146 males and 4 females.

The third special offender group was a sex offender group identified by selecting those cases in which an index or recidivating offence was of a sexual nature and/or those with the Specific Risk/Need Factor item "sexual assault" and/or "inappropriate sexual activity" scored. This selection criteria yielded 51 offenders, 46 males and 5 females.

Design and Analyses

The current study was a longitudinal design consisting of three types of variables: client descriptive variables, risk assessment variables, and recidivism outcome variables.

Initially, several reliability analyses were performed in order to test the reliability of the LSI-OR. Inter-correlations between the sections and subscales were performed including Cohen's Kappa coefficient, and Cronbach alpha's. In order to obtain offender norms, descriptive statistics were obtained for each of the samples, community and institution, male and female groups, special offender groups, outcome variables, and mean LSI-OR subscale and total section scores. Frequency tables for risk categories (very high, high, medium, low, very low) by group (community and institutional) were calculated. Means were calculated for community, institutional, recidivist and nonrecidivist groups for LSI-OR section totals and subscales, strengths, age, and various other identifying variables. Additionally, an exploratory factor analysis was conducted on the General Risk/Need Factor items using a varimax rotation.

A variety of univariate statistics were completed in order to test the difference between the means on the LSI-OR subscales and section totals of the recidivist and nonrecidivist groups. For the purposes of brevity, all tests for normality and equality of variance were met unless otherwise specified. For example, when the Levene's test for the equality of variance was significant, the appropriate degrees of freedom were used in the recording of the results. A series of 2 X 5 chi-square analyses were also applied to determine whether risk level categories differentiated between recidivists and nonrecidivists across all offender groups for both general and violent recidivism. Survival curves were also generated to test whether institutional and community offenders differed in their survival rates during the follow-up and to determine whether risk levels differentiated survival rates between recidivist and nonrecidivist groups.

In order to reduce the recidivism set of variables, the recidivism measures were subjected to

an exploratory principal components analysis using a varimax rotation.

Several 2 X 2 ANOVA's were performed to test the mean General Risk/Need Factor total score and the Specific Risk/Need Factor total score with special offender group status and recidivist/ nonrecidivist group status. A variety of validity analyses including several correlation analyses were performed in order to determine the relationship of the LSI-OR total, each of the eight subscales, as well as the section totals, strengths, and initial and final risk levels with general and violent recidivism, and a number of other recidivism variables. In order to examine the incremental validity of the override, the correlations between the initial and final risk levels with general recidivism were compared.

Multiple regression analyses were performed to generate predictive models using multiple predictor variables to test the hypothesis that combinations of the predictor variables improved the predictability of recidivism, both general and violent. Tests for the equality of variance, independence, and linearity were met unless otherwise specified. The first series of regressions included the General Risk/Need Factor and the Specific Risk/Need Factor subscales and the total strength score in order to predict binary and continuous recidivism measures as well as the recidivism factors. The second series of regressions included the LSI-OR factors and recidivism variables as well as LSI-OR factors and recidivism factors, followed by a series of regressions which examined the LSI-OR sections and strength scores as predictor variables and recidivism binary variables.

Results

The results of this study are presented in four sections. The first section involved obtaining a

number of descriptive statistics for the offenders. The second section of analyses generated norms for

the LSI-OR and examined its psychometric properties, which included a nonstatistical analysis of the

override and a factor analysis on the General Risk/Need Factors items. The third section focussed on

offender recidivism, particularly, looking at a number of descriptive variables regarding the offender

follow-up, a survival analysis, recidivist/nonrecidivist descriptives, including a description of violent

recidivism, and recidivism by special populations such as a mentally disordered, domestic violence,

and sex offender group. This section also examined differences in recidivism by subject group. The

association between all recidivism variables was also included in this section followed by a principal

components analysis of the recidivism variables in order to reduce the outcome variable data set. The

fourth section involved a series of predictive analyses between the LSI-OR and recidivism outcome.

The ability of the LSI-OR risk/need factors and level categories to differentiate between recidivists and

nonrecidivists was examined. This was followed by a review of a number of bivariate correlations

between predictor and outcome variables. Included in this section was a series of multiple regression

analyses that were conducted to assess the capacity of the LSI-OR variables and factors to predict a

variety of recidivism variables, including violent recidivism. Finally, an examination of the LSI-OR's

ability to differentiate recidivists and nonrecidivists for special offender groups (mentally disordered,

domestic violence, and sex offenders) is presented in this section.

As already indicated, the results in this chapter pertain to the adult male sample unless

otherwise indicated. Comparable analyses on the females and young offender samples are presented

in Appendices X and Y, respectively.

<u>Offender Descriptives</u>

This section begins with a description of the current sample on various legal and demographic

variables. At the time of the administration of the LSI-OR, the average age of the adult male offender

group was 31.78 (SD = 9.69) years with a range of 18 to 75. The average age of the institutionals was

31.73 (SD = 9.77) and similarly for the community group at 31.90 (SD = 9.50). With respect to ethnic

background, a chi-square analysis revealed significant differences between the institutional and

community groups, (χ^2 = 25.001, df = 4, N = 630, p < .001). From Table 1, there were slight differences

in the percentages of the Caucasian group (88.2% vs 85.2%). There were more Black incarcerated

offenders (5.9%) compared to those of the community group (1.7%). There were significantly fewer

incarcerated Asians (0.7%) when compared to the community Asian group (4%). Ninety-eight percent

of the sample was of Canadian citizenship, while 1% was unknown and 1% was "other citizenship".

Consistent findings were noted for the institutional group, while 93.8 % were Canadian citizenship in

the community group, 3.4% unknown, and 2.8% "other".

Table 1

<u>Ethnic Origin by Group</u>

Ethnic origin	Institutionals		Community	
	<u>N</u>	%	<u>n</u>	%
Caucasian	401	88.3	150	85.2
Native	18	4.0	6	3.4
Black	27	5.9	3	1.7
Asian	3	0.7	7	4.0
Unknown	5	1.1	10	5.7

In order to test the fourth hypothesis, the differences between institutional and community

offenders were examined. Institutional and community groups were compared on their index offence,

which was defined as the offence or set of offences for which the offender was administered the LSI-

OR. Index offences were coded according to the Ministry's 26 offence categories (Policy and

Procedure Manual for Adult Institutions, Revised, 1997), eight of which include violent offences. Base

rates for the index offence of institutional and community groups are shown in Table 2.

Table 2

Base Rates of Index Offence by Offence Category

Offence	All adult males		Institutionals		Community	
	N	%	N	%	N	%
Homicide	1	0.2	1	0.2	---	---
Serious violent	32	5.1	25	5.5	7	4.0
Violent sexual	12	1.9	4	0.9	8	4.5
Break & enter	98	15.6	84	18.5	14	8.0
Nonviolent sexual	7	1.1	2	0.4	5	2.8
Traffic import drug	43	6.8	42	9.3	1	0.6
Weapon	17	2.7	11	2.4	6	3.4
Fraud	33	5.2	21	4.6	12	6.8
Misc. against the person	40	6.3	30	6.6	10	5.7
Theft/possession	80	12.7	57	12.6	23	13.1
Assault	105	16.7	60	13.2	45	25.6
Arson & property damage	13	2.1	3	0.7	10	5.7
Obstruction of justice	4	0.6	3	0.7	1	0.6
Drug possession	19	3.0	13	2.9	6	3.4
Criminal code traffic	42	6.7	41	9.0	1	0.6
Breach of court order	23	3.7	15	3.3	8	4.5
Drinking driving	43	6.8	29	6.4	14	8.0
Misc. against public order	6	1.0	1	0.2	5	2.8
Other federal statute	4	0.6	4	0.9	---	---
Parole violations	8	1.3	8	1.8	---	---
Total	630	100	454	100	176	100

As expected, the adult males in institutions were convicted of a greater number of offences than their community counterparts. Significantly, more institutional males were convicted of Break and Enter Offences compared to the community males (18.5% vs. 8%, χ^2 = 50.00, df = 1, p < .001, n = 98). Similarly, institutional males were convicted of more trafficking and importing of drug offences (9.3% vs. 0.6%, χ^2 = 39.09, df = 1, p < .001, n = 43) and Criminal Code Traffic related offences (9.0% vs. 0.6%, χ^2 = 38.09, df = 1, p <.001, n = 42). The community males were convicted of significantly more offences which fall in the category of Arson and Property Damage (5.7% vs. 0.7%, χ^2 = 3.77, df = 1, p = .05, n = 13) as well as Theft and Related offences (13.1% vs. 12.6%, χ^2 = 14.45, df = 1, p < .0001, n = 80) and Drinking and Driving related offences (4.5% vs. 3.3%, χ^2 = 5.23, df = 1, p = .02, n = 43).

In general, the institutional group was convicted of more serious offences than the community group, (χ^2 = 97.05, df = 19, N = 630, p < .001, N = 630). Over 38.88% of all most serious index offences were violent offences. The proportion of violent index offences committed by the institutional males was significantly greater than that of the community males (56.74% vs. 43.26%, χ^2 = 4.44, df = 1, p = .035, n = 245).

The institutional group were convicted of more offences, received significantly greater sentence lengths, and had greater diversity of offences as related by the number of types of index offences than the community group (Table 3).

Table 3

Group Comparisons on Age & Index Offence Variables

Age & Index Offence Variables	Institutional n = 454		Community n = 176				
	M	SD	M	SD	t	df	p
Age	31.90	9.50	31.73	9.77	.20	628.0	.80
Convictions	2.87	3.36	1.60	1.27	-6.88	627.82	.00
Sentence length	251.98	179.06	59.02	169.20	-12.63	335.50	.00
Types +	2.15	1.32	1.41	0.81	-8.54	510.39	.00
Severity ++	9.65	4.52	10.23	4.16	1.34	621.0	.18

Over 75% of the index offences were Level II offences across groups (Table 4).

Table 4

Index Offence Level by Setting

Level	All adult males		Institutional		Community	
	N	%	n	%	n	%
Level I	154	24.4	112	24.7	42	23.9
Level II	476	75.6	342	75.3	134	76.1
Total	630	100	454	100	176	100

In terms of index offence dispositions from Table 5, it can be seen that over 96% of the offenders were incarcerated, over 90% of the community sample received probation compared to 34.8% for the institutional group.

Table 5

Index Offence Dispositions by Group

Disposition	All adult males		Institutionals		Community	
	N	%	N	%	n	%
Conditional sentence	1	0.2	---	---	1	0.6
Fines	47	7.5	16	3.5	31	17.6
Suspended sentence	58	9.2	4	0.9	54	30.7
Intermittent sentence	21	3.3	2	0.4	19	10.8
Probation	318	50.5	158	34.8	160	90.9
Sentenced	609	96.7	452	96.7	157	89.2

In Table 6, the various release modes of the institutional sample can be viewed. Two incarcerated males had probation following their incarceration, while 15.2% were paroled. Over 84% of institutional offenders were released to the community following incarceration, which included straight releases without supervision, or early releases, while 2 offenders (<1%) went to a Federal penitentiary from a provincial institution.

Table 6

Index Offence Release Mode

Mode	Institutionals	
	n	%
Probation following incarceration	2	0.4
Paroled	69	15.2
Straight release [1]	382	84.1
Federal penitentiary	2	0.4

Note . [1] includes satisfied sentence with no supervision and early releases.

Psychometric Properties of the LSI-OR

In order to examine the psychometric properties of the LSI-OR, a number of analyses were performed. The first set of analyses generated norms for the adult male sample and community and institutional groups. Several reliability measures of the LSI-OR were obtained which included internal consistency, inter-item reliability, test-retest reliability, and parallel form reliability. A factor analysis on the General Risk/Need Factor section was performed followed by a nonstatistical review of the override.

Offender Norms. The first analyses performed provided preliminary normative data (Table 7) for the adult male sample and institutional and community groups for each of the LSI-OR General Risk/Need Factors total and subscale scores, Specific Risk/Need Factors total and subscale scores, total strengths, Institutional Factors, Other Client Issues, and Responsivity Factors.

Table 7

Mean LSI-OR Subscale and Total Section Scores by Group

Subscales & total sections	All adult males $\underline{N} = 630$		Institutionals $\underline{N} = 454$		Community $\underline{n} = 176$	
	M	SD	M	SD	M	SD
General risk/need factor	20.15	8.82	22.90	7.63	13.04	7.65
Criminal history	4.94	2.29	5.71	1.81	2.93	2.18
Education/employment	4.48	2.62	5.06	2.41	2.97	2.55
Family/marital	1.43	1.09	1.54	1.08	1.16	1.08
Leisure/recreation	1.33	0.79	1.55	0.66	.76	0.80
Companions	1.59	1.17	1.84	1.08	.94	1.15
Procriminal attitudes	1.06	1.09	1.21	1.05	.67	1.17
Substance abuse	3.99	2.33	4.49	2.16	2.69	2.27
Antisocial patterns	1.34	1.15	1.52	1.14	.90	1.05
Total specific risk/need factor	3.19	2.42	3.53	2.49	2.31	1.99
Specific risk/need +	1.78	1.75	1.94	1.84	1.37	1.41
History ++	1.41	1.22	1.59	1.23	.94	1.09
Total strengths	.61	1.39	.19	0.77	1.67	1.95
Institutional factors	---	---	.95	1.05	---	---
Other client issues	2.22	2.23	2.36	2.32	1.85	1.93
Responsivity factors	.80	1.01	.83	1.01	.71	1.00

Note. + refers to Specific risk/need factors with criminogenic potential. ++ refers to Specific risk/need factor subscale, History of.

Group comparisons on all subscales as shown in Table 8, reveal that institutional offenders scored significantly higher on all risk/need factors whether general or specific, and on all other subscales (p < .001; Other Client Issues, p < .01) except for Responsivity factors where the mean differences were nonsignificant. Since Institutional factors are specific to the institutional offenders, no comparisons were assessed on this factor.

Table 8

Group Comparisons on LSI-OR Subscales and Section Totals

Subscales & section totals	Institutional n = 454		Community n = 176			
	M	SD	M	SD	t	df
General risk/need factor	22.90	7.63	13.04	7.65	-14.55 ***	628.00
Criminal history	5.71	1.81	2.93	2.18	-15.01 ***	273.65
Education/employment	5.06	2.41	2.97	2.55	-9.58 ***	628.00
Family/marital	1.54	1.08	1.16	1.08	-3.95 ***	628.00
Leisure/recreation	1.55	0.66	.76	0.80	-12.65 ***	628.00
Companions	1.84	1.08	.94	1.15	-8.95 ***	300.92
Procriminal attitudes	1.21	1.05	.67	1.11	-5.73 ***	628.00
Substance abuse	4.49	2.16	2.69	2.27	-9.23 ***	628.00
Antisocial patterns	1.52	1.14	.90	1.05	-6.43 ***	344.73
Total specific risk/need	3.53	2.49	2.31	1.99	-6.43 ***	394.80
Specific risk/need +	1.94	1.84	1.37	1.41	-4.17 ***	413.86
History ++	1.59	1.23	.94	1.09	-6.49 ***	357.98
Total strengths	.19	0.77	1.67	1.95	9.76 ***	196.24
Other client issues	2.36	2.32	1.85	1.93	-2.80 **	379.52
Responsivity factors	.83	1.01	.71	1.00	-1.39	627.00

Note. + refers to Specific risk/need factors with criminogenic potential. ++ refers to Specific risk/need

factor subscale, History of. ** $p \leq .01$;   *** $p \leq .001$.

Frequencies were obtained for the initial and final risk levels as found in Table 9 and 10. An offender's General Risk/Need Factor total score prior to the use of the override was used to group the males into initial risk level categories. The risk level category indicated following the use of the override was used to derive the final risk level category. Since the override was used in less than 3% of the cases ($\underline{n}$ = 19) for the adult male sample, there were only slight overall changes from the initial to final risk level categories.

The greatest increase occurred in the very low category, final risk level indicating that higher initial scores were lowered following the use of the override. From reviewing the percentages across the different groups, it can be seen that the majority of offenders (79%) fell within the middle-ranged categories (low, medium, high), with fewer offenders falling within the extremes. As expected, incarcerated offenders fell in higher risk level categories compared to the community based offenders. Specifically, there were fewer institutional very low scorers than community ones, and many more very high scorers. Interestingly, the 46.7% of institutionals fell within the high-risk category while 42.6% of the community group fell within the medium risk category.

Table 9

Initial Risk Level Frequencies by Group

Risk level (score)	All adult males		Institutionals		Community	
	N	%	n	%	n	%
Very low (0 – 4)	27	5.0	5	1.1	22	7.0
Low (5 – 10)	75	11.9	24	5.3	51	29.0
Medium (11 – 19)	189	30.0	116	25.6	73	41.5
High (20 – 29)	238	37.8	212	46.7	26	14.8
Very high (30+)	101	16.0	97	21.4	4	2.3
Total	630	100	454	100	176	100

Table 10

Final Risk Level Frequencies by Group

Risk level (score)	All adult males		Institutionals		Community	
	N	%	n	%	n	%
Very low (0 – 4)	30	4.8	5	1.1	25	14.2
Low (5 – 10)	70	11.1	23	5.1	47	26.7
Medium (11 – 19)	193	30.8	118	26.0	75	42.6
High (20 – 29)	235	37.3	212	46.7	23	13.1
Very high (30+)	102	16.2	96	21.1	6	3.4
Total	630	100	454	100	176	100

The association between the risk level categories and the General Risk/Need Factors

subscales and total section scores were examined (Table 11). The correlations decrease slightly from

the initial to the final risk level (r = .956 to r = .941). The correlation coefficient between the initial and

final risk level was .980 reflecting that there was very little change.

Table 11

Spearman Correlations between Initial Risk Levels, Final Risk Levels and General Risk/Need Factors

Subscales and Total for Adult Males [1]

LSI-OR Subscales	Initial risk level (1 – 5)	Final risk level (1 – 5)
Criminal history	.740	.731
Education/employment	.703	.685
Family/marital	.499	.486
Leisure/recreation	.578	.567
Companions	.677	.659
Procriminal attitudes/orientation	.598	.596
Substance abuse	.675	.663
Antisocial patterns	.756	.759
General risk/need factors	.956	.941

Note. [1] refers to Adult males N = 630. Initial and final risk level r = .982. $p \leq$ .001.

Reliability. The next set of analyses provided information of the reliability of the LSI-OR. The

internal consistency of the LSI-OR was assessed by computing Cronbach's alpha for each section total

and corresponding subscale scores. The overall coefficient for the LSI-OR General Risk/Need Factors

total score was .91, with subscale alphas ranging from .32 to .80. The overall coefficient for the Specific

Risk/Need Factor total score was .62 with subscale alphas of .56 and .34. Institutional Factors, Other

Client Issues, and Responsivity Factors section alphas were .31, .67, and .44, respectively. These

findings are reported in Table 12.

Table 12

Internal Consistency Estimates [1] of LSI-OR Subscales & Section Totals

LSI-OR subscales/sections (items)	All adult males $\underline{N} = 630$	Institutionals $\underline{n} = 454$	Community $\underline{n} = 176$
General risk/need factors (43)	.906	.875	.881
Criminal history (8)	.801	.685	.783
Education/employment (9)	.786	.741	.803
Family/marital (4)	.321	.269	.401
Leisure/recreation (2)	.562	.397	.560
Companions (4)	.668	.614	.709
Procriminal attitudes (4)	.473	.331	.727
Substance abuse (8)	.780	.734	.795
Antisocial patterns – subitems (19)	.817	.796	.790
total items (4)	.500	.507	.492
Total specific risk/needs factors (21)	.616	.621	.535
Specfic risk/need factors + (14)	.560	.631	.445
History ++ (8)	.344	.294	.392
Institutional factors [2] (10)	---	.309	---
Other client issues (18)	.674	.692	.610
Responsivity factors (8)	.441	.446	.449

Note. [1] refers to Cronbach's alphas. [2] Institutional factors are specific to Institutional Group, $\underline{n} = 454$.

+ refers to Specific risk/need factors with criminogenic potential. ++ refers to Specific risk/need factor subscale, History of.

Pearson Product moment intercorrelation coefficients for the General Risk/Need Factors

subscales and total section score were examined and are shown in Table 13. Correlations ranged from

a high of .61 for Antisocial Pattern and Procriminal Attitudes to a low of .28 for Family/Marital and

Leisure/Recreation.

Table 13

LSI-OR General Risk/Need Factors Intercorrelations and Internal Reliability Estimates

LSI-OR (items)	History 1	Ed/empl 2	Fam/mar 3	Leis/rec 4	Comp 5	Procrim 6	Subst 7	Anti 8
History 1 (8)	X							
Ed/empl 2 (9)	.42	X						
Fam/mar 3 (4)	.30	.29	X					
Leis/rec 4 (2)	.40	.42	.28	X				
Comp 5 (4)	.50	.44	.32	.41	X			
Procrim 6 (4)	.40	.30	.29	.32	.38	X		
Subst 7 (8)	.51	.33	.34	.43	.41	.30	X	
Anti 8 (4)	.58	.56	.44	.41	.52	.61	.39	X
Total section A	.78	.74	.54	.61	.70	.59	.72	.79

Note. 1 refers to Criminal history subscale. 2 refers to Education/employment subscale. 3 refers to

Family/marital subscale. 4 refers to Leisure/recreation subscale. 5 refers to Companions subscale. 6

refers to Procriminal attitudes subscale. 7 refers to Substance abuse subscale. 8 refers to Antisocial

patterns subscale. $p \leq .001$.

In Table 14, correlations are presented between the total General Risk/Need Factors score and each of the subscales ranged from .79 for Antisocial Pattern to a low of .53 for Family/Marital. Pearson Product moment correlation coefficients for the association between the Specific Risk/Need Factors total section score and each of the two subscale scores with each of the General Risk/Need Factors subscales and total section scores were also examined and ranged from an expected high of .88 between the Specific Risk/Need Factors total score and the Specific Risk/Need Factors with Criminogenic Potential subscale to a low of .16 for History and Education/Employment. Interestingly, the second largest association occurred between the Antisocial Pattern subscale and the Specific Risk/Need Factor total score ($r = .513$, $p < .001$). These results are found in Table 15.

Table 14

<u>Pearson Correlation Coefficients for General Risk/Need Factor Subscales and Total Section Scores for</u>

<u>Adult Males</u>

LSI-OR subscales & section total	$\underline{r}$
General risk/need factor	1.00
1. Criminal history	.792
2. Education/employment	.715
3. Family/marital	.527
4. Leisure/recreation	.608
5. Companions	.613
6. Procriminal attitudes/orientation	.684
7. Substance abuse	.724
8. Antisocial patterns	.785

<u>Pearson Correlations with Specific Risk/Need Factors Subscales and Total Specific Risk/Need Factor</u>

<u>Score</u>

	$\underline{r}$
Total	1.00
Specific risk/need factors (B¹) +	.878
History (B²) ++	.742

<u>Note</u>. + refers to Specific risk/need factors with criminogenic potential. ++ refers to Specific risk/need

factor subscale, History of. $\underline{p} \leq .001$.

Table 15

Specific Risk/Need Factor Correlations with General Risk/Need Subscales and Total Section Score

General & Specific scales	Specific risk/need +	History ++	Total specific risk/need [1]
General risk/need	.469	.415	.549
Criminal history	.322	.411	.440
Education/employment	.346	.156	.329
Family/marital	.300	.269	.352
Leisure/recreation	.284	.206	.309
Companions	.277	.239	.321
Procriminal attitudes	.423	.338	.476
Substance abuse	.245	.368	.363
Antisocial patterns	.513	.303	.524
Specific risk/need +	1.00	.305	.876
History ++		1.00	.726
Total specific risk/need [1]			1.00

Note. + refers to Specific risk/need factors with criminogenic potential. ++ refers to Specific risk/need factor subscale, History of. [1] refers to the Total specific risk/need factor score. Findings based on Adult males, N = 630. $p \leq$ .001.

Correlations between all of the LSI-OR sections can be found in Table 16. The lowest

association of .25 occurred between Institutional factors and General Risk/Need Factors total score

while the highest of .55 occurred between the General Risk/Need Factors total score and Specific

Risk/Need Factors total score. The strong positive association between the Specific Risk/Need Factor

section with the Responsivity Factors section supports the fifth hypothesis, that as the total number of

specific risk/needs increases so does the total number of offender responsivity concerns.

Table 16

LSI-OR Section Intercorrelations

LSI-OR sections	General risk/need 1	Specific risk/need 2	Institutional 3	Client issues 4	Responsivity 5
General risk/need 1	X				
Specific risk/need 2	.549	X			
Institutional 3	.253	.462	X		
Client issues 4	.370	.507	.435	X	
Responsivity 5	.263	.406	.356	.295	X

Note. 1 refers to General risk/need factors, (Section A). 2 refers to Specific risk/need factors, (Section B). 3 refers to Institutional factors, (Section D). 4 refers to Other client issues, (Section F). 5 refers to Responsivity factors, (Section G). $p \leq .001$.

Pearson Product moment correlations between the total strengths scores and each of the

General and Specific Risk/Need Factors subscales can be found in Table 17. Correlation coefficients

for each of the section totals are presented in Table 18. As expected, all associations were negative.

Table 17

Strength Correlations with Total General Risk/Need Factor and Subscales and Total Specific

Risk/Need Factor and Subscales for Adult Males, N = 630.

General risk/need factor total and subscales	Pearson r
General risk/need factors	-.553
Criminal history	-.492
Education/employment	-.424
Family/marital	-.269
Leisure/recreation	-.449
Companions	-.389
Procriminal attitudes	-.261
Substance abuse	-.379
Antisocial patterns	-.319
Total specific risk/need factors score	-.278
Specific risk/need factors +	-.234
History ++	-.215

Note. + refers to Specific risk/need factors with criminogenic potential. ++ refers to Specific risk/need

factor subscale, History of. $p \leq .001$.

Table 18

Strength Correlation Coefficients with LSI-OR Section Scores

LSI-OR sections	Pearson r
General risk/need factors (Section A)	-.553
Specific risk/need factors (Section B)	-.278
Institutional factors (Section D)	-.163
Other client issues (Section F)	-.159
Responsivity factors (Section G)	-.147

$p \leq .001$.

The reliability of the LSI-OR also involved the examination of inter-rater consistency, which was tested in two ways. Test-retest reliability coefficients on each of the subscales and total sections were examined. The mean number of days between the first and second administration of the LSI-OR was 26 (SD = 16.09) days. As can be seen in Table 19, test-retest reliability estimates were significant for the General Risk/Need Factor total score, Criminal History, Education/Employment, Companions, Substance Abuse, and Antisocial Pattern subscales with r's ranging from .907 for Criminal History to .115 for Specific Risk/Need Factor total score.

Table 19

Test/Re-test Reliability Coefficients [1]

LSI-OR subscales and sections	r
General risk/need factors	.882 ***
Criminal history	.907 ***
Education/employment	.754 **
Family/marital	.380
Leisure/recreation	.261
Companions	.680 **
Procriminal attitudes/orientation	.160
Substance abuse	.877 ***
Antisocial patterns	.549 *
Total specific risk/need factors	.115
Specific risk/need +	-.068
History ++	.520 *
Strengths	.217
Institutional factors	-.169
Other client issues	-.187
Responsivity factors	.122

Note. [1] Findings are based on n = 18. + refers to Specific risk/need factors with criminogenic potential. ++ refers to Specific risk/need factor subscale, History of. * $p \le .05$; ** $p \le .01$; *** $p \le .001$.

Cohen's kappa was used to test inter-rater agreement correcting for chance. The largest possible nonchance agreement between raters was .58 ($p \leq .001$) and .49 ($p \leq .002$), respectively.

Parallel alternative form reliability was tested by conducting a manual search on the entire sample on the OMS database to retrieve all the latest LSI-VI's that were available. A small sample of 68 were found with a mean time between the administration of the latest LSI-VI and LSI-OR of 271.54 days ($SD = 842.76$). However, this mean was skewed by the fact that one offender's lapsed time was 6963 days. On the other hand, over 90% of the sample had a lapse time of 8 to 340 days. Pearson product moment and Spearman correlation coefficients were examined between LSI-VI total scores (Table 20) as well as LSI-VI levels (Table 21) with the General Risk/Need Factors total section score, Specific Risk/Need Factors total section score, initial and final risk level, and total strengths. To examine the strength of the association between the alternative forms different cut-offs for the lapse time were established in order to examine the changes of the impact of lapsed time on the association. As can be seen from the findings in the two tables, as the lapse time decreases the magnitude of the association between the two forms of the LSI increase. As expected, there is a strong association between the LSI-VI and LSI-OR when the lapse time is the smallest. For example, the highest coefficient between LSI-VI and LSI-OR General Risk/Need Factor total score of .74 was obtained when the lapse time was between 8 to 122 days.

Table 20

Pearson Correlation Coefficients Between LSI-VI Total Score and LSI-OR.

	Lapse time		
	8 to 6963 days	123 to 365 days	8 to 122 days
	n = 68	n = 32	n = 30
LSI-OR sections	Total	Total	Total
General risk/need factors (Section A)	.670 ***	.712 ***	.742 ***
Specific risk/need factors (Section B)	.424 ***	.400 **	.522 ***
Initial risk level (1 – 5)	.582 ***	.592 ***	.751 ***
Final risk level (1 – 5)	.568 ***	.603 ***	.714 ***
Strengths	-.434 ***	-.680 ***	-.206

*$p \leq$ .05, **$p \leq$ .01, ***$p \leq$ .001.

Table 21

Spearman Correlation Coefficients Between LSI-VI Risk Level and LSI-OR.

	Lapse time		
	8 to 6963 days	123 to 365 days	8 to 122 days
	n = 68	n = 32	n = 30
LSI-OR sections	Level	Level	Level
General risk/need factors (Section A)	.532 ***	.618 ***	.410 *
Specific risk/need factors (Section B)	.271 *	.324	.187
Initial risk level (1 – 5)	.509 ***	.546 ***	.483 **
Final risk level (1 – 5)	.544 ***	.618 ***	.524 **
Strengths	-.167 ***	-.601 ***	.071

*$p \leq$ .05, **$p \leq$ .01, ***$p \leq$ .001.

Factor Analysis. A factor analysis was conducted on the LSI-OR General Risk/Need Factor

items in order to confirm whether the items reduced to approximately 8 factors, which correspond to the

8 subscales. The generalized weighted least squares method was used because weights are applied to

the variables with substantial shared variance (Tabachnick & Fidell, 1996). All of the General

Risk/Need Factors (Section A) subscale items were entered except for those items in the Antisocial

Pattern, which had repeated items from other subscales. As a result, only item 40 was used from the

Antisocial Pattern subscale. Using the Kaiser rule (1960) of retaining all factors with eigen values

greater than one, the initial factor analysis with varimax rotation yielded 11 factors, which explained

49.4% of the variance. The factor loadings of approximately .40 were used to define the factors

(Stevens, 1992). When the .40 recommendation was applied, it was determined that 6 of the LSI-OR

subscales loaded onto at least 2 factors. Furthermore, all of the items on 2 of the LSI-OR subscales did

not load onto any factors, specifically, Leisure/Recreation and Antisocial Pattern. As a result, the factor

analysis was replicated forcing a 6-factor model, which can be found in Table 22. The resulting factor

model explained 39.7% of the variance and the resulting orthogonal factors were identified and their

corresponding percentage of explained variance: Criminal History Factor (15.6%), Employment Factor

(8.0%); Drug abuse Factor and associated attitudes supportive of crime (6.0%); Alcohol Abuse Factor

and related law violations and family problems (4.0%); No Anticriminal Companions (3.7%); Criminal

Companions (2.4%). The test of fit for the model was significant (χ^2= 1112.8425, $\underline{df}$ = 555, $\underline{p}$ < .001).

When the 6-factor model was produced the orthogonal factors were labelled according to their

respective factor loadings. Factor I was labelled Criminal History because over 5 of the 8 items of the

Criminal History subscale produced the largest loadings (e.g. Item 2. "Two or more prior adult/youth

dispositions", Factor Loading = .9411), and all pertained to an early history of criminal behavior. Factor

II was labelled the Employment Factor because 2 of the items which pertain to employment history in

addition to items indicating problems with authority figures and socialization difficulties from the Education/Employment subscale produced the largest factor loadings (e.g., Item 17, "Authority Interactions", Factor Loading = .8924). Factor III was labelled the Drug Abuse Factor since items corresponding to problems related to consumption of illegal drugs in combination with problems related to law violations, marital/family, and school/work related problems produced the largest factor loadings (e.g., Item 35, "Drug problem, currently, Factor Loading = .7805). Difficulties with drugs interfere with daily functioning and lend themselves to law violations. There was an additional heavily loaded item, which was related to the procriminal attitude "supportive of crime". Factor IV was labelled, Alcohol Abuse Factor, which mirrored the Drug Abuse Factor loadings with the exception that items, which corresponded to difficulties with alcohol produced the largest factor loadings (e.g., Item 32, "Alcohol Problem, ever, Factor Loading = .8446). Factor V was labelled the No Anticriminal Friends Factor because the items reflecting the absence of prosocial companions produced the largest factor loadings (e.g., Item 26 and 27, "No Anticriminal Friends", "No Anticriminal Acquaintances", Factor Loading = .9601and .9291, respectively). Factor VI was labelled Some Criminal Friends because the presence of criminal associates produced the largest factor loadings (e.g., Item 24 and 25, "Some Criminal Acquaintances", "Some Criminal Friends", Factor Loading = .8200 and .8052).

Table 22

LSI-OR Factor Scores from Factor Analysis

LSI-OR items	History 1	Employ 2	Drug 3	Alcohol 4	No anti 5	Some crim 6
A1.1 7	.69964	.08717	.05979	.18713	.05089	.13120
A1.2	.94105	.06694	.05469	.12940	.04238	.10596
A1.3	.77094	.08920	.12380	.15439	.09350	.13393
A1.4	.28336	.13084	.11203	.12746	-.00781	.11448
A1.5	.28937	.19448	.14940	.05448	.20010	.18785
A1.6	.49408	.05805	.13046	.13879	.03963	.20705
A1.7	.22866	.15981	.23728	.11391	.14991	.11319
A1.8	.41635	.07607	.22290	.19176	.14000	.24427
A2.9 8	.08578	.53467	.27335	.06106	.05212	.09772
A2.10	.14103	.40978	.39697	.12086	.14330	.12611
A2.11	.09131	.30649	.18138	-.01846	.19067	.17511
A2.12	.01104	.13703	.03495	.15523	.13105	.03140
A2.13	.11070	.22629	.10156	.13127	.12700	.13565
A2.14	.12803	.23286	.13932	.08318	.08170	.23444
A2.15	.18642	.69745	.19461	.12008	.10291	.10916
A2.16	.05287	.85188	-.01748	-.05162	.00818	.09022
A2.17	.06202	.89241	.03088	.00189	.07845	.08000
A3.18 9	.01596	.05373	.13092	.14598	.07094	.00711
A3.19	.09376	.11292	.22787	.02181	.19251	.00810
A3.20	.09327	.05984	.19298	.04987	.23033	-.02484

(table continues)

LSI-OR items	History 1	Employ 2	Drug 3	Alcohol 4	No anti 5	Some crim 6
A3.21	.15510	.07834	.02205	.14622	.10971	.17436
A4.22 10	.16720	.18880	.21386	.16077	.16480	.11080
A4.23	.18302	.21717	.28836	.25154	.14812	.23894
A5.24 11	.26452	.14450	.15372	.03562	-.01029	.82003
A5.25	.23542	.13352	.16865	.08622	.04955	.80518
A5.26	.07981	.08113	.12454	.06610	.92907	.02424
A5.27	.07720	.07684	.11971	.04339	.96011	.03609
A6.28 12	.14699	.03465	.42368	.04508	.25822	.15802
A6.29	.05311	.16646	.18371	.03765	.23646	.03403
A6.30	.08567	.10829	-.13104	-.00909	.06878	-.00408
A6.31	.22550	.09627	.13005	.15494	.22186	.11652
A7.32 13	.19537	-.00810	-.06485	.84455	.03108	.00296
A7.33	.16300	.12422	.75481	.05080	.10653	.16408
A7.34	.13011	.01380	.01736	.82592	.05546	.07160
A7.35	.08026	.11097	.78047	.03737	.12768	.17607
A7.36	.25804	.06257	.30080	.60702	.02124	.12571
A7.37	.23366	.02276	.33949	.44131	.03449	.04515
A7.38	.17934	.04950	.38748	.31987	.10459	.05355
A7.39	.11767	-.00013	.17449	.23567	.19502	.01293
A8.40 14	-.03229	.12191	.03979	-.08969	.06936	-.09715

Note. 1 refers to Criminal history factor; 2 refers to Employment factor; 3 refers to Drug abuse factor; 4 refers to Alcohol abuse factor; 5 refers to No anticriminal friends factor; 6 refers to Some criminal friends factor; 7 A1 refers to Criminal history subscale; 8 A2 refers to Education/employment subscale; 9 A3 refers to Family/marital subscale; 10 A4 refers to Leisure/recreation subscale; 11 A5 refers to Companions subscale; 12 A6 refers to Procriminal attitudes subscale; 13 A7 refers to Substance Abuse subscale; 14 A8 refers to Antisocial patterns subscale.

Override Analysis. Since the override was used only 2.7% of the time ($\underline{n}$ = 19/698), the female and young offender groups were included in the override analyses in order to determine any patterns. From Table 23, it can be seen that the majority of the overrides were used for those offenders in the community group.

Table 23

Risk Level Change by Group

	All $\underline{N}$ = 698		Adult males $\underline{N}$ = 630		Institutionals $\underline{n}$ = 454		Community $\underline{n}$ = 176	
Change	$\underline{N}$	%	$\underline{N}$	%	$\underline{n}$	%	$\underline{n}$	%
Up	9	1.3	8	1.3	1	<1.0	7	4.0
No change	679	97.3	614	97.5	452	99.6	162	92.0
Down	10	1.4	8	1.3	1	<1.0	7	4.0

There were no apparent differences between the number of times the override was used to score an offender in a higher risk level or score an offender in a level lower than the initial risk level. In order to test the seventh hypothesis, Pearson product moment correlations between a risk change variable calculated based on the direction of change (-1 to +1) was used in association with the section total scores of the LSI-OR. Table 24 shows those findings.

Table 24

Correlations Between Risk Change and LSI-OR Sections and Strengths

LSI-OR sections	Risk change	Probability
General risk/need factors total	-.43	.06
Strengths total	.48	.03 *
Specific risk/need factors total	.08	.73
Specific risk/need factors +	.20	.41
History ++	-.09	.70
Other client issues	-.05	.83
Responsivity factors	.14	.55

Note. + refers to Specific risk/need factors with criminogenic potential. ++ refers to Specific risk/need factor subscale, History of. * $p \leq .05$.

Contrary to expectations, the only significant positive association occurred between the risk change score and the strengths score indicating (a positive linear relationship rather than a negative linear relationship) that as the strengths score increases, the risk change score also increases. The sample size and restriction in the range of scores did not yield any additional results. Therefore, a nonstatistical analysis of the override data was conducted and was reported in Appendix F.

Offender Recidivism: General and Violent

In the following section a number of different analyses were performed. Initially, in order examine the differences between community and institutional groups (fourth hypothesis), a series of comparisons on a variety of outcome variables were performed, including a survival analysis. Comparisons of recidivists/nonrecidivists and violent recidivism and all other offenders were conducted. This also included comparisons for the exceptional offender samples.

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Outcome Descriptives. According to the findings in Table 25, by the end of the follow-up

54.4% of all adult male offenders had recidivated based on any convictions. Chi-square analyses

revealed that the institutional group recidivated more frequently compared to the community group

(61.9% vs. 35.2%, χ^2 = 139.83, $\underline{df}$ = 1, $\underline{p}$ < .001, $\underline{n}$ = 343). Additionally, of all adult males, 24.1%

recidivated violently. A chi-square analysis revealed a significant group difference with the institutional

males recidivating violently more often than the community males (27.1% vs.16.5%, χ^2 = 58.1316, $\underline{df}$ =

1, $\underline{p}$ < .001, $\underline{n}$ = 152). A review of the frequency of Level I and Level II offences, indicated that 11.1% of

adult males were reconvicted of offences which were Level I offences, while 43.2% of adult males were

reconvicted of Level II offences (χ^2 =140.0922, $\underline{df}$ =2, $\underline{p}$ < .001, $\underline{n}$ = 630). Additionally, institutional

offenders were reconvicted of significantly more Level I offences than the community males (13.4% vs.

5.1%, χ^2 = 238.6286, $\underline{df}$ = 1, $\underline{p}$ < .001, $\underline{n}$ =70). The proportion of Level II offences of which the

institutionals were reconvicted was also significant compared to those of the community males (48.5%

vs. 29.5%, χ^2 = 103.7647, $\underline{df}$ = 1, $\underline{p}$ < .001, $\underline{n}$ = 272).

Table 25

Recidivism Rates by Group

Recidivism status	All adult males N = 630		Institutionals n = 454		Community n = 176	
	N	%	n	%	n	%
Nonrecidivists	287	45.6	173	38.1	114	64.8
Recidivism	343	54.4	281	61.9	62	35.2
Violent recidivism	152	24.1	123	27.1	29	16.5
Nonviolent recidivism	190	30.2	158	34.8	33	18.7
Unknown recidivism	1	0.2	---	---	1	0.6
Level I	70	11.1	61	13.4	9	5.1
Level II	272	43.2	220	48.5	52	29.5
Unknown	1	0.2	---	---	1	0.6

The mean length of the follow-up time for the current study was 932.73 (SD= 120.84) days or 31 months or 2.6 years, which represented an offenders average time at risk to reoffend. The community and institutional groups were compared on a number of variables related to the follow-up, including an offender's time at risk, total time incarcerated during the follow-up, a percentage variable based on incarceration time as a function of the offender's risk time, total number of outstanding charges, total number of remands, and total number of withdrawn charges accumulated during the follow-up period. The results can be found in Table 26.

Table 26

Outcome Variables by Group

Outcome variables	All adult males		Institutionals		Community	
	N = 630		n = 454		n = 176	
	M	SD	M	SD	M	SD
Risk time (days)	932.73	120.84	906.22	122.42	1001.12	84.63 ***
Total time served	124.33	194.35	153.34	204.81	49.49	139.19 ***
In-to-risk % +	13.56	21.18	16.95	22.60	4.83	13.58 ***
Total remands	.92	1.68	1.11	1.83	.43	1.06 ***
Total withdrawn charges	.68	1.83	.69	1.71	.68	2.12
Outstanding charges	.77	1.71	1.00	2.01	.72	1.60

Note. + In-to-risk % refers to the proportion of reincarceration time as a function of risk time. *** $p \leq$ .001.

Univariate t-tests were significant for all the variables except for total number of outstanding charges and total number of withdrawn charges. In other words, the institutional group had a shorter follow-up time (t = 11.05, df = 457.70, p < .001), spent more time incarcerated during the follow-up (t = -7.30, df = 465.39, p < .001) and had more remands by the end of their follow-up time (t = -5.76, df = 535.07, p < .001) compared to the community group.

Survival Analyses. A series of survival analyses were conducted using the Kaplan-Meier method (Norusis, 1995), which is a widely used survival method. Survival techniques are often used in order to model the timing of qualitative change (Luke & Homan, 1998), which in this case, is the change from nonrecidivist status to one of recidivism during the specified follow-up period per offender. First, the Kaplan-Meier method was used in order to determine the typical time of surviving during the

risk time/follow-up for the adult male sample. Secondly, group membership was examined to determine whether membership influences survival time and the differences in the rate of survival over time. It has already been established that institutional recidivists recidivated more quickly than the community male offenders, however, survival analyses allow for graphic comparisons and interpretation of time to recidivism throughout the entire follow-up.
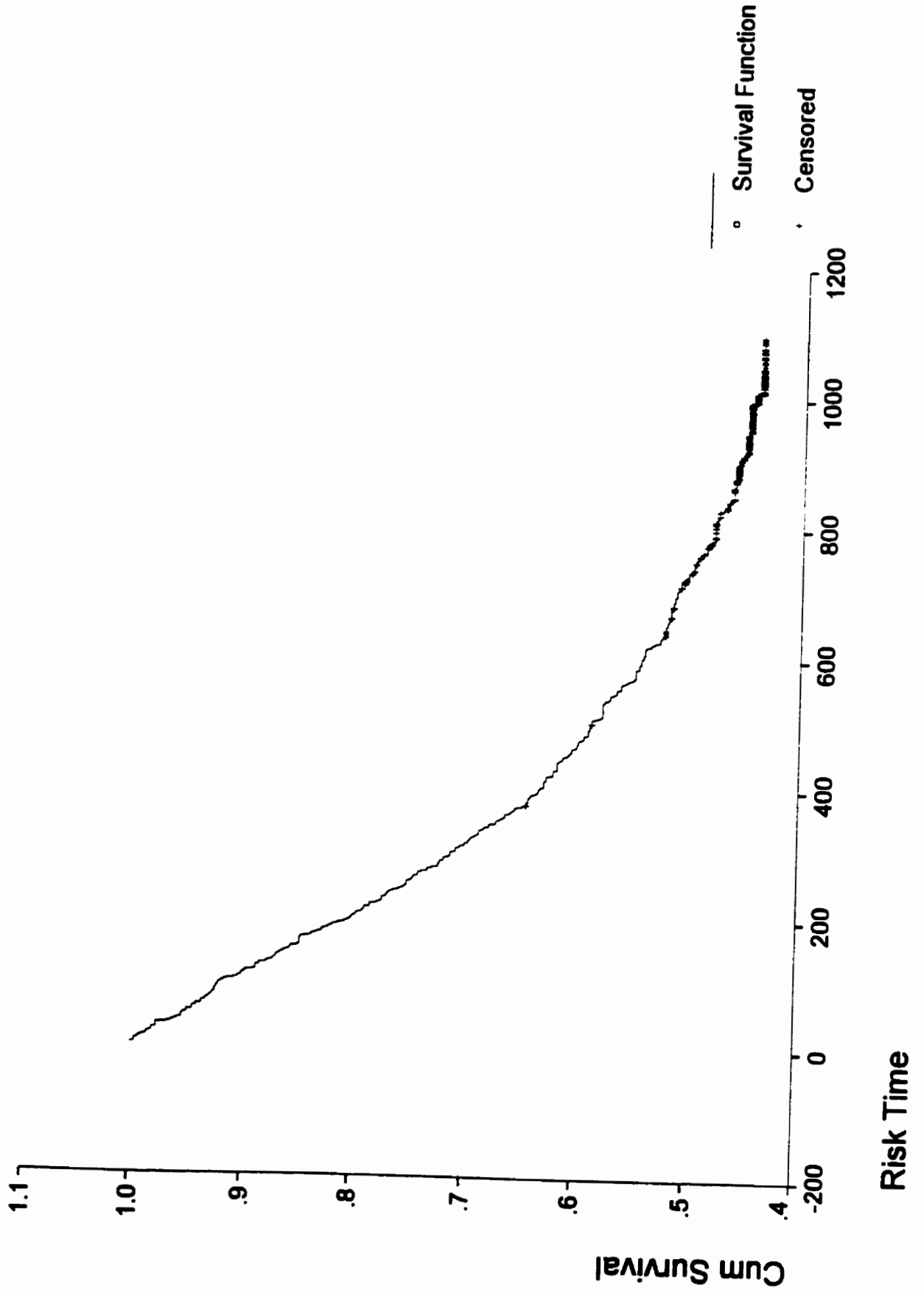
In the first series, preliminary analyses were examined on the entire male sample. A time variable was calculated based on the time to first reconviction for the recidivist group and the duration of an offender's follow-up time for the nonrecidivist group. An examination of the length of follow-up revealed that 5 offenders had a risk time under 365 days as a result of death during the follow-up period. As a result, survival analyses were limited to those with a risk time greater than 365 days. Wherever possible, the mean survival time, corresponding standard of error, and 95% confidence intervals were reported. For all male adult offenders, the mean survival time was 678.41 (CI = 645.69, 711.12, SE = 16.69). The median survival time was 736.00 days (SE = 76.07, CI: 586.90, 885.10) which can be interpreted to mean that there is a 50% chance of being a survivor or nonrecidivist at 736 days of follow-up for the adult male sample. The survival curve can be found in Figure 1. The height of the curve indicated survival probability at any one point in time, while the slope indicated changes in survival rate over time.

Since the sample is overly represented with institutionals, group membership analyses were conducted to determine the differences in survival rates between the community and institutional offenders. The mean survival time for the institutional group was 602.28 (SE = 19.10, CI: 564.85, 639.71) while for the community males, the mean survival time was 852.67 days (SE = 27.99, CI: 797.81, 907.52). A graphic review of group membership and survival time can be found in Figure 2. The institutional slope was steeper than the community one, indicating shorter survival times for the institutional group. The community curve was flatter and as can be seen by the end of the follow-up

period, there was a greater proportion of community males who did not recidivate in comparison to the institutional group. In order to test the equality of the survival distributions by group membership, the Log-Rank statistic (nonparametric test) was used and found to be significant when alpha was set at .05 (Log-Rank = 39.21, $\underline{df}$=1, $\underline{p}$ <.001). Therefore, a community based offender is likely to survive or not recidivate for a longer period of time. In other words, the institutional offenders were likely to recidivate more quickly than the community offenders at any given time in the follow-up period.

Figure 1. Survival Function of All Adult Males N = 630.

Survival Function

Adult Males N=630

Cum Survival

1.1
1.0
.9
.8
.7
.6
.5
.4

-200   0   200   400   600   800   1000   1200

Risk Time

□ Survival Function

+ Censored

Figure 2. Survival Function by Setting

Survival Functions
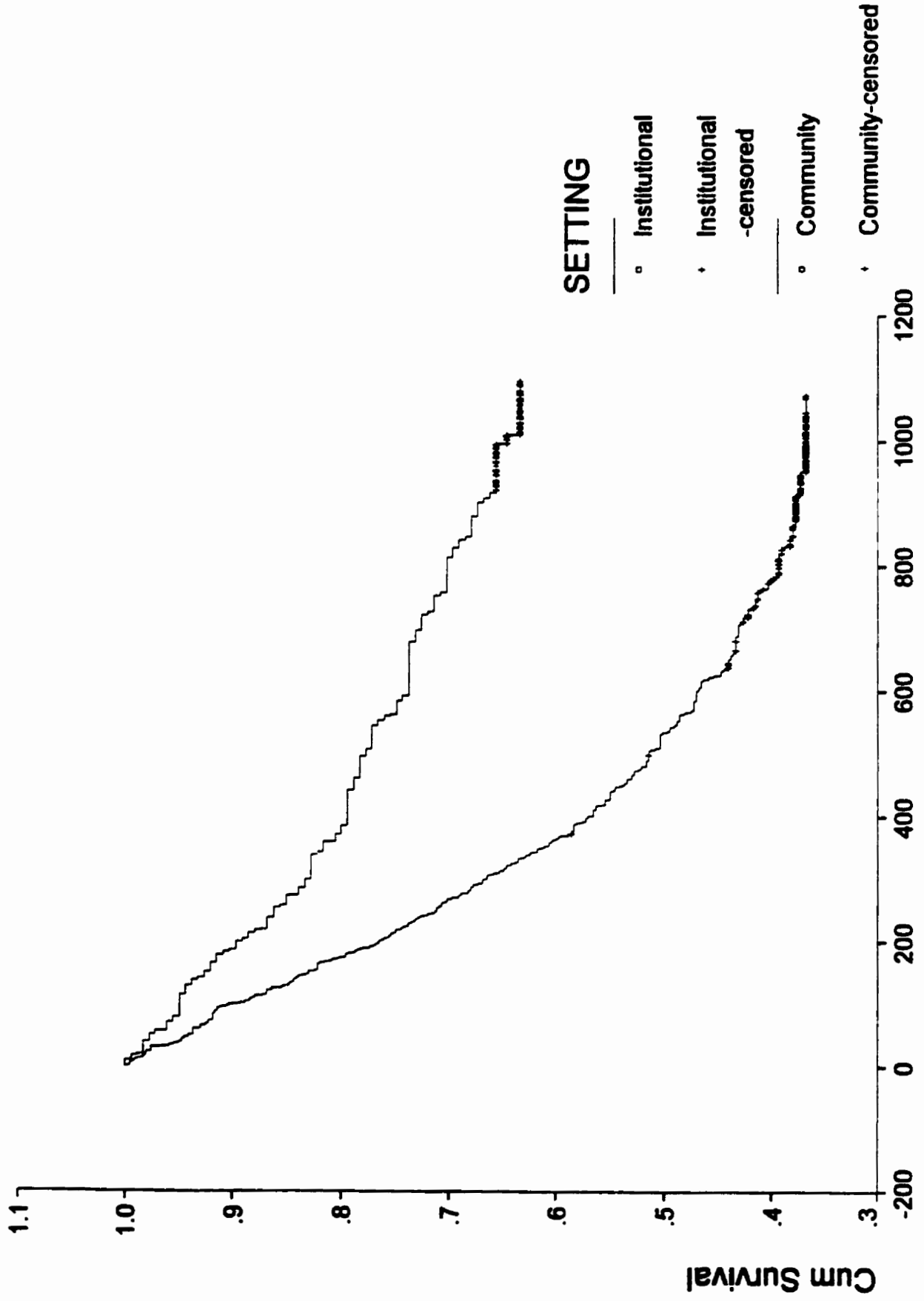
Cum Survival (y-axis): 1.1, 1.0, .9, .8, .7, .6, .5, .4, .3

Risk Time (x-axis): -200, 0, 200, 400, 600, 800, 1000, 1200

SETTING

□ Institutional

+ Institutional
-censored

□ Community

+ Community-censored

General Recidivism and Exceptional Offender Groups. Since the relevance of the LSI-OR has

been questioned with respect to several exceptional groups such as emotionally disabled, violent,

sexual, and domestic violent offenders, in addition to young offenders, females, community and

institutional offenders, a number of additional analyses were performed. Several exceptional offender

groups were selected from the data set based on LSI-OR items. Specific groups identified for this study

included a mentally disordered group, sex offender group including those with previous histories or an

index offence or any recidivating events which were sexual in nature, as well as, a domestic violence

group. The first exceptional offender group selected was a mentally disordered group, obtained by

selecting all offenders who had the following Other Client Issues items scored: "depression",

"psychosis", "previous suicide attempts/threats", and "other evidence". Total sample size of mentally

disordered offenders was 188 based on the entire sample including females and youth, in order to

obtain the largest sample available. This sample included 15 females and 5 young offenders. Sixty-six

offenders were under community supervision, while 122 were institutional offenders. From Table 27, it

can be seen that the mentally disordered offenders had a mean follow-up time (risk time) of 941.28

days, (SD = 110.67) which was not significantly different from that of all other offenders (M = 935.89,

SD = 135.67). There were no significant group differences on total number of convictions, sentence

length, time to first recidivism, total number of charges, total incarceration time, total outstanding

charges, total number of remands, and total number of withdrawn charges.

Table 27

Outcome Variable Comparisons Between Mentally Disordered and Nonmentally Disordered Offenders

Outcome variables	Mentally disordered		Nonmentally disordered			
	$\underline{n}$ = 188		$\underline{n}$ = 509			
	M	SD	M	SD	t	df
Risk time	941.28	110.67	935.89	135.67	.54	695.00
Convictions	2.60	4.26	2.64	4.31	.09	695.00
Sentence length	153.96	275.80	185.91	388.75	1.03	695.00
Time to recidivism +	153.93	226.28	183.38	246.89	1.43	695.00
Charges	4.22	6.72	4.10	6.20	-.22	686.00
Time served	119.53	195.55	111.35	176.40	.50	695.00
Outstanding charges	0.89	2.06	0.71	1.57	-1.11	270.69
Remands	1.01	1.84	0.85	1.57	-1.11	686.00
Withdrawn ++	0.62	1.64	0.69	1.89	.47	695.00

Note. + refers to Time to first recidivism. ++ refers to Total withdrawn charges. All $\underline{p}$'s are nonsignificant.

The second group examined was a domestic violence group, which was selected based on whether the Specific Risk/Need Factor item "physical assault intrafamilial" was scored. The selection criteria yielded a subsample of 150, 146 males and 4 females. The above comparisons were repeated for the domestic violence group. In Table 28, the results can be found for domestic and nondomestic violence offenders. The nondomestic violence offenders had a greater mean follow-up period ($\underline{M}$ = 945.10, $\underline{SD}$ = 111) than the domestic violence offenders ($\underline{M}$ = 919.77, $\underline{SD}$ = 138.68). Comparisons on all other outcome related variables were nonsignificant.

Table 28

Outcome Variable Comparisons Between Domestic Violence and Nondomestic Violence Offenders

Outcome variable	Domestic violence n = 150		Nondomestic violence n = 548			
	M	SD	M	SD	t	df
Risk time	919.77	138.68	945.10	111.00	2.06	204.14 *
Convictions	3.17	5.10	2.48	4.04	-1.54	202.85
Sentence length	181.70	288.22	175.76	379.52	-.18	696.00
Time to recidivism +	178.27	241.70	174.36	241.79	-.18	696.00
Charges	4.95	7.10	3.91	6.10	-1.62	207.87
Time served	139.20	204.25	111.12	186.17	-1.52	221.36
Outstanding charges	0.70	1.68	0.77	1.72	.43	696.00
Remands	1.09	1.81	0.84	1.60	-1.65	687.00
Withdrawn ++	0.71	1.58	0.66	1.88	-.26	696.00

Note. + refers to Time to first recidivism, ++ refers to Total withdrawn charges; *p < .05.

A sex offender group was also identified by selecting those cases in which an index or recidivating offence was of a sexual nature and/or those with the Specific Risk/Need Factor item "sexual assault" and/or "inappropriate sexual activity" scored. As a result, 51 offenders were identified, 46 males and 5 females. There were no offenders who had a history of sexual assault or whose recidivism involved a serious violent sexual offence or a violent sexual offence. However, there was one offender who had a nonviolent sexual offence as a recidivating offence during the follow-up time. A closer examination of this offender's profile revealed that he did not have a previous history of sexual offences. There were 7 offenders who had a nonviolent sexual offence as an index offence. There were

12 offenders who had a violent sexual offence as their index offence. Thirty offenders were identified as having a history of either sexual assault and/or inappropriate sexual activity. In Table 29, the results for the sex offender group revealed nonsignificant differences on all outcome variable comparisons including length of follow-up.

Table 29

Outcome Variable Comparisons Between Sex and Nonsex Offenders

Outcome variable	Sex offender		Nonsex offender			
	n = 31		n = 667			
	M	SD	M	SD	t	df
Risk time	968.23	74.76	938.33	119.35	-1.38	696.00
Convictions	2.74	4.36	2.62	4.29	-.15	696.00
Sentence length	245.00	643.64	173.88	343.52	-1.07	696.00
Time to recidivism +	161.84	254.39	175.82	241.17	.31	697.00
Charges	3.80	6.69	4.15	6.32	.29	687.00
Time served	92.91	145.66	118.28	192.24	.72	696.00
Outstanding charges	0.84	2.27	0.75	1.69	-.28	696.00
Remands	0.83	2.26	0.89	1.62	.19	687.00
Withdrawn ++	0.69	1.82	0.39	1.98	.89	696.00

Note. + refers to Time to first recidivism, ++ refers to Total withdrawn charges. All p's are nonsignificant.

Table 30 reveals the rates of recidivism for the exceptional offender groups. For the mentally disordered offender group 48.9% (n = 92) of the group recidivated while 22.9% (n = 43) of all mentally

disordered offenders recidivated violently. The domestic violence offenders recidivated at a rate of 54% and 39.3% recidivated violently. The sex offenders recidivated at a rate of 45.2% and recidivated violently at a rate of 16.1%.

Table 30

Rates of Recidivism for Exceptional Offender Groups

	Recidivism				Nonrecidivism	
	General		Violent			
	n	%	N	%	n	%
Mentally disordered (n = 188)	92	48.9	43	22.9	96	51.1
Nonmentally disordered (n = 509)	274	53.8	118	23.2	235	46.2
Domestic violence (n = 150)	81	54.0	59	39.3	69	46.0
Nondomestic violence (n = 548)	286	52.2	102	18.6	262	47.9
Sex offender (n = 531)	14	45.2	5	16.1	17	54.8
Nonsex offender (n = 647)	341	52.7	151	23.4	306	47.3
Total sample (N = 698)	367	52.6	161	23.1	331	47.4

Recidivists Only. In order to examine the Recidivists by group were compared on several outcome measures and in general, few differences were noted. This review was followed by an examination of violent and nonviolent recidivism which involved a detailed comparison between violent/nonviolent reoffending and Level I/Level II offence categories. Finally, an examination of the relationship between all outcome measures was conducted. The findings are reported in Appendix G.

Principal Components Analysis of Outcome Variables. Since there were a large number of recidivism variables, a principal components analysis was performed in order to reduce the outcome variable set. Prior to running the analysis, however, the outcome variable data set was examined and variables which were derived from other variables were not used in the analysis. For example, a binary recidivism variable is a derived variable based on the other outcome variables such as convictions. The principal components analysis was chosen because this is a preliminary analysis of outcome variables. Using the Kaiser rule (1960) of retaining all factors with eigen values greater than 1, the factor analysis yielded 3 orthogonal factors with varimax rotation which explained 73.4% of the variance. The factor loadings of greater than .40 (Stevens, 1992) were used to define the factors which were identified as: (1) Incarceration Time and Sentence Length which explained 52.5% of the variance; (2) Severity and Diversity of Offence which explained 12.4% of the variance; and (3) Outstanding charges which explained 8.5% of the variance. The largest factor loadings for Factor I, Incarceration Time and Sentence Length, were produced by recidivism variables related to the length of incarceration of an offender. Factor II, Severity and Diversity of Offence, was labelled as such because the largest factor loadings were produced by recidivism variables related to the severity of the most serious offence and the diversity or number of different offences committed by an offender. Factor III, Outstanding Charges Factor, was labelled because the variables which produced the largest factor loadings were related to outstanding charges. The factor loadings are reported in Table 31.

Table 31

Recidivism Factor Scores from Principal Components Analysis

Recidivism variables	Sentence length/time served	Severity/diversity	Outstanding [1]
Sets severity	.01330	.79146	-.06113
Sets	.69781	.57208	.09220
Types	.73087	.55056	.05377
Convictions	.74196	.52127	.03855
Sentence length	.85626	-.01807	-.08449
Outstanding [1]	.06079	.02858	.85146
Outstanding [1] severity	.04060	-.02393	.84773
Remands	.64468	.44519	.23298
Withdrawn [1]	.43714	.07009	.09418
Time served	.93065	.07895	.02941
Charges	.79947	.49132	.11524
In-to-risk %	.92391	.06092	.03047

Note. [1] refers to Charges.

Predictive Analyses

Several predictive analyses were conducted and are reported in the following section. First recidivist/nonrecidivists were compared on several measures related to their index offence. Secondly, they were compared on the LSI-OR subscales and scale scores. Although the results of the factor analysis produced a 6-factor model, which did not correspond directly to the 8 subscales of the General Risk/Need Factor section, a preponderance of empirical evidence suggests that the 8 subscales represent the major risk/need factor domains related to recidivism (Gendreau et al, 1996, Andrews &

Bonta, 1994/1998). As a result, it was decided that predictive analyses would be conducted using the LSI-OR subscales and factors. Survival analyses were also conducted, followed by an examination of recidivism by risk level categories. This subsection was followed by an examination of violent recidivism by risk level categories. A number of correlation analyses between the LSI-OR variables and a variety of recidivism variables were also conducted. These predictive analyses were followed by a variety of multiple regression analyses. The final subsection included a number of analyses with exceptional offender groups.

Recidivist/Nonrecidivist Comparisons. A number of analyses were made on variables that compared recidivists and nonrecidivists on conditions related to their original sentence. As can be seen in Table 32, all t-test comparisons were significant when alpha was set at .05 except for index offence sentence length, conditional sentence as well as intermittent sentences. On the index offence severity, recidivists had a lower mean severity score indicating that recidivists tended to be convicted of more serious offences initially. Recidivists were also convicted of more types of offences referring to a greater diversity of convictions and a greater total number of convictions than nonrecidivists related to their initial offence. In spite of these differences related to the nature of their offences, recidivists and nonrecidivists did not differ significantly on risk time.

Table 32

Recidivist/Nonrecidivist Comparisons on Index Offence Variables and Follow-up Time for Adult Males

Group N = 630

Index Offence variables	Nonrecidivists n = 287		Recidivists n = 343				
	M	SD	M	SD	t	df	p
Severity	10.355	4.925	9.353	4.914	2.55	628.00	.011
Sentence length	192.004	220.108	203.155	174.218	-.70	540.28	.487
Types	1.728	1.062	2.122	1.347	-4.10	625.86	.000
Convictions	2.112	1.716	2.857	3.693	-3.33	501.40	.001
Time served	131.333	138.442	159.670	122.046	-2.52	498.84	.012
Fines	.091	.288	.061	.240	1.38	558.18	.021
Conditional	.004	.059	.000	.000	1.00	286.00	.318
Suspended	.129	.336	.061	.240	2.86	505.74	.004
Intermittent	.049	.216	.020	.142	1.91	477.39	.057
Risk time	937.906	130.433	928.397	112.191	.97	567.75	.332

The same analyses were repeated for institutional and community groups. For the institutional and community groups, recidivists and nonrecidivists did not differ with respect to length of follow-up. For the institutional group, recidivists had more serious index offences, longer sentence lengths, more types of offences, received more suspended sentences related to the disposition of the index offence than the institutional nonrecidivists. These findings can be viewed in Table 33.

Table 33

Recidivist/Nonrecidivist Comparisons on Index Offence Variables and Follow-up Time for Institutional Group n = 454

Index offence variables	Nonrecidivists n = 173		Recidivists n = 281		T	df	p
	M	SD	M	SD			
Severity	10.370	5.275	9.199	4.931	2.39	452.00	.017
Sentence length	279.399	192.380	235.100	168.476	2.58	452.00	.010
Types	2.00	1.181	2.242	1.386	-1.98	407.29	.048
Convictions	2.543	1.906	3.075	3.986	-1.91	430.04	.057
Time served	188.443	129.485	183.139	114.512	.44	424.00	.658
Fines	.029	.168	.039	.194	-.57	452.00	.566
Suspended	.000	.000	.014	.119	-2.01	280.00	.045
Intermittent	.000	.000	.007	.084	-1.42	280.00	.158
Risk time	898.439	137.753	911.004	111.930	-1.06	452.00	.289

For the community recidivist/nonrecidivist groups, there were no significant differences on variables related to the index offence. The findings can be found in Table 34.

Table 34

Recidivist/Nonrecidivist Comparisons on Index Offence Variables and Follow-up Time for Community Group n = 176

Index offence variables	Nonrecidivists n = 114		Recidivists n = 62				
	M	SD	M	SD	t	df	p
Severity	10.333	4.361	10.048	4.816	.40	174.00	.690
Sentence length	59.377	191.955	58.371	117.787	.04	174.00	.970
Types	1.316	.669	1.581	1.001	-1.87	91.37	.065
Convictions	1.456	1.098	1.871	1.520	-1.90	96.35	.061
Time served	15.024	62.460	21.523	55.588	-.58	124.00	.564
Fines	.184	.389	.161	.371	.38	174.00	.705
Conditional	.009	.094	.000	.000	.74	174.00	.462
Suspended	.325	.470	.274	.450	.69	174.00	.492
Intermittent	.123	.330	.081	.275	.86	174.00	.392
Risk time	997.798	90.396	1007.223	73.158	-.70	174.00	.482

In order to test the second and third hypotheses, recidivists and nonrecidivists were compared on all LSI-OR subscales and section total scores by setting. For each group, the means and standard deviations are provided in Table 35, 36, and 37. For the adult male group recidivists had significantly greater mean scores on all subscales and section totals except for the Institutional Factors total section score.

Table 35

Recidivist/Nonrecidivist Comparisons on LSI-OR Subscales and Sections for Adult Males

N = 630

| | Nonrecidivists | | Recidivists | | | | |
| | n = 343 | | n = 287 | | | | |
LSI-OR	M	SD	M	SD	t	df	p
General risk/need factors	16.373	8.396	23.306	7.883	-10.67	628.00	.000
Criminal history	3.927	2.438	5.778	1.766	-10.73	510.18	.000
Education/employment	3.829	2.571	5.015	2.547	-5.79	628.00	.000
Family/marital	1.303	1.082	1.539	1.089	-2.72	628.00	.007
Leisure/recreation	1.132	.817	1.487	.725	-5.71	577.31	.000
Companions	1.174	1.170	1.930	1.057	-8.44	582.90	.000
Procriminal attitudes	.756	1.005	1.315	1.095	-6.67	622.60	.000
Substance abuse	3.321	2.298	4.545	2.214	-6.79	628.00	.000
Antisocial patterns	.937	1.019	1.685	1.137	-8.70	625.03	.000
Total specific risk/need	2.613	2.086	3.668	2.573	-5.68	627.39	.000
Specific risk/need +	1.467	1.571	2.044	1.846	-4.23	626.88	.000
History ++	1.146	1.014	1.623	1.340	-5.07	620.56	.000
Total strengths	.948	1.712	.321	.947	5.54	427.76	.000
Other client issues	2.007	2.023	2.398	2.370	-2.23	626.82	.026
Special responsivity	.679	.913	.901	1.070	-2.80	626.82	.005

Note. + refers to Specific risk/need factors with criminogenic potential. ++ refers to Specific risk/need factors, History subsection.

For the institutional group, the findings were replicated with the exception that Family/Marital

and Other Client Issues did not differentiate between recidivists and nonrecidivists.

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Table 36

Recidivist/Nonrecidivist Comparisons on LSI-OR Subscales and Sections for Institutional Group n=454

LSI-OR subscales & sections	Nonrecidivists n = 173		Recidivists N = 280				
	M	SD	M	SD	t	df	p
General risk/need factors	19.538	7.607	24.975	6.874	-7.86	452.00	.000
Criminal history	5.001	2.059	6.146	1.489	-6.33	282.66	.000
Education/employment	4.341	2.460	5.498	2.277	-5.10	452.00	.000
Family/marital	1.434	1.117	1.601	1.048	-1.62	452.00	.107
Leisure/recreation	1.416	.707	1.626	.620	-3.222	328.30	.001
Companions	1.434	1.101	2.085	.989	-6.37	334.66	.000
Procriminal attitudes	.896	.971	1.406	1.045	-5.28	384.65	.000
Substance abuse	3.965	2.199	4.811	2.076	-4.12	452.00	.000
Antisocial patterns	1.052	1.013	1.801	1.119	-7.34	391.77	.000
Total specific risk/need	2.977	2.183	3.868	2.601	-3.92	411.08	.000
Specific risk/need +	1.590	1.667	2.157	1.911	-3.33	40.57	.001
History ++	1.387	1.059	1.711	1.308	-2.88	419.33	.004
Total strengths	.324	1.034	.114	.522	2.86	452.00	.004
Institutional factors	.936	1.074	.964	1.036	-0.27	451.00	.784
Other client issues	2.115	2.065	2.514	2.449	-1.86	409.97	.064
Special responsivity	.705	.896	.914	1.068	-2.24	411.18	.026

Note. + refers to Specific risk/need factors with criminogenic potential. ++ refers to Specific risk/need factors, History subsection.

The results for the community group were somewhat different in that Education/Employment,

Family/Marital, Leisure/Recreation, Specific Risk/Need factors with Criminogenic Potential, Other Client

Issues, and Special Responsivity Factors did not differentiate between recidivists and nonrecidivists

(Table 37).

Table 37

Recidivist/Nonrecidivist Comparisons on LSI-OR Subscales and Sections for Community Group n =

176

LSI-OR subscales & sections	Nonrecidivists n = 114		Recidivists n = 62				
	M	SD	M	SD	t	Df	p
General risk/need factors	11.570	7.194	15.742	7.780	-3.57	174.00	.000
Criminal history	2.290	2.025	4.113	1.968	-5.76	174.00	.000
Education/employment	3.053	2.552	2.823	2.57	.57	174.00	.569
Family/marital	1.105	.999	1.258	1.227	-.84	105.48	.402
Leisure/recreation	.702	.786	.855	.827	-1.21	174.00	.227
Companions	.781	1.167	1.226	1.078	-2.48	174.00	.014
Procriminal attitudes	.544	1.023	.903	1.224	-1.97	107.75	.052
Substance abuse	2.342	2.099	3.339	2.429	-2.84	174.00	.005
Antisocial patterns	.763	1.007	1.161	1.074	-2.45	174.00	.015
Total specific risk/need	2.061	1.801	2.758	2.245	-2.24	174.00	.026
Specific risk/need +	1.281	1.399	1.532	1.423	-1.13	174.00	.259
History ++	.781	.817	1.226	1.419	-2.27	83.54	.026
Total strengths	1.895	2.07	1.258	1.639	2.24	151.34	.027
Other client issues	1.842	1.953	1.871	1.903	-.10	128.20	.924
Special responsivity	.640	.942	.839	1.089	-1.26	174.00	.209

Note. + refers to Specific risk/need factors with criminogenic potential. ++ refers to Specific risk/need factors, History subsection.

Table 38 compares recidivists and nonrecidivists on the risk time variable by group. There was no difference in the length of follow-up for recidivist or nonrecidivist amongst offenders.

Table 38

Recidivist/Nonrecidivist Comparisons on Risk Time by Group

	Adult Males [1]	Institutionals [2]	Community [3]
	$\underline{N}$ = 630	$\underline{n}$ = 454	$\underline{N}$ = 176
Recidivists			
$\underline{M}$	928.40	911.00	1007.23
$\underline{SD}$	112.19	137.75	73.16
Nonrecidivists			
$\underline{M}$	937.91	898.44	997.80
$\underline{SD}$	130.43	137.75	90.40

Note. [1] $\underline{t}$ = .98, $\underline{df}$ = 628, $\underline{p}$ = .326. [2] $\underline{t}$ = 1.06, $\underline{df}$ = 452, $\underline{p}$ = .289. [3] $\underline{t}$ = -.70, $\underline{df}$ = 174, $\underline{p}$ = .482.

Survival by Risk Level. Another series of survival analyses were performed using final risk level categories as a factor variable. Since the numbers in the very low risk level offender group for institutionals ($\underline{n}$ = 5) and the numbers in the community group for very high offenders ($\underline{n}$ = 6) was low, the 5 level risk categories were collapsed into 3 risk level categories. The mean survival time for the low risk level offenders was 942.60 ($\underline{CI}$ = 881.60, 1003.59, $\underline{SE}$ = 31.12). The mean survival time for the medium risk level offenders was 778.27 ($\underline{CI}$ = 778.27, 832.34, $\underline{SE}$ = 27.59). The mean survival time for the high risk level offenders was 533.72 ($\underline{CI}$ = 491.08, 576.35, $\underline{SE}$ = 21.75). When alpha was set at .05, the nonparametric test of independence was significant (Log Rank = 4.86, $\underline{df}$ = 1, $\underline{p}$ < .027). Figure 3 shows that risk level differentiated between survival probabilities in that a higher risk level was associated with lower survival probability.

Figure 3. Survival Functions by Risk Level

Survival Functions
Adult Males N=630

Cum Survival (y-axis): 1.2, 1.0, .8, .6, .4, .2

Risk Time (x-axis): -200, 0, 200, 400, 600, 800, 1000, 1200

Risk Level

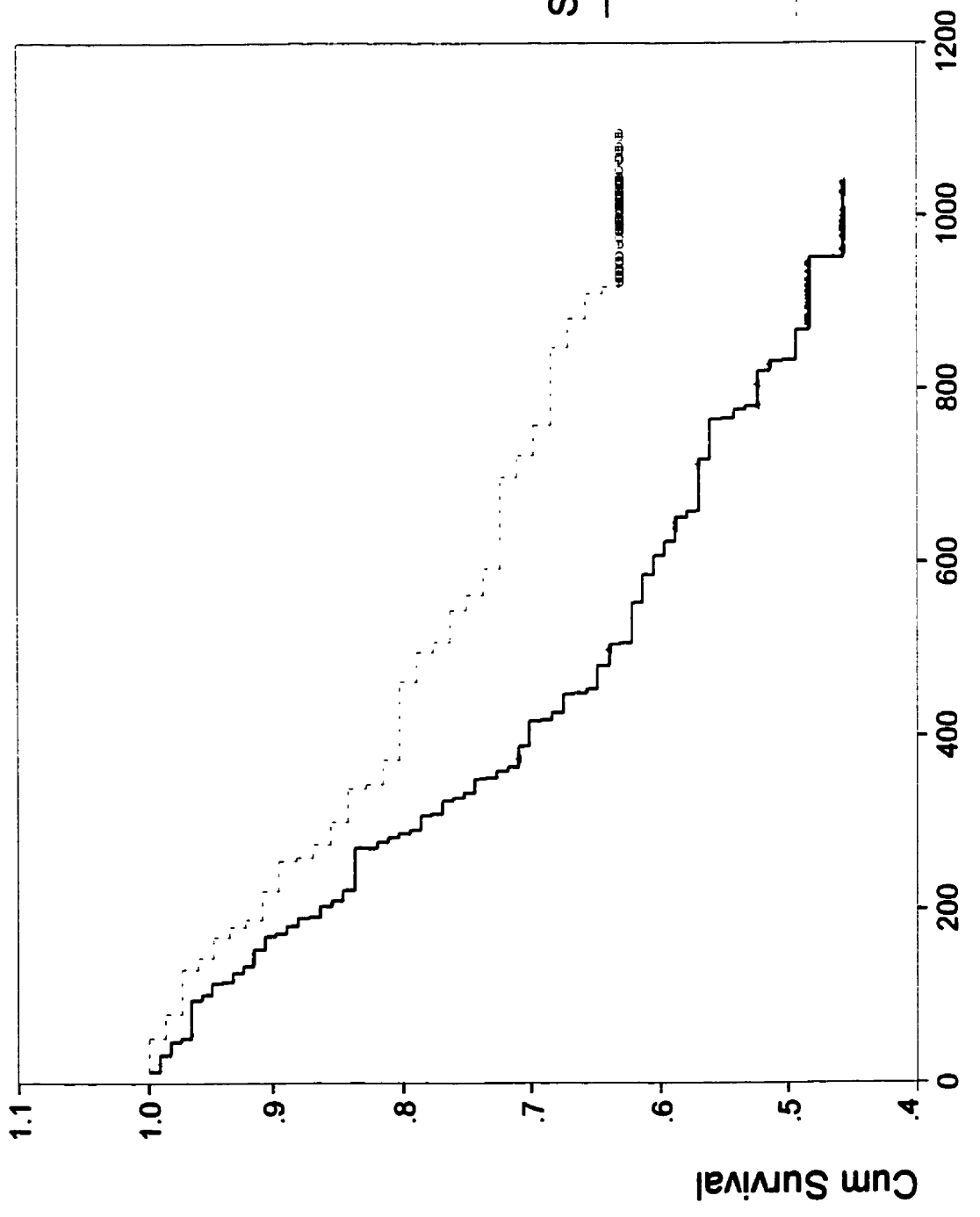|	
□	3.00
+	3.00-censored
□	2.00
+	2.00-censored
□	1.00
+	1.00-censored
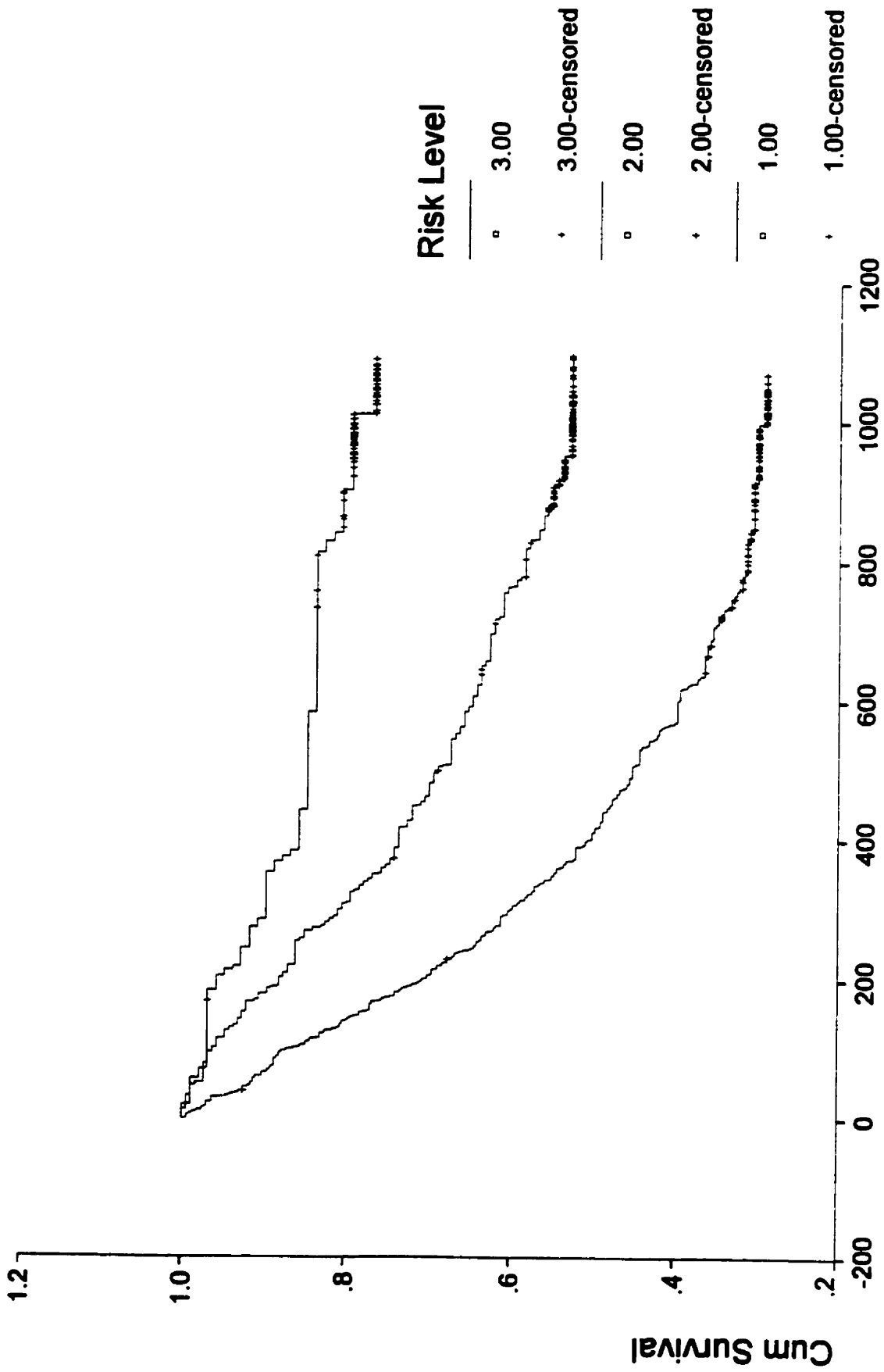
The above analyses were repeated using setting as a factor variable and risk level as a strata variable. The Log Rank for setting was significant (Log Rank = 39.21, df = 1, p < .001), as well as for risk level categories (Log Rank = 4.86, df = 1, p = .027). The mean survival time for community low risk level was 928.19 (CI = 852.63, 1003.75, SE = 38.55) while for the institutional low risk level group, the mean survivial time was 967.86 (CI = 872.17, 1063.54, SE = 48.82). The mean survival time for the community medium risk level offender was 853.01 (CI = 772.85, 933.17, SE = 40.90) while for the institutional medium risk level offender the mean survival time was 702.27 (CI = 635.81, 768.74, SE = 33.91). The mean survival time for the community high risk level offenders was 642.31 (CI = 491.37, 793.24, SE = 77.01) while for the institutional high risk level offenders the mean survival time was 523.26, (CI = 479.03, 567.49, SE = 22.57). The Log Rank statistics for each risk level were nonsignificant for the institutional and community samples except for the medium risk level offenders (Log Rank = 5.09, df = 1, p = .024) when alpha was set at .05. Those findings are shown in Figure 4. In other words, for all offenders in the medium risk level, community offenders have a statistically longer time to reoffence (or put another way, a statistically higher survival probability) compared to medium risk level institutional offenders. The mean survival time to reoffence did not reach statistical significance for the either low or high-risk level offenders.

Figure 4. Survival Function for Medium Risk Level Offenders by Setting

Survival Functions
Medium Risk Level

Cum Survival (vertical axis): 1.1, 1.0, .9, .8, .7, .6, .5, .4

Risk Time (horizontal axis): 0, 200, 400, 600, 800, 1000, 1200

SETTING

— Institutional

▽ Institutional
  -censored

⋯ Community

○ Community-censored

General Recidivism by Risk Level. A comprehensive review of recidivism and the LSI-OR involved an examination of recidivism status by risk level categories in order to determine whether the proportion of males who recidivated increased with each risk level since these categories are used to guide supervision requirements by correctional staff. Total LSI-OR General Risk/Need Factors scores were used in order to group males into risk level categories. The analyses were performed on all risk level categories determined following the use of the override. The combined group results are presented in Table 39. As can be seen, the rate of recidivism increased incrementally with risk level for the entire sample.

Table 39

Recidivism by Final Risk Level for Adult Males N = 630

Level	Recidivists		Nonrecidivists	
	N	%	n	%
1 (0 – 4)	2	6.9	27	93.1
2 (5 – 10)	19	27.1	51	72.9
3 (11 – 19)	89	45.9	105	54.1
4 (20 – 29)	151	64.3	84	35.7
5 (30 +)	82	80.4	20	19.6
Total	343	54.4	287	45.6

Examination of gamma statistics revealed a significant relationship between LSI-OR risk categories and recidivism, for both institution (gamma = 0.479, $p < .001$, $n = 454$) and community (gamma = 0.442, $p < .001$, $n = 176$) samples, as well as for the adult male sample (gamma = 0.545, $p < .001$, $N = 630$). From Table 40, the pattern of results was replicated with a slight decrease in the rate of recidivism for the institutional sample for the Low level risk category compared to the Very Low level.

Table 40

Recidivism by Final Risk Level for Institutionals n = 454

	Recidivists		Nonrecidivists	
Level	N	%	n	%
1 (0 – 4)	1	20.0	4	80.0
2 (5 – 10)	3	13.0	20	87.0
3 (11 – 19)	61	51.7	57	48.3
4 (20 – 29)	138	65.1	74	34.9
5 (30 +)	78	81.3	18	18.8
Total	281	61.9	173	38.1

As can be seen in Table 41, for the community group, the difference in recidivism rates for the very low and medium risk levels was minimal, but increased significantly for high and very high-risk levels.

Table 41

Recidivism by Final Risk Level for Community Group n = 176

	Recidivists		Nonrecidivists	
Level	N	%	n	%
1 (0 – 4)	1	4.2	23	95.8
2 (5 – 10)	16	34.0	31	66.0
3 (11 – 19)	28	36.8	48	63.2
4 (20 – 29)	13	56.5	10	43.5
5 (30 +)	4	66.7	2	33.3
Total	62	35.2	114	64.8

Violent Recidivism by Risk Level. The above analyses were replicated using violent recidivism

status in order to determine the rate of recidivating violently as a function of risk level category. The

results can be found in Table 42. As with general recidivism status, the gamma statistics were

significant for the entire male (gamma = 0.441, p < .001, N= 629) sample, the institutional (gamma =

.444, p < .001, n = 454) and the community samples (gamma = .383, p = .009, n =175). As can be

seen from the results, violent recidivism rates increased with risk level incrementally, also. As

expected, there were no Very Low risk level offenders who recidivated violently. Conversely, 46.1% of

all very high risk offenders recidivated violently.

Table 42

Violent Recidivism by Final Risk Level for Adult Males N = 630

Level	Violent recidivists		All other offenders	
	N	%	n	%
1 (0 – 4)	---	---	29	100.0
2 (5 – 10)	8	11.4	62	88.6
3 (11 – 19)	37	19.1	157	80.9
4 (20 – 29)	60	25.6	174	74.4
5 (30 +)	47	46.1	55	53.9
Total	152	24.2	477	75.8

Findings were replicated for the institutional (Table 43) and community (Table 44) samples with

slight variations. For example, fewer low-level institutional offenders than low-level community

offenders recidivated violently (4.30% vs 11.4%). However, the pattern reversed for the very high risk

offenders, that is, more very high risk institutional offenders recidivated violently compared to

community high risk offenders (46.9% vs 33.3%).

Table 43

Violent Recidivism by Final Risk Level for Institutionals n = 454

	Violent recidivists		All other offenders	
Risk level	N	%	n	%
1 (0 – 4)	---	---	5	100.0
2 (5 – 10)	1	4.3	22	95.7
3 (11 – 19)	22	18.6	96	81.4
4 (20 – 29)	55	25.9	157	74.1
5 (30 +)	45	46.9	51	53.1
Total	123	27.1	331	72.9

Table 44

Violent Recidivism by Final Risk Level for Community Group n = 176

	Violent recidivists		All other offenders	
Risk level	N	%	n	%
1 (0 – 4)	---	---	24	100.0
2 (5 – 10)	7	14.9	40	85.1
3 (11 – 19)	15	19.7	61	80.3
4 (20 – 29)	5	22.7	17	77.3
5 (30 +)	2	33.3	4	66.7
Total	29	16.6	146	83.4

Outcome Variable Intercorrelations. A number of intercorrelations amongst the outcome variables were produced for the combined adult male sample, the institutional, and community groups. The intercorrelation matrices can be found in Appendix H.

Correlations Between LSI-OR and Recidivism. The correlations between the predictor variables and criterion variables were examined in order to examine the best predictors of recidivism (first hypothesis) and can be found in Table 45, 46, and 47 for the combined institutional and community sample. The predictor variables were the LSI-OR scale and subscale scores, in addition to the initial and final risk levels, strengths, and risk change variables. In addition to a binary general recidivism variable, there was a binary violent recidivism variable and several continuous recidivism variables that served as the dependent variables.

When the samples were combined, the General Risk/Need Factor score consistently performed better than the Specific Risk/Need Factor score across all recidivism variables with the exception of violent recidivism for which the Specific Risk/Need Factor scale outperformed the General Risk/Need Factor scale (r = .335 vs .277, $p \leq$ .001). The General Risk/Need Factor total score had the largest associations with recidivism types for the initial recidivating event (r = .358) and subsequent recidivating events (r = .396), convictions (r = .325), total reincarceration time (r = .352) and charges (r = .345). As expected, the Other Mental Health Issues, the Institutional Factors, and the Responsivity Factors scales performed considerably poorer than the first two scales. The Other Mental Health Issues scale had low correlations (r = .173 to -.002, $p <$ .001) with recidivism variables, the Responsivity Factor scale correlated with recidivism variables in a minimal way and performed slightly better than the Other Mental Health Issues scale (r = .175 to -.040,, $p <$ .001), while the Institutional Factor scale did not correlate significantly with Any Recidivism variable with the exception of outstanding charges level (r= .093, $p <$ .05). Of all the subscales, the largest associations were produced by the Criminal History subscale across all recidivism variables (r = .135 to .405) with the

exception of violent recidivism. The Criminal History subscale was the best predictor of Any Recidivism (r = .403), offence severity for both initial (r = .337) and subsequent recidivating events (r = .253), the level of first recidivism (r = .405) and subsequent recidivating events (r = .405). Both the Companions and Antisocial subscales had correlations greater than .30 for the binary recidivism variable (r = .322, .325, respectively). The best predictor of the binary violent recidivism variable was the History subscale of the Specific Risk/Need Factors scale (r = .364, N = 630). As expected, the total strengths score correlated negatively in a reasonable fashion across recidivism variables (r = -.092 to .226) except with outstanding and withdrawn charges (r = -.044, -.001, respectively). In order to examine the sixth hypothesis, whether the use of the override added to the prediction of recidivism, the initial and final risk level associations were compared across recidivism variables. Although the risk change (-1 to +1) variable was not significantly correlated with recidivism, the final risk level was correlated slightly more highly with recidivism than the initial risk level.

Table 45

Pearson Correlations Between LSI-OR Subscales, Sections and Recidivism for Adult Males N=630

	Recid	Violent recid	Charges	Convictions	Types	No. of sets +
General risk/need (A)	.392 ***	.277 ***	.345 ***	.325 ***	.396 ***	.358 ***
Criminal history	.403 ***	.265 ***	.324 ***	.314 ***	.388 ***	.346 ***
Education/employment	.223 ***	.172 ***	.202 ***	.182 ***	.227 ***	.202 ***
Family/marital	.108 **	.154 ***	.149 ***	.137 ***	.149 ***	.165 ***
Leisure/recreation	.224 ***	.124 **	.162 ***	.169 ***	.211 ***	.177 ***
Companions	.322 ***	.156 ***	.278 ***	.270 ***	.314 ***	.310 ***
Procriminal attitudes	.256 ***	.223 ***	.289 ***	.284 ***	.298 ***	.238 ***
Substance abuse	.262 ***	.181 ***	.210 ***	.188 ***	.259 ***	.239 ***
Antisocial patterns	.325 ***	.235 ***	.303 ***	.276 ***	.326 ***	.292 ***
Specific risk/need (B)	.217 ***	.335 ***	.241 ***	.252 ***	.262 ***	.206 ***
Personal problems (B^1)	.165 ***	.210 ***	.201 ***	.220 ***	.210 ***	.174 ***
History (B^2)	.194 ***	.364 ***	.190 ***	.185 ***	.219 ***	.158 ***
Total strengths	-.226 ***	-.124 **	-.140 ***	-.151 ***	-.189 ***	-.171 ***
Initial risk level	.370 ***	.252 ***	.318 ***	.298 ***	.364 ***	.337 ***
Final risk level	.378 ***	.255 ***	.321 ***	.300 ***	.366 ***	.340 ***
Risk change	.044	.017	.017	.010	.012	.020
Institutional factors (D)	.013	.060	.043	.065	.080	.030
Other mental health (F)	.088 *	.094 *	.153 ***	.143 ***	.138 ***	.118 **
Special responsivity (G)	.110 **	.095 **	.162 ***	.175 ***	.131 ***	.132 ***

Note. + refers to Number of sets; * p ≤.05; ** p ≤.01; *** p ≤.001.

Table 45 continued

Pearson Correlations Between LSI-OR Subscales, Sections and Recidivism for Adult Males N=630

	Sent length +	Time served	In-to-risk %	Offence severity	Level
General risk/need (A)	.259 ***	.352 ***	.360 ***	.232 ***	.398 ***
Criminal history	.269 ***	.344 ***	.352 ***	.253 ***	.405 ***
Education/employment	.161 ***	.226 ***	.232 ***	.126 **	.235 ***
Family/marital	.087 *	.134 ***	.141 ***	.045	.130 ***
Leisure/recreation	.151 ***	.222 ***	.222 ***	.135 ***	.224 ***
Companions	.245 ***	.315 ***	.314 ***	185 ***	.306 ***
Procriminal attitudes	.236 ***	.257 ***	.259 ***	.117 **	.269 ***
Substance abuse	.108 **	.185 ***	.190 ***	.182 ***	.257 ***
Antisocial patterns	.209 ***	.283 ***	.290 ***	.176 ***	.331 ***
Specific risk/need (B)	.137 ***	.227 ***	.221 ***	.151 ***	.287 ***
Personal problems (B¹)	.119 **	.194 ***	.183 ***	.112 **	.205 ***
History (B²)	.100 **	.171 ***	.176 ***	.137 ***	.274 ***
Total strengths	-.150 ***	-.182 ***	-.184 ***	-.147 ***	-.214 ***
Initial risk level	.237 ***	.330 ***	.337 ***	.214 ***	.370 ***
Final risk level	.240 ***	.335 ***	.341 ***	.227 ***	.376 ***
Risk change	.020	.028	.024	.067	.033
Institutional factors (D)	.016	.039	.038	.046	.046
Other mental health (F)	.064	.122 **	.114 **	.104 **	.104 **
Special responsivity (G)	.117 **	.122 **	.116 **	.126 **	.126 **

Note. + refers to Sentence length; *p ≤ .05; **p ≤ .01; ***p ≤ .001.

Table 46

Pearson Correlations Between LSI-OR Subscales, Sections and First Recidivism for Adult Males

N = 630

	Convictions	Sent length +	Types	Offence severity	Level
General risk/need (A)	.168 ***	.135 ***	.306 ***	.301 ***	.398 ***
Criminal history	.187 ***	.151 ***	.305 ***	.337 ***	.405 ***
Education/employment	.092 *	.080 *	.174 ***	.165 ***	.235 ***
Family/marital	.022	.026	.076	.065	.130 ***
Leisure/recreation	.101 **	.089 *	.205 ***	.152 ***	.224 ***
Companions	.137 ***	.113 **	.223 ***	.256 ***	.306 ***
Procriminal attitudes	.165 ***	.144 ***	.220 ***	.157 ***	.269 ***
Substance abuse	.074	.050	.205 ***	.225 ***	.257 ***
Antisocial patterns	.165 ***	.112 **	.267 ***	.227 ***	.331 ***
Specific risk/need (B)	.114 **	.029	.201 ***	.182 ***	.287 ***
Personal problems (B¹)	.109 **	.044	.167 ***	.132 ***	.205 ***
History (B²)	.070	-.005	.159 ***	.171 ***	.274 ***
Total strengths	-.093 *	-.115 **	-.168 ***	-.180 ***	-.214 ***
Initial risk level	.150 ***	.125 **	.278 ***	.283 ***	.370 ***
Final risk level	.151 ***	.129 ***	.280 ***	.295 ***	.376 ***
Risk change	.006	.019	.016	.063	.033
Institutional factors (D)	.023	-.005	.046	-.012	.046
Other mental health (F)	.043	-.002	.078 *	.074	.104 **
Special responsivity (G)	.089 *	.068	.069	.095 *	.126 **

Note. + refers to Sentence length; * p ≤.05; ** p ≤.01; *** p ≤.001.

Table 47

Pearson Correlations Between LSI-OR Subscales, Sections and Other Recidivism Variables for Adult

Males N=630

	Charges +	Severity +	Level +	Remands ++	Withdrawn +++
General risk/need (A)	.086 *	.113 **	.165 ***	.330 ***	.121 **
Criminal history	.130 ***	.128 ***	.174 ***	.289 ***	.113 **
Education/employment	.038	.062	.063	.180 ***	.104 **
Family/marital	.029	.033	.053	.173 ***	.021
Leisure/recreation	.043	.047	.048	.187 ***	.009
Companions	.029	.041	.115 **	.266 ***	.078 *
Procriminal attitudes	.017	.066	.100 **	.257 ***	.105 **
Substance abuse	.060	.097 *	.155 ***	.219 ***	.051
Antisocial patterns	.085 *	.098 **	.158 ***	.293 ***	.147 ***
Specific risk/need (B)	.084 *	.034	.155 ***	.220 ***	.050
Personal problems (B¹)	.095 *	.007	.120 **	.182 ***	.026
History (B²)	.032	.058	.135 ***	.175 ***	.062
Total strengths	-.044	-.092 *	-.067	-.142 ***	-.001
Initial risk level	.103 **	.109 **	.163 ***	.317 ***	.110 **
Final risk level	.102 **	.117 **	.165 ***	.317 ***	.115 **
Risk change	.000	.015	.013	.319 ***	.024
Institutional factors (D)	.050	.040	.093 *	.008	.008
Other mental health (F)	.110 **	.014	.089 *	.173 ***	.011
Special responsivity (G)	.058	-.040	.042	.142 ***	.023

Note. + refers to Outstanding charges; ++ refers to Total number of remands; +++ refers to Total withdrawn charges; *p ≤.05; **p ≤.01; ***p ≤.001.

In Table 48, 49, and 50, the results for the institutional sample can be found. All reported correlations were significant at the .001 level unless otherwise indicated. As with the adult male group, the General Risk/Need Factors total score produced the largest significant association with the binary recidivism variable (r = .347, n = 454) and consistently performed better than the Specific Risk/Need Factor score across all recidivism variables with the exception of violent recidivism for which the Specific Risk/Need Factor scale outperformed the General Risk/Need Factor scale (r = .391 vs .278). The General Risk/Need Factors total score produced the largest associations with the Level of offence (r = .352) and with total number of types (r = .266). Related to all subsequent recidivism events, the General Risk/Need Factors total section score produced the largest associations with the severity, level, types, sets, and convictions (r = .176, r = .352, r = .344, r = .310, r = .294, respectively). The General Risk/Need Factor total section score had the largest association with the total number of remands (r = .308). The General Risk/Need Factors total score had the largest association with total time served (r = .310), the percentage of incarceration to risk time (r = .311), and total number of charges (r = .330).

Consistent with the findings for the combined sample, the Other Mental Health Issues scale, the Institutional Factors scale, and the Responsivity Factors scales did not perform as well as the first two scales. The Other Mental Health Issues scale had low correlations (r = .176 to -.003), the Responsivity Factor scale correlated with recidivism variables in a minimal way and performed slightly better than the Other Mental Health Issues scale (r = .188 to -. 006), while the Institutional Factor scale did not correlate significantly with Any Recidivism variable with the exception of outstanding charges level (r= .093, p < .05).

As for the subscales, Criminal History tended to produce the highest significant correlations across recidivism variables (r = .328 to .067). Criminal History also produced the largest associations with variables related to the first recidivism event such as offence severity (r = .239), while the

Procriminal Attitudes subscale was the best predictor of the sentence length associated with the first

recidivism (r = .154) and total sentence length throughout the follow-up (r = .227). Criminal History also

correlated significantly with all of the outstanding charges variables (r = .154, r = .171, r = .228). The

Antisocial Pattern subscale was significantly associated with the total number of convictions related to

the first recidivism (r = .183, n = 454, p = .000) as well as with total number of withdrawn charges (r =

.191). As with the combined sample, the largest association with violent recidivism was the History

subscale of the Specific Risk/Need Factors section (r = .391). The total strength scores did consistently

negatively correlate with the recidivism variables, although not consistently achieving the significance

level. When comparing the magnitude of associations from initial to final risk levels, the general pattern

was a slight increment in correlation coefficients for the final risk level. However, this finding was only a

slight increment and not consistent across all recidivism variables. It should be noted, however, that

there was only one institutional offender for whom the override was used. The risk change variable did

not produce any significant associations.

Table 48

Pearson Correlations Between LSI-OR Subscales, Sections and Recidivism for Institutionals n=454

	Recid	Violent recid	Charges	Convictions	Types	No. of sets +
General risk/need (A)	.347 ***	.278 ***	.330 ***	.294 ***	.344 ***	.310 ***
Criminal history	.306 ***	.250 ***	.301 ***	.273 ***	.327 ***	.279 ***
Education/employment	.233 ***	.177 ***	.185 ***	.166 ***	.198 ***	.178 ***
Family/marital	.076	.142 **	.140 **	.122 **	.114 **	.126 **
Leisure/recreation	.154 ***	.104 *	.084	.086	.109 *	.099 *
Companions	.294 ***	.143 **	.297 ***	.277 ***	.289 ***	.293 ***
Procriminal attitudes	.237 ***	.213 ***	.273 ***	.251 ***	.271 ***	.215 ***
Substance abuse	.190 ***	.177 ***	.170 ***	.131 **	.185 ***	.169 ***
Antisocial patterns	.320 ***	.234 ***	.310 ***	.277 ***	.315 ***	.282 ***
Specific risk/need (B)	.174 ***	.353 ***	.233 ***	.245 ***	.227 ***	.163 ***
Personal problems (B¹)	.150 ***	.217 ***	.209 ***	.235 ***	.201 ***	.154 ***
History (B²)	.128 **	.391 ***	.159 ***	.144 **	.160 ***	.098 *
Total strengths	-.133 **	-.057	-.110 **	-.106 *	-.113 *	-.118 **
Initial risk level	.314 ***	.248 ***	.295 ***	.262 ***	.302 ***	.282 ***
Final risk level	.313 ***	.251 ***	.298 ***	.265 ***	.305 ***	.284 ***
Risk change	-.017	.013	.009	.015	.018	.005
Institutional factors (D)	.013	.060	.043	.065	.080	.030
Other mental health (F)	.084	.100 *	.174 ***	.162 ***	.143 **	.121 **
Special responsivity (G)	.101 *	.081	.156 ***	.188 ***	.131 **	.126 **

Note. + refers to Number of sets; * p ≤.05; ** p ≤.01; *** p ≤.001.

Table 48 continued

Pearson Correlations Between LSI-OR Subscales, Sections and Recidivism for Institutionals n=454

	Sent length +	Time served	In-to-risk %	Offence severity	Level
General risk/need (A)	.186 ***	.310 ***	.311 ***	.176 ***	.352 ***
Criminal history	.189 ***	.270 ***	.274 ***	.151 ***	.327 ***
Education/employment	.105 *	.187 ***	.188 ***	.138 **	.223 ***
Family/marital	.061	.135 **	.140 **	.007	.113 *
Leisure/recreation	.042	.118 *	.113 *	.116 **	.134 **
Companions	.205 ***	.296 ***	.289 ***	.143 **	.266 ***
Procriminal attitudes	.227 ***	.265 ***	.261 ***	.072	.243 ***
Substance abuse	.030	.133 **	.132 **	.115 *	.204 ***
Antisocial patterns	.180 ***	.278 ***	.282 ***	.146 **	.309 ***
Specific risk/need (B)	.095 *	.212 ***	.199 ***	.108 *	.261 ***
Personal problems (B^1)	.097 *	.197 ***	.178 ***	.096 *	.195 ***
History (B^2)	.047	.134 **	.137 **	.073	.237 ***
Total strengths	-.055	-.077	-.071	-.084	-.117 **
Initial risk level	.165 ***	.291 ***	.291 ***	.148 **	.313 ***
Final risk level	.168 ***	.294 ***	.294 ***	.146 **	.314 ***
Risk change	.012	.015	.012	.028	-.008
Institutional factors (D)	.016	.039	.038	-.015	.046
Other mental health (F)	.057	.136 **	.121 **	.036	.113 *
Special responsivity (G)	.118 **	.135 **	.126 **	.070	.122 **

Note. + refers to Sentence length; * p ≤.05; ** p ≤.01; *** p ≤.001.

Table 49

Pearson Correlations Between LSI-OR Subscales, Sections and First Recidivism for Institutionals

n=454

	Convictions	Sent length +	Types	Offence severity	Level
General risk/need (A)	.165 ***	.082	.266 ***	.232 ***	.352 ***
Criminal history	.148 **	.067	.231 ***	.239 ***	.328 ***
Education/employment	.119 **	.039	.170 ***	.164 ***	.223 ***
Family/marital	.050	.033	.064	.007	.113 *
Leisure/recreation	.049	-.010	.132 **	.095 *	.139 **
Companions	.143 **	.070	.197 *	.206 ***	.266 ***
Procriminal attitudes	.121 **	.154 ***	.190 ***	.110 *	.243 ***
Substance abuse	.055	.015	.152 ***	.143 **	.204 ***
Antisocial patterns	.183 ***	.094 *	.259 ***	.195 ***	.309 ***
Specific risk/need (B)	.130 **	.011	.175 ***	.133 **	.261 ***
Personal problems (B¹)	.150 ***	.043	.175 ***	.110 *	.195 ***
History (B²)	.039	-.043	.092 *	.104 *	.237 ***
Total strengths	-.073	-.037	-.098 *	-.095 *	-.117 **
Initial risk level	.140 **	.075	.226 ***	.210 ***	.313 ***
Final risk level	.143 **	.076	.229 ***	.209 ***	.314 ***
Risk change	.014	.009	.018	-.019	-.008
Institutional factors (D)	.023	-.005	.046	-.012	.046
Other mental health (F)	.052	-.009	.076	.061	.113 *
Special responsivity (G)	.074	.078	.065	.083	.122 **

Note. + refers to Sentence length; *p ≤.05; **p ≤.01; ***p ≤.001.

Table 50

Pearson Correlations Between LSI-OR Subscales, Sections and Other Recidivism Variables for

Institutionals n=454

	Charges +	Severity +	Level +	Remands ++	Withdrawn +++
General risk/need (A)	.106 *	.138 **	.224 ***	.308 ***	.167 ***
Criminal history	.154 ***	.171 ***	.228 ***	.265 ***	.159 ***
Education/employment	.043	.072	.081	.144 **	.123 **
Family/marital	.034	.045	.096 *	.174 ***	.018
Leisure/recreation	.030	.002	.029	.119 **	.002
Companions	.038	.042	.124 **	.272 ***	.125 **
Procriminal attitudes	.030	.067	.140 **	.241 ***	.154 ***
Substance abuse	.078	.126 **	.214 ***	.181 ***	.069
Antisocial patterns	.114 *	.112 *	.206 ***	.284 ***	.191 ***
Specific risk/need (B)	.089	.036	.202 ***	.194 ***	.073
Personal problems (B¹)	.103 *	.009	.169 ***	.172 ***	.036
History (B²)	.025	.061	.157 ***	.136 **	.094 *
Total strengths	-.069	-.079	-.107 *	-.092 *	-.058
Initial risk level	.120 **	.129 **	.205 ***	.298 ***	.141 **
Final risk level	.121 **	.131 **	.208 ***	.301 ***	.140 **
Risk change	.010	.012	.013	.013	-.016
Institutional factors (D)	.050	.040	.093 *	.008	.008
Other mental health (F)	-.123 **	-.003	.121 **	.176 ***	.026
Special responsivity (G)	-.058	-.047	.064	.122 **	-.006

Note. + refers to Outstanding charges; ++ refers to Total number of remands; +++ refers to Total

withdrawn charges; * p ≤.05; ** p ≤.01; *** p ≤.001.

The correlations for the community sample can be seen from Table 51, 52, and 53. Once

again, the General Risk/Need Factor scale performed better than the Specific Risk/Need Factor scale

across all recidivism variables even with violent recidivism for community offenders (r = .201 vs .196, p

< .001). For the community group, the Other Mental Health Issues and Special Responsivity scales did

not produce any significant associations with the exception of Responsivity Factors scale with total

charges (r = .155, p < .05) and with total remands (r = .207, p < .05). In general, the largest significant

associations were produced with the Criminal History subscale except for outstanding charge severity

and total, and withdrawn charges, which did not produce any significant relationships. The magnitude

of the associations range from .400 (p < .001) for Any Recidivism binary variable to .154 (p < .05) for

total remands. The Criminal History subscale was also the best predictor of violent recidivism (r = .246,

p = .001) for community offenders although the History subscale of the Specific Risk/Need Factor scale

approached the magnitude (r = .210, p < .01). The Procriminal Attitudes subscale produced many

correlations near or above the .20 level for charges, convictions, and types (r = .241, .271, .245,

respectively). Substance Abuse performed better than Procriminal Attitudes, for the binary recidivism

variable (r = .211 vs .155) as well as for types (r = .265 vs .245) and number of sets (.261 vs .175).

Furthermore, from the results for the community group, it can be seen that the Education/Employment

and Family/Marital yielded virtually nonsignificant associations across all recidivism variables except for

Family/Marital with the number of recidivating sets (r = .200, p < .01). As expected, the associations

across all recidivism variables (although only slightly) consistently increased from initial to final risk

levels. The risk change variable once again did not produce any significant associations with recidivism

variables.

Table 51

Pearson Correlations Between LSI-OR Subscales, Sections and Recidivism for Community n=176

	Recid	Violent recid	Charges	Convictions	Types	No. of sets +
General risk/need (A)	.261 ***	.201 **	.251 ***	.246 ***	.336 ***	.308 ***
Criminal history	.400 ***	.246 ***	.258 ***	.266 ***	.367 ***	.363 ***
Education/employment	-.043	.045	.079	.042	.048	.024
Family/marital	.068	.133	.092	.090	.141	.200 **
Leisure/recreation	.092	.038	.151 *	.153 *	.202 **	.115
Companions	.185 **	.080	.088	.106	.177 *	.173 *
Procriminal attitudes	.155 *	.182 *	.241 ***	.271 ***	.245 ***	.175 *
Substance abuse	.211 **	.087	.160 *	.163 *	.265 ***	.261 ***
Antisocial patterns	.182 *	.159 *	.169 *	.153 *	.192 **	.156 *
Specific risk/need (B)	.168 *	.196 **	.140	.148 *	.206 **	.197 **
Personal problems (B¹)	.086	.116	.077	.076	.103	.124
History (B²)	.196 **	.210 **	.157 *	.173 *	.243 ***	.201 **
Total strengths	-.157 *	-.139	-.055	-.076	-.123	-.094
Initial risk level	.256 ***	.182 *	.239 ***	.223 **	.320 ***	.299 ***
Final risk level	.293 ***	.190 **	.247 ***	.223 ***	.320 ***	.316 ***
Risk change	.115	.034	.039	.017	.025	.065
Institutional factors (D)	---	---	---	---	---	---
Other mental health (F)	.007	.025	.016	.015	.014	.001
Special responsivity (G)	.095	.118	.155 *	.111	.095	.122

Note. + refers to Number of sets; * p ≤.05; ** p ≤.01; *** p ≤.001.

Table 51 continued

Pearson Correlations Between LSI-OR Subscales, Sections and Recidivism for Community n=176

	Sent length +	Time served	In-to-risk %	Offence severity	Level
General risk/need (A)	.221 **	.163 *	.156 *	.200 **	.274 ****
Criminal history	.274 ***	.270 ***	.266 ***	.328 ***	.379 ***
Education/employment	.074	.048	.045	-.073	.002
Family/marital	.046	-.022	-.029	.061	.052
Leisure/recreation	.208 **	.188 **	.185 **	-.010	.132
Companions	.167 *	.127	.120	.143	.194 **
Procriminal attitudes	.115	.054	.050	.126	.187 **
Substance abuse	.101	.046	.040	.205 **	.158 *
Antisocial patterns	.129	.087	.082	.143	.232 **
Specific risk/need (B)	.101	.045	.037	.166 *	.193 **
Personal problems (B¹)	.060	.013	.007	.080	.110
History (B²)	.107	.066	.060	.201 **	.210 **
Total strengths	-.137	-.125	-.123	-.108	-.156 *
Initial risk level	.168 *	.127	.121	.193 **	.265 ***
Final risk level	.191 **	.154 *	.147 *	.252 ***	.293 ***
Risk change	.074	.078	.076	.168 *	.093
Institutional factors (D)	---	---	---	---	---
Other mental health (F)	-.035	-.056	-.060	.020	-.025
Special responsivity (G)	.074	.034	.030	.076	.096

Note. + refers to Sentence length; * p ≤.05; ** p ≤.01; *** p ≤.001.

Table 52

Pearson Correlations Between LSI-OR Subscales, Sections and First Recidivism for Community

n = 176

	Convictions	Sent length +	Types	Offence severity	Level
General risk/need (A)	.177	.047	.276 ***	.234 **	.274 ***
Criminal history	.210 **	.184 **	.358 ***	.364 ***	.379 ***
Education/employment	-.029	.004	.021	-.082	.002
Family/marital	-.074	-.125	.025	.111	.052
Leisure/recreation	.112	.167 *	.211 **	-.002	.132
Companions	.068	.076	.167 *	.189 **	.194 **
Procriminal attitudes	.213 **	-.023	.204 **	.135	.187 **
Substance abuse	.038	-.057	.196 **	.235 **	.158 *
Antisocial patterns	.085	.022	.184 **	.157 *	.232 **
Specific risk/need (B)	.027	-.079	.167 *	.174 *	.193 **
Personal problems (B¹)	-.028	-.089	.050	.087	.110
History (B²)	.086	-.030	.241 ***	.206 **	.210 **
Total strengths	-.062	-.121	-.152 *	-.121	-.156 *
Initial risk level	.104	.023	.261 ***	.214 **	.265 ***
Final risk level	.103	.045	.264 ***	.274 ***	.293 ***
Risk change	.006	.058	.028	.172 *	.093
Institutional factors (D)	---	---	---	---	---
Other mental health (F)	-.004	-.062	.019	.028	-.025
Special responsivity (G)	.109	-.008	.051	.094	.096

Note. + refers to Sentence length; *p ≤.05; **p ≤.01; ***p ≤.001.

Table 53

Pearson Correlations Between LSI-OR Subscales, Sections and Other Recidivism Variables for

Community n=176

	Charges +	Severity +	Level +	Remands ++	Withdrawn +++
General risk/need (A)	.036	.042	.110	.193 **	.084
Criminal history	.119	.045	.169 *	.154 *	.093
Education/employment	.005	.007	.038	.064	.086
Family/marital	.003	-.019	-.051	.062	.030
Leisure/recreation	.057	.122	.108	.151 *	.021
Companions	-.013	.004	.119	.039	.001
Procriminal attitudes	-.034	.043	.016	.196 **	.018
Substance abuse	-.001	.000	.050	.144	.025
Antisocial patterns	-.013	.035	.046	.173 *	.066
Specific risk/need (B)	.060	-.005	.028	.155 *	-.001
Personal problems (B¹)	.055	-.025	-.029	.094	.003
History (B²)	.039	.023	.099	.162 *	-.006
Total strengths	-.017	-.124	-.063	-.063	.046
Initial risk level	.077	.056	.154	.182 *	.103
Final risk level	.072	.064	.157 *	.191 **	.120
Risk change	-.007	.026	.017	.037	.052
Institutional factors (D)	---	---	---	---	---
Other mental health (F)	.060	.057	-.006	.073	-.026
Special responsivity (G)	.052	-.026	-.016	.207 **	.094

Note. + refers to Outstanding charges; ++ refers to Total number of remands; +++ refers to Total withdrawn charges; * p ≤.05; ** p ≤.01; *** p ≤.001.

Item Correlations with General and Violent Recidivism. All of the items of each of the sections of the LSI-OR (the General Risk/Need Factor, the Specific Risk/Need Factor, the Institutional Factors, the Other Mental Health Issues, and Special Responsivity Factor sections) were correlated with both general and violent recidivism. The results were reported in Appendix J.

Multiple Regression Analyses Predicting Measures of Recidivism. According to Tabachnik and Fidell (1996) statistical regressions are typically used to develop a subset of independent variables that are useful in predicting the dependent variable and to eliminate those independent variables that do not provide additional predictive validity. According to the first hypothesis, one of the purposes of the research was to identify the best combinations of predictors of recidivism. Given the large n of the combined and individual samples and their representativeness of their respective populations, step-wise multiple regression procedures were employed. Numerous multiple regression analyses were repeated in order to determine the best predictors of violent recidivism as well as a number of other outcome measures. Alpha was set at .05 for all analyses. The regression analyses were performed on the adult male sample, then, repeated on the institutional and community samples. Findings are reported in this fashion for each series of analyses.

In the first series of multiple regression analyses, recidivism was the dependent variable and the eight subscales of the General Risk/Need Factor section and the two subscales of the Specific Risk/Need Factor section as well as the total strengths score were the predictor variables. For the adult male sample, a multiple R of .43172 was obtained with Criminal History (Beta = .3000), Companions (Beta = .1387), Procriminal Attitudes (Beta = .0829) entering the equation (Table 54). These variables accounted for approximately 19% of the variance in recidivism. The R squared was .1863. For the institutional group, the multiple R was .37435 with Criminal History (Beta = .1682), Companions (Beta = .1594), and Antisocial Pattern (Beta = .1318) entering the equation (Table 55). The variables explained approximately 14% of the variability in recidivism. For the community group, a multiple R of .4003 was

obtained with only Criminal History (Beta = .4003) entering the regression equation and explaining 16%

of the variability in recidivism (Table 56).

Table 54

<u>Summary of Stepwise Regression Analysis for LSI-OR Subscale Predictors of Recidivism for Adult</u>

<u>Males N = 630</u>

Variable	<u>B</u>	<u>SE B</u>	<u>Beta</u>
Step 1			
Criminal history	.0875	.0080	.4024 ***
Step 2			
Criminal history	.0701	.0091	.3223 ***
Companions	.0677	.0178	.1593 ***
Step 3			
Criminal history	.0652	.0094	.3000 ***
Companions	.0590	.0183	.1387 ***
Procriminal attitudes	.0379	.0185	.0829 *

<u>Note.</u> R = .4024 for Step 1. R = .4253 for Step 2. R = .4317 for Step 3. *p ≤ .05. ***p ≤ .001.

Table 55

Summary of Stepwise Regression Analysis for LSI-OR Subscale Predictors of Recidivism for

Institutional Sample n = 454

Variable	B	SE B	Beta
Step 1			
Antisocial pattern	.1360	.0191	.3182 ***
Step 2			
Criminal history	.0483	.0147	.1803 ***
Antisocial pattern	.0903	.0235	.2112 ***
Step 3			
Criminal history	.0451	.0146	.1682 **
Companions	.0718	.0235	.1594 **
Antisocial pattern	.0563	.0258	.1318 *

Note. R = .3182 for Step 1. R = .3497 for Step 2. R = .3744 for Step 3. *$p \leq$ .05, **$p \leq$ .01, ***$p \leq$ .001.

Table 56

Summary of Stepwise Regression Analysis for LSI-OR Subscale Predictors of Recidivism for

Community Group n = 176

Variable	B	SE B	Beta
Step 1			
Criminal history	.0879	.0153	.4003 ***

Note. R = .4003 for Step 1. ***$p \leq$ .001.

Total Charges was used as the recidivism variable for the adult male sample. The multiple R

for the regression equation was .3798, with Criminal History (Beta = .2008), Companions (Beta =

.1120), and Procriminal Attitudes (Beta = .1662) entering the equation (Table 57). The variables

explained over 14% of the variance. Similarly, for the institutional sample, the multiple R obtained was

.3781 with Criminal History (Beta =.1843), Companions (Beta = .1730), and Procriminal Attitudes (Beta

= .1320) also entering the equation (Table 58). The variables explained over 14% of the variance. For

the community group, the multiple R was .3163, however, only Criminal History (Beta = .2118) and

Procriminal Attitudes (Beta = .1890) entered the equation. These variables accounted for 10% of the

variance associated with total Charges (Table 59).

Table 57

Summary of Stepwise Regression Analysis for LSI-OR Predictors of Charges for Adult Males N = 630

Variable	B	SE B	Beta
Step 1			
Criminal history	.8881	.1044	.3237 ***
Step 2			
Criminal history	.6802	.1119	.2479 ***
Procriminal attitudes	1.1065	.2365	.1908 ***
Step 3			
Criminal history	.5008	.1227	.2007 ***
Companions	.6024	.2393	.1120 *
Procriminal attitudes	.9639	.2422	.1662 ***

Note. R = .3237 for Step 1. R = .3680 for Step 2. R = .3798 for Step 3. $^*p \leq .05.$ $^{***}p \leq .001.$

Table 58

<u>Summary of Stepwise Regression Analysis for LSI-OR Subscale Predictors of Charges for Institutional</u>

<u>Sample n = 454</u>

Variable	B	SE B	Beta
Step 1			
Antisocial pattern	1.7723	.2570	.3114 ***
Step 2			
Companions	1.0850	.3183	.1811 ***
Antisocial pattern	1.2127	.3024	.2131 ***
Step 3			
Criminal history	.5836	.1970	.1642 **
Companions	1.0075	.3166	.1682 **
Antisocial pattern	.6927	.3474	.1217 *
Step 4			
Criminal history	.5643	.1966	.1588 **
Companions	.9255	.3182	.1545 **
Procriminal attitudes	.6796	.3402	.1093 *
Antisocial pattern	.3920	.3775	.0689
Step 5			
Criminal history	.6548	.1762	.1843 ***
Companions	1.036	.2998	.1730 ***
Procriminal attitudes	.8204	.3120	.1320 **

<u>Note</u>. R = .3114 for Step 1. R = .3466 for Step 2. R = .3705 for Step 3. R = .3808 for Step 4. R = .3781 for Step 5.   * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$.

Table 59

Summary of Stepwise Regression Analysis for LSI-OR Subscale Predictors of Charges for Community

Group n = 176

Variable	B	SE B	Beta
Step 1			
Criminal history	.6537	.1863	.2578 ***
Step 2			
Criminal history	.5370	.1891	.2117 **
Procriminal attitudes	.9442	.3725	.1890 **

Note. R = .2578 for Step 1. R = .3163 for Step 2. ** $p \leq .01$. *** $p \leq .001$.

Total reincarceration time or time served was also used as a recidivism variable in a series of analyses. For the adult male sample, the multiple R was .39271 with Criminal History (Beta = .2192), Companions (Beta = .1627), and Procriminal Attitudes (Beta = .1080) entering the regression equation (Table 60). These 3 variables explained over 15% of the variance. The results were similar for the institutional group with a multiple R of .3615, and the same variables entering the equation. Criminal History had a corresponding Beta of .1496, Companions had a Beta of .1867, and Procriminal Attitudes had a Beta of .1328. The contribution of Companions was greater than that for the adult male sample. The variables accounted for 13% of the variance (Table 61). For the community group, the multiple R for total Time Served was .2696 with only Criminal History (Beta = .2696) entering the regression equation. Criminal History explained approximately 7% of the variance of reincarceration time (Table 62).

Table 60

Summary of Stepwise Regression Analysis for LSI-OR Subscale Predictors of Time Served for Adult

Males N = 630

Variable	B	SE B	Beta
Step 1			
Criminal history	29.1494	3.1816	.3436 ***
Step 2			
Criminal history	21.0644	3.6272	.2483 ***
Companions	31.4530	7.0955	.1895 ***
Step 3			
Criminal history	18.5946	3.7310	.2192 ***
Companions	26.9955	7.2639	.1627 ***
Procriminal attitudes	19.2681	7.3440	.1080 **

Note. R = .3436 for Step 1. R = .3807 for Step 2. R = .3927 for Step 3. ** $p \leq$ .01. *** $p \leq$ .001.

Table 61

Summary of Stepwise Regression Analysis for LSI-OR Subscale Predictors of Time Served for

Institutional Sample n = 454

Variable	B	SE B	Beta
Step 1			
Companions	56.0982	8.5340	.2957 ***
Step 2			
Criminal history	20.9145	5.3901	.1852 ***
Companions	43.0403	9.0528	.2269 ***
Step 3			
Criminal history	16.8967	5.5631	.1496 **
Companions	35.4190	9.4377	.1867 ***
Procriminal attitudes	26.0200	9.7820	.1328 **

Note. R = .2957 for Step 1. R = .3420 for Step 2. R = .3615 for Step 3. ** $p \leq .01$. *** $p \leq .001$.

Table 62

Summary of Stepwise Regression Analysis for LSI-OR Subscale Predictors of Time Served for

Community Sample n = 176

Variable	B	SE B	Beta
Step 1			
Criminal history	17.1955	4.6579	.2696 ***

Note. R = .2696 for Step 1. *** $p \leq .001$.

A series of regression analyses were repeated for the percentage of incarceration time to risk time variable as the dependent variable and the above predictor variables, the multiple R for the adult male sample was .3977 with Criminal History (Beta = .2303), Companions (Beta = .1572), and Procriminal Attitudes (Beta = .1074). The R squared for this equation was .1582 (Table 63). The results for the institutional group, replicated those of the adult male sample with a multiple R of .3588, and corresponding Beta's of .1588, .1780, .1293, respectively. These variables accounted for 13% of the variance (Table 64). For the community group, and the multiple R was .2660, with only Criminal History (Beta = .2660) entering the regression equation and an R square of .0707 (Table 65). The findings parallel those of the time served variable.

Table 63

Summary of Stepwise Regression Analysis for LSI-OR Subscale Predictors of In-to-Risk Time Percentage for Adult Males N = 630

Variable	B	SE B	Beta
Step 1			
Criminal history	3.2518	.3456	.3517 ***
Step 2			
Criminal history	2.3972	.3944	.2593 ***
Companions	3.3245	.7715	.1838 ***
Step 3			
Criminal history	2.1297	.4057	.2303 ***
Companions	2.8418	.7898	.1571 ***
Procriminal attitudes	2.0871	.7985	.1074 **

Note. R = .3517 for Step 1. R = .3859 for Step 2. R = .3977 for Step 3. ** $p \leq .01$. *** $p \leq .001$.

Table 64

Summary of Stepwise Regression Analysis for LSI-OR Subscale Predictors of In-to-Risk Time

Percentage for Institutional Sample n = 454

Variable	B	SE B	Beta
Step 1			
Companions	6.0490	.9436	.2890 ***
Step 2			
Criminal history	2.4101	.5951	.1934 ***
Companions	4.5442	.9995	.2171 ***
Step 3			
Criminal history	1.9787	.6145	.1588 ***
Companions	3.7260	1.0424	.1780 ***
Procriminal attitudes	2.7938	1.0804	.1293 **

Note. R = .2890 for Step 1. R = .3402 for Step 2. R = .3588 for Step 3. ** $p \leq .01$. *** $p \leq .001$.

Table 65

Summary of Stepwise Regression Analysis for LSI-OR Subscale Predictors of In-to-Risk Time

Percentage for Community Sample n = 176

Variable	B	SE B	Beta
Step 1			
Criminal history	1.6557	.4549	.2660 ***

Note. R = .2660 for Step 1. *** $p \leq .001$.

The next series of multiple regression analyses repeated the use of the General and Specific Risk/Need Factor subscales and the total strengths score as the independent variables and the recidivism factors obtained from the principal components analysis, namely, Sentence Length/Time Served Factor, Diversity/Severity of Offence Factor, and Outstanding Charges Factor as the dependent variables. These analyses were followed by analyses using the above recidivism factor variables as the dependent variables and the LSI-OR six factors derived from the factor analysis as the predictor variables. These analyses were later followed by a series of regression analyses using the LSI-OR factor variables as the independent variables and the binary recidivism variable, total charges, time served, and the in-to-risk percentage variable as the dependent variables. All of these results can be found in Appendix I.

Multiple Regression Analyses Predicting Measures of Violent Recidivism. Multiple regression analyses were repeated for violent recidivism using the General and Specific Risk/Need Factor subscales as well as the total strength score as the independent variables. For the adult male sample, the multiple R obtained was .3860 with Antisocial Pattern (Beta = .1340) and the History (Beta = .3236) subscale of the Specific Risk/Need Factor entering the regression equation. The R square was .1490 (Table 66). For the institutional group, the multiple R was .4219 with Criminal History (Beta = .0952), Education/Employment (Beta = .1062) and History (Beta = .3474) entering the regression equation. Similarly, the largest contribution to the prediction of violent reoffending was the History subscale of the Specific Risk/Need Factor section of the LSI-OR. The R square was .1780 (Table 67). For the community group, the multiple R was .2464 with Criminal History (Beta = .2464) entering the regression equation and accounting for 6% of the variance associated with violent recidivism. The R square was .0607 (Table 68).

Table 66

Summary of Stepwise Regression Analysis for LSI-OR Subscale Predictors of Violent Recidivism for

Adult Males N = 630

Variable	B	SE B	Beta
Step 1			
History (B²)	.1272	.0130	.3642 ***
Step 2			
Antisocial pattern	.0500	.0145	.1340 ***
History (B²)	.1130	.0135	.3236 ***

Note. R = .3642 for Step 1. R = .3860 for Step 2. *** p ≤ .001.

Table 67

Summary of Stepwise Regression Analysis for LSI-OR Subscale Predictors of Violent Recidivism for

Institutional Sample n = 454

Variable	B	SE B	Beta
Step 1			
History (B²)	.1413	.0157	.3909 ***
Step 2			
Education/employment	.0500	.0145	.1340 ***
History (B²)	.1130	.0135	.3236 ***
Step 3			
Criminal history	.0233	.0118	.0952 *
Education/employment	.0196	.0083	.1062 *
History (B²)	.1256	.0165	.3474 ***

Note. R = .3909 for Step 1. R = .4134 for Step 2. R = .4219 for Step 3 * p ≤ .05. ** p ≤ .01. *** p ≤

.001.

Table 68

Summary of Stepwise Regression Analysis for LSI-OR Subscale Predictors of Violent Recidivism for

Community Sample n = 176

Variable	B	SE B	Beta
Step 1			
Criminal history	.0420	.0126	.2464 ***

Note. R = .2464 for Step 1. *** p ≤ .001.

Multiple Regression Analyses Using LSI-OR Sections as Predictors for General Recidivism. A series of multiple regression analyses were conducted using the LSI-OR section totals and strengths as the predictor variables in order to determine the best combination of predictor variables for general recidivism. Once again, the section totals were as follows: (1) General Risk/Need Factor total score, (2) Specific Risk/Need Factor total score, (3) Other Mental Health Issues total score, and (3) Special Responsivity Factors total score. Analyses were repeated for violent recidivism.

Across the adult male, institutional, and community samples, the General Risk/Need Factor total score was the only section, which entered into the regression equations. For the adult male group, the multiple R was .3920 and the R squared was .1536 (Table 69). For the institutional group, the multiple R was .3473 and the R squared was .1206 (Table 70). For the community group, the multiple R was .2613 and the corresponding R squared was .0683 (Table 71).

Table 69

Summary of Stepwise Regression Analysis for LSI-OR Section Predictors of General Recidivism for

Adult Males N = 630

Variable	B	SE B	Beta
Step 1			
General risk/need factor	.0221	.0021	.3919

Note. R = .3920 for Step 1. p ≤ .001.

Table 70

Summary of Stepwise Regression Analysis for LSI-OR Section Predictors of General Recidivism for

Institutional Group n = 454

Variable	B	SE B	Beta
Step 1			
General risk/need factor	.0221	.0028	.3473

Note. R = .3473 for Step 1. p ≤ .001.

Table 71

Summary of Stepwise Regression Analysis for LSI-OR Section Predictors of General Recidivism for

Community Group n = 176

Variable	B	SE B	Beta
Step 1			
General risk/need factor	.0164	.0046	.2613

Note. R = .2613 for Step 1. p ≤ .001.

<u>Multiple Regression Analyses Using LSI-OR Sections as Predictors for Violent Recidivism.</u>

The regression analyses were repeated for the prediction of violent recidivism as a binary variable

using the already mentioned LSI-OR section totals. For the combined sample, the multiple R was .3688

on the final step, with the General Risk/Need Factor section total (Beta = .1500), the Specific

Risk/Need Factor section total (Beta = .3150), and the Other Mental Health Issues section total (Beta =

-.1213) entering the regression equation. The Other Mental Health Issues produced a negative raw and

standardized Beta (Table 72). For the institutional group, the analysis produced a larger multiple R

(.3887) with the same section totals entering the regression equation. The General Risk/Need Factor

corresponding Beta was .1444, the Specific Risk/Need Factor Beta was .3548, and the Other Mental

Health Issues Beta was -.1439 (Table 73). The results were somewhat different for the community

group. Only the General Risk/Need Factor section total score entered the regression equation with a

multiple R of .2014 and an R squared of .0406 (Table 74).

Table 72

<u>Summary of Stepwise Regression Analysis for LSI-OR Section Predictors of Violent Recidivism for</u>

<u>Adult Males N = 630</u>

Variable	B	SE B	Beta
Step 1			
Specific risk/need factor	.0594	.0067	.3358 ***
Step 2			
General risk/need factor	.0065	.0022	.1340 ***
Specific risk/need factor	.0464	.0079	.2623 ***
Step 3			
General risk/need factor	.0073	.0022	.1500 ***
Specific risk/need factor	.0557	.0086	.3150 ***
Other mental health issues	-.0233	.0084	-.1213 **

<u>Note.</u> $\underline{R}$ = .3358 for Step 1. $\underline{R}$ = .3540 for Step 2. $\underline{R}$ = .3688 for Step 3. ** $\underline{p} \leq .01$. *** $\underline{p} \leq .001$.

Table 73

Summary of Stepwise Regression Analysis for LSI-OR Section Predictors of Violent Recidivism for

Institutional Group n = 454

Variable	B	SE B	Beta
Step 1			
Specific risk/need factor	.0632	.0079	.3531 ***
Step 2			
General risk/need factor	.0075	.0030	.1281 **
Specific risk/need factor	.0511	.0092	.2859 ***
Step 3			
General risk/need factor	.0084	.0030	.1444 **
Specific risk/need factor	.0635	.0102	.3548 **
Other mental health issues	-.0277	.0100	-.1439 **

Note. R = .3531 for Step 1. R = .3700 for Step 2. R = .3887 for Step 3. ** p ≤ .01. *** p ≤ .001.

Table 74

Summary of Stepwise Regression Analysis for LSI-OR Section Predictors of Violent Recidivism for

Community Group n = 176

Variable	B	SE B	Beta
Step 1			
General risk/need factor	.0099	.0036	.2014 **

Note. R = .2014 for Step 1. ** p ≤ .01.

General Recidivism: Exceptional Offenders Group Comparisons. For each of these groups, chi square tests of independence for recidivism/nonrecidivism status by final risk level were examined, as well as Pearson correlation coefficients to determine the overall association between general recidivism by exceptional offender group and the General and Specific Risk/Need Factor total scores. These analyses were followed by a series of analyses of variance (ANOVA) to test the General Risk/Need Factor total mean score as well as the Specific Risk/Need Factor total mean score using recidivism and offender group status as the independent variables.

General Recidivism and Mentally Disordered Offenders. A chi-square test of independence for recidivism status by final risk level for the mentally disordered and nonmentally disordered offenders yielded significant gamma statistics (gamma = .6300, n = 188, p < .001 and gamma = .5625, n = 509, p < .001, respectively). As can be seen from Table 75, recidivists and nonrecidivist differences were not specific to the mentally disordered or nonmentally disordered offender groups across risk levels. The LSI-OR risk level was able to differentiate recidivists and nonrecidivists whether mentally disordered or not. For the mentally disordered and nonmentally disordered offender groups, the associations for the General Risk/Need Factor total scores with general recidivism were: r = .431, p < .001 and r = .415, p < .001, respectively. For the mentally disordered and nonmentally disordered offender groups, the associations for the Specific Risk/Need Factor total scores with general recidivism were: r = .360, p < .001 and r = .201, p < .001, respectively.

Table 75

Recidivism Rates by Risk Level for Mentally Disordered and Nonmentally Disordered Offender Groups

	Mentally disordered [1]				Nonmentally disordered [2]			
	Recidivists		Nonrecidivists		Recidivists		Nonrecidivists	
Level	n	%	n	%	N	%	N	%
1 (0 – 4)	0	0	7	100	2	6.1	31	93.9
2 (5 – 10)	3	12.5	21	87.5	18	29.5	43	70.5
3 (11 – 19)	20	39.2	31	60.8	83	47.7	91	52.3
4 (20 – 29)	36	56.3	28	43.8	117	67.2	57	32.8
5 (30 +)	33	78.6	9	21.4	54	80.6	13	19.4
Total	92	48.9	96	51.1	274	53.8	235	46.2

Note. [1] Mentally disordered n = 188. [2] Nonmentally disordered n = 509.

A series of 2 X 2 ANOVA 's were performed to test the General Risk/Need Factor and Specific Risk/Need Factor total scores using recidivism status and mentally disordered offender status as the independent variables. The mean General Risk/Need Factor score by mentally disordered offender group and by recidivism status revealed a significant main effect for recidivism (F = 147.569, df = 1, p < .001) and group status (F = .10.186, df = 1, p < .001). The interaction was not significant (F = .199, df = 1, p = .656). These findings can be found in Table 76. Recidivists (M = 23.05, SD = 7.99) had significantly higher mean LSI-OR total scores compared to nonrecidivists (M = 15.62, SD = 8.47), while mentally disordered (M = 21.14, SD = 9.28) offenders had significantly higher mean LSI-OR total scores compared to nonmentally disordered offenders (M = 18.92, SD = 8.86).

Table 76

Analysis of Variance of General Risk/Need Factor Total Score by Mentally Disordered Factor and

Recidivism

Source	df	MS	F
Recidivism (R)	1	9821.553	147.569 ***
Mentally disordered (MD)	1	677.969	10.186 ***
R x (MD)	1	13.253	.199
Explained	3	3504.258	52.651
Residual (error)	693	(66.556)	

*** $p \leq .001$.

The General Risk/Need Factor means for recidivism status by mentally disordered status can

be found in Table 77.

Table 77

Mean General Risk/Need Factor Total Scores for Mentally Disordered Group by Recidivism Status

	Mentally disordered		Nonmentally disordered	
	Recidivists	Nonrecidivists	Recidivists	Nonrecidivists
General risk/need				
M	25.22 1,3	17.24 2	22.32 4	14.96
SD	8.01	8.876	7.88	8.28

Note. 1 25.22 vs. 22.32, t = -3.04, df = 364, $p \leq .003$. 2 17.24 vs. 14.96, t = -2.23, df = 329,

$p \leq .026$. 3 25.22 vs. 17.24, t = -6.51, df = 186, $p \leq .001$. 4 22.32 vs. 14.96, t = -10.25, df = 507,

$p \leq .001$.

A 2 X 2 ANOVA was repeated testing the Specific Risk/Need Factors mean total score. These results can be found in Table 78. There was a significant main effect for recidivism ($\underline{F}$ = 46.853, $\underline{df}$ = 1, $\underline{p}$ < .001) and group ($\underline{F}$ = 41.591, $\underline{df}$ = 1, $\underline{p}$ < .001). Recidivists ($\underline{M}$ = 3.57, $\underline{SD}$ = 2.61) had a Specific Risk/Need total score which was significantly higher than nonrecidivists ($\underline{M}$ = 2.44, $\underline{SD}$ = 2.06), while mentally disordered offenders had significantly higher Specific Risk/Need Factor total scores, ($\underline{M}$ = 3.95, $\underline{SD}$ = 2.80) compared to nonmentally disordered offenders ($\underline{M}$ = 2.70, $\underline{SD}$ = 2.19). The interaction between recidivism and mental disorder was significant ($\underline{F}$= 43.634, $\underline{df}$ = 1, $\underline{p}$ = .004).

Table 78

Analysis of Variance of Specific Risk/Need Factors Total Score by Mentally Disordered Factor and Recidivism

Source	$\underline{df}$	$\underline{MS}$	$\underline{F}$
Recidivism (R)	1	244.240	46.853 ***
Mentally disordered (MD)	1	216.805	41.591 ***
R x (MD)	1	43.634	8.371 **
Explained	3	168.226	32.272 ***
Residual (error)	693	(5.213)	

$\underline{p}$ $\leq$ .01; *$\underline{p}$ $\leq$ .001.

Post-hoc comparisons revealed that mentally disordered offenders who are reconvicted have significantly more Specific Risk/Need Factor items indicated compared to nonmentally disordered recidivists (4.98 vs 3.10, $\underline{t}$ = -6.26, $\underline{df}$ = 364, $\underline{p}$ < .001). Additionally, mentally disordered nonrecidivists also had significantly more Specific Risk/Need Factors compared to nonmentally disordered nonrecidivists (2.97 vs 2.22, $\underline{t}$ = -3.04, $\underline{df}$ = 329, $\underline{p}$ = .003). The recidivist/nonrecidivist mean

comparisons were also significant for each group (4.98 vs 2.98, t = -5.56, df = 186, p < .001; 3.10 vs

2.22, t = -4.61, df = 507, p < .001). These means can be found in Table 79.

Table 79

Mean Specific Risk/Need Factor Total Score for Mentally Disordered Group by Recidivism Status:

Interaction Effect

Specific risk/need factor score	Mentally disordered		Nonmentally disordered	
	Recidivists	Nonrecidivists	Recidivists	Nonrecidivists
M	4.98 [1,3]	2.97 [2]	3.10 [4]	2.22
SD	2.86	2.36	2.35	1.88

Note. [1] 4.98 vs. 3.10, t = -6.26, df = 364, $p \leq$ .001. [2] 2.97 vs. 2.22, t = -3.04, df = 329, $p \leq$ .003.

[3] 4.98 vs. 2.97, t = -5.26, df = 186, $p \leq$ .001. [4] 3.10 vs. 2.22, t = -4.61, df = 507, $p \leq$ .001.

General Recidivism and Domestic Violence Offenders. The above analyses were repeated

with domestic and nondomestic violence offender groups. Chi-square tests of independence for

recidivism status by final risk level for each of the domestic violence and nondomestic violence offender

groups yielded significant gamma statistics (gamma = .4528, n = 150, p < .001 and gamma = .6033, n

= 547, p < .001, respectively). The frequencies can be found in Table 80. For the domestic violence

and nondomestic violence offender groups, the associations for the General Risk/Need Factor total

scores with general recidivism were: r = .333, p < .001 and r = .434, p < .001, respectively. For the

domestic violence and nondomestic violence offender groups, the associations for the Specific

Risk/Need Factor total scores with general recidivism were: r = .287, p < .001 and r = .234, p < .001,

respectively.

Table 80

Recidivism Rates by Risk Level for Domestic Violence and Nondomestic Violent Offender Groups

	Domestic violence [1]				Nondomestic violence [2]			
	Recidivists		Nonrecidivists		Recidivists		Nonrecidivists	
Level	$\underline{n}$	%	$\underline{n}$	%	$\underline{n}$	%	$\underline{n}$	%
1 (0 – 4)	0	0	6	100	2	5.9	32	94.1
2 (5 – 10)	4	33.3	8	66.7	17	23.3	56	76.7
3 (11 – 19)	27	50.0	27	50.0	76	44.4	95	55.6
4 (20 – 29)	23	52.3	21	47.7	131	67.2	64	32.8
5 (30 +)	27	79.4	7	20.6	60	80.0	15	20.0
Total	81	54.0	69	46.0	286	52.2	262	47.8

Note. [1] Domestic violence $\underline{n}$ = 150. [2] Nondomestic violence $\underline{n}$ = 548.

A 2 X 2 ANOVA testing the mean General Risk/Need Factor total score by recidivism and domestic violence groups yielded a significant main effect for recidivism ($\underline{F}$ = 141.776, $\underline{df}$ = 1, $\underline{p}$ < .001) and domestic violence ($\underline{F}$ = 5.999, $\underline{df}$ = 1, $\underline{p}$ = .015). Recidivism, which produced a significant main effect for the 2 X 2 ANOVA with the domestic violence offender group, was included in these analyses to test for any possible interactions. The ANOVA table can be found in Table 81 and as can be seen, the interaction was nonsignificant ($\underline{F}$ = 1.032, $\underline{df}$ = 1, $\underline{p}$ = .310). As already indicated, recidivists' mean score ($\underline{M}$ = 23.04, $\underline{SD}$ = 7.99) was significantly greater than that of nonrecidivists ($\underline{M}$ = 15.62, $\underline{SD}$ = 8.47). Domestic violence offenders ($\underline{M}$= 21.08, $\underline{SD}$ = 9.28) also have mean LSI-OR scores which are greater than nondomestic violence offenders ($\underline{M}$ = 19.10, $\underline{SD}$ = 8.86).

Table 81

Analysis of Variance of General Risk/Need Factor Total Score by Domestic Violence Factor and

Recidivism

Source	df	MS	F
Recidivism (R)	1	9517.434	141.776 ***
Domestic violence (DV)	1	463.219	6.900 *
R x (MD)	1	69.310	1.032
Explained	3	3349.988	49.903 ***
Residual (error)	694	(67.130)	

* $p \leq .05$. *** $p \leq .001$.

The mean General Risk/Need Factor total score by recidivist status and domestic/nondomestic

violence groups can be found in Table 82. From the table it can be seen that recidivists, whether

domestic violence or not, obtained significantly higher mean General Risk/Need Factor total scores

(23.93 vs 17.74, $t = -4.29$, $df = 148$, $p < .001$). However, for the domestic violence offender group,

nonrecidivists obtained significantly greater mean General Risk/Need Factor total scores (17.74 vs

15.06, $t = -2.35$, $df = 329$, $p = .020$).

Table 82

Mean General Risk/Need Factor Total Scores for Domestic Violence Group by Recidivism Status

General risk/need	Domestic violence		Nondomestic violence	
	Recidivists	Nonrecidivists	Recidivists	Nonrecidivists
M	23.93 [1]	17.74 [3]	22.79 [2]	15.06
SD	8.94	8.62	7.70	8.36
n	81	69	286	262

Note. [1] 23.93 vs. 17.74, t = -4.29, df = 148, $p \leq$ .001. [2] 22.79 vs. 15.06, t = -11.26, df = 546, $p \leq$ .001. [3] 17.74 vs. 15.06, t = -2.35, df = 329, $p \leq$ .02.

A 2 X 2 ANOVA was repeated using the mean Specific Risk/Need Factor score by recidivism and domestic violence factors or grouping variables. The findings were replicated with significant main effects for recidivism (F = 44.762, df = 1, p < .001) and domestic violence groups (F = 120.914, df = 1, p < .001) as found in Table 83. As already indicated recidivists (M = 3.57, SD= 2.61) had significantly greater mean LSI-OR scores than nonrecidivists (M = 2.44, SD = 2.06). Domestic violence offenders had significantly greater Specific Risk/Need Factor scores (M = 4.79, SD = 2.77) compared to nondomestic violence offenders (M = 2.55, SD = 2.09).

Table 83

Analysis of Variance of Specific Risk/Need Factors Total Score by Domestic Violence Factor and

Recidivism

Source	df	MS	F
Recidivism (R)	1	213.243	44.762 ***
Domestic violence (DV)	1	586.644	123.142 ***
R x (DV)	1	11.104	2.331
Explained	3	270.330	56.745 ***
Residual (error)	694	(4.764)	

*** $p \leq .001$.

As can be seen from Table 84, when the means were examined by domestic violence and

recidivism status, the domestic violence offenders whether recidivist or nonrecidivist had significantly

greater mean Specific Risk/Need Factor total scores than nondomestic violence recidivist and

nonrecidivist groups.

Table 84

Mean Specific Risk/Need Factor Total Score for Domestic Violence Group by Recidivism Status

	Domestic violence		Nondomestic violence	
Specific risk/need factor score	Recidivists	Nonrecidivists	Recidivists	Nonrecidivists
M	5.52 [1,4]	3.93 [3]	3. 02 [2]	2.05
SD	2.94	2.31	2.23	1.79
N	81	69	286	262

Note. [1] 5.52 vs. 3.93, t = -3.64, df = 148, $p \leq$ .001. [2] 3.02 vs. 2.05, t = -5.62, df = 546, $p \leq$ .001.

[3] 3.93 vs. 2.05, t = -7.28, df = 329, $p \leq$ .001. [4] 5.52 vs. 3.02, t = -8.26, df = 365, $p \leq$ .001.

General Recidivism and Sex Offender Group. Chi-square tests of independence were performed on recidivism by final risk level categories for the sex and nonsex offender groups. The frequencies can be found in Table 85. The tests of independence were significant for both the nonsex offender group (gamma = .5668, n = 647, p < .001) and the sex offender group (gamma = .60741, n = 51, p < .001). Therefore, the LSI-OR risk levels successfully differentiated between recidivists and nonrecidivists whether a sex offender or nonsex offender. The associations between the General Risk/Need Factor total scores and general recidivism were: r = .477, p < .001 and r = .406, p < .001, for sex offender and nonsex offender groups, respectively. The associations between the Specific Risk/Need Factor total scores and general recidivism were: r = .312, p = .026 and r = .229, p < .001 for sex offender and nonsex offender groups, respectively.

Table 85

Recidivism Rates by Risk Level for Sex and Nonsex Offender Groups

	Sex offenders [1]				Nonsex offenders [2]			
	Recidivists		Nonrecidivists		Recidivists		Nonrecidivists	
Level	$\underline{n}$	%	$\underline{n}$	%	$\underline{n}$	%	$\underline{n}$	%
1 (0 – 4)	0	0	5	100	2	5.7	33	94.3
2 (5 – 10)	2	28.6	5	71.4	19	24.4	59	75.6
3 (11 – 19)	4	33.3	8	66.7	99	46.5	114	53.5
4 (20 – 29)	12	80.0	3	20.0	142	63.4	82	36.6
5 (30 +)	8	66.7	4	33.3	79	81.4	18	18.6
Total	26	51.0	25	49.0	341	52.7	306	47.3

Note. [1] Sex offender $\underline{n}$ = 51. [2] Nonsex offender $\underline{n}$ = 647.

A series of 2 X 2 ANOVA's were performed to test the mean General Risk/Need Factor and mean Specific Risk/Need Factor total scores by recidivism status and sex offender groups. Once again, recidivism was repeated, in order to test for any possible interaction. For the mean General Risk/Need Factor score, the ANOVA, which can be found in Table 86 revealed a significant main effect for recidivism ($\underline{F}$ = 141.493, $\underline{df}$ = 1, $\underline{p}$ = .000) but not for the sex offender group. As already indicated, the mean General Risk/Need Factor score for recidivists ($\underline{M}$ = 23.04, $\underline{SD}$ = 7.99) was significantly greater than that of nonrecidivists ($\underline{M}$ = 15.62, $\underline{SD}$ = 8.47). The mean General Risk/Need Factor total scores for recidivist status by sex offender status can be found in Table 87.

Table 86

Analysis of Variance of General Risk/Need Factor Total Score by Sex Offender Factor and Recidivism

Source	df	MS	F
Recidivism (R)	1	9577.275	141.493 ***
Sex offender (SO)	1	.003	.000
R x (SO)	1	85.312	1.260
Explained	3	32221.089	47.5888 ***
Residual (error)	(694)	(67.687)	

*** $p \leq .001$.

Table 87

Mean General Risk/Need Factor Total Scores for Sex Offender Group by Recidivism Status

General risk/need	Sex offender		Nonsex offender	
	Recidivists	Nonrecidivists	Recidivists	Nonrecidivists
M	24.27 [1]	14.36	22.95 [2]	15.73
SD	9.41	9.21	7.88	8.41
n	26	25	341	306

Note. [1] 24.27 vs. 14.36, $t = -3.80$, $df = 49$, $p \leq .001$. [2] 22.95 vs. 15.73, $t = -11.27$, $df = 645$, $p \leq .001$.

A 2 X 2 ANOVA for the mean Specific Risk/Need Factor total score, which can be found in

Table 88, revealed a significant main effect for both recidivism ($F = 41.046$, $df = 1$, $p < .001$) and sex-

offender group ($F = 12.120$, $df = 1$, $p < .001$), however, the interaction was nonsignificant. As already

indicated, recidivists ($M = 3.57$, $SD = 2.61$) and sex offenders ($M = 4.12$, $SD = 2.95$) had mean Specific

Risk/Need factor scores which were greater than nonrecidivists ($\underline{M}$ = 2.44, $\underline{SD}$= 2.06) and nonsex

offender groups ($\underline{M}$ = 2.95, $\underline{SD}$ = 2.38). The mean Specific Risk/Need Factor total scores by recidivism

status and sex offender status can be found in Table 89.

Table 88

Analysis of Variance of Specific Risk/Need Factors Total Score by Sex Offender Factor and Recidivism

Source	$\underline{df}$	$\underline{MS}$	$\underline{F}$
Recidivism (R)	1	226.042	41.046 ***
Sex offender (SO)	1	66.748	12.120 ***
R x (SO)	1	4.656	.845
Explained	3	98.421	14.872 ***
Residual (error)	694	(5.507)	

*** $\underline{p} \leq .001$.

Table 89

Mean Specific Risk/Need Factor Total Score for Sex Offender Group by Recidivism Status

	Sex offender		Nonsex offender	
Specific risk/need factor score	Recidivists	Nonrecidivists	Recidivists	Nonrecidivists
$\underline{M}$	4.96 [1,3]	3.24 [4]	3.47 [2]	2.37
$\underline{SD}$	2.91	2.40	2.56	2.02
$\underline{n}$	26	25	341	306

Note. [1] 4.96 vs. 3.24, $\underline{t}$ = -2.30, $\underline{df}$ = 49, $\underline{p} \leq .026$. [2] 3.47 vs. 2.37, $\underline{t}$ = -5.99, $\underline{df}$ = 645, $\underline{p} \leq .001$.

[3] 4.96 vs. 3.47, $\underline{t}$ = -2.84, $\underline{df}$ = 365, $\underline{p} \leq .01$. [4] 3.24 vs. 2.37, $\underline{t}$ = -2.04, $\underline{df}$ = 329, $\underline{p} \leq .042$.

<u>Violent Recidivism: Exceptional Offender Group Comparisons.</u> As already indicated the

above analyses were replicated using violent recidivism status as a factor, in order to determine

whether the LSI-OR could successfully differentiate violent recidivism for each of these sub-

populations. It should be noted that violent recidivism status compares violent recidivists and all other

offenders.

<u>Violent Recidivism and Mentally Disordered Offenders.</u> Chi-square tests of independence

which are presented in Table 90, for violent recidivism and all other offenders by final risk level

categories for the mentally disordered offender groups yielded significant gamma statistics (gamma =

.3225, $\underline{n}$ = 188, $\underline{p}$ < .001 and gamma = .5056, $\underline{n}$ = 508, $\underline{p}$ < .001, respectively). In other words, the LSI-

OR risk level categories were able to differentiate between violent recidivists and all other offenders.

The association between the General Risk/Need Factor total score with violent recidivism were: $\underline{r}$ =

.193, $\underline{p}$ = .008, $\underline{r}$ = .316, $\underline{p}$ < .001 for mentally disordered and nonmentally disordered offenders,

respectively. The association between the Specific Risk/Need Factor total score with violent recidivism

were: $\underline{r}$ = .377, $\underline{p}$ < .001 and $\underline{r}$ = .331, $\underline{p}$ < .001 for mentally disordered and nonmentally disordered

groups, respectively.

Table 90

Violent Recidivism Rates by Risk Level for Mentally Disordered and Nonmentally Disordered Offender Groups

| Level | Mentally disordered [1] | | | | Nonmentally disordered [2] | | | |
| | Violent recidivists | | General offenders | | Violent recidivists | | General offenders | |
	$\underline{n}$	%	$\underline{n}$	%	$\underline{N}$	%	$\underline{n}$	%
1 (0 – 4)	0	0	7	100	0	0	33	100
2 (5 – 10)	3	12.5	21	87.5	6	9.8	55	90.2
3 (11 – 19)	10	19.6	41	80.4	32	18.4	142	81.6
4 (20 – 29)	16	25.0	48	75.0	46	26.6	127	73.4
5 (30 +)	14	33.3	28	66.7	34	50.7	33	49.3
Total	43	22.9	145	77.1	118	23.2	390	76.8

Note. [1] Mentally disordered $\underline{n}$ = 188. [2] Nonmentally disordered $\underline{n}$ = 509.

The 2 X 2 ANOVA's were repeated testing General and Specific Risk/Need Factor mean total scores by violent recidivism status and mentally-disordered group status (Table 91). Using violent recidivism status as a grouping variable, the ANOVA revealed a significant main effect for violent recidivism status ($\underline{F}$ = 59.831, $\underline{df}$ = 1, $\underline{p}$ < .001) and for mentally disordered status ($\underline{F}$ = 9.213, $\underline{df}$ = 1, $\underline{p}$ = .002). Both violent recidivists ($\underline{M}$= 24.11, $\underline{SD}$ = 8.31) and mentally disordered offenders ($\underline{M}$ = 21.14, $\underline{SD}$ = 8.31) had mean General Risk/Need Factor total scores which were significantly greater than those of all other offenders ($\underline{M}$ = 18.13, $\underline{SD}$ = 8.77) and nonmentally disordered offenders ($\underline{M}$ = 18.91, $\underline{SD}$ = 8.86).

Table 91

Analysis of Variance of General Risk/Need Factor Total Score by Mentally Disordered Factor and

Violent Recidivism

Source	df	MS	F
Violent recidivism (VR)	1	4440.143	59.831 ***
Mentally disordered (MD)	1	696.836	9.390 **
VR x (MD)	1	137.748	1.856
Explained	3	1753.81	23.633 ***
Residual (error)	692	(74.211)	
Total	695		

** $p \leq .01$, *** $p \leq .001$.

The General Risk/Need Factor total scores for mentally disordered offender groups by violent

recidivism status can be found in Table 92.

Table 92

Mean General Risk/Need Factor Total Scores for Mentally Disordered Offender Groups by Violent

Recidivism Status

General risk/need	Mentally disordered		Nonmentally disordered	
	Violent recidivists	General offenders	Violent recidivists	General offenders
M	24.42	20.17 [1,3]	24.00 [2]	17.37
SD	8.49	9.31	8.28	8.46
N	43	145	118	390

Note. [1] 20.17 vs. 17.37, t = -3.31, df = 533, $p \leq$ .001. [2] 24.00 vs. 17.37, t = -7.50, df = 506, $p \leq$ .001. [3] 20.17 vs. 24.00, t = -2.68, df = 186, $p \leq$ .008.

Similarly, the 2 X 2 ANOVA, which can be found in Table 93, testing the mean Specific

Risk/Need Factor score yielded a significant main effect for violent recidivism (F = 92.716, df = 1, $p <$

.001) and mentally disordered group (F = 43.965, df = 1, $p <$ .001) and a nonsignificant interaction (F =

3.068, df = 1, p = .080). Violent recidivists (M = 4.51, SD =2.82), as well as mentally disordered

offenders (M = 3.95, SD = 2.80) had mean Specific Risk/Need Factor total scores greater than that of

other offenders (M = 2.59, SD = 2.09) and nonmentally disordered offenders (M = 2.69, SD = 2.19),

respectively. There were no significant interactions, once again, supporting the contention that the LSI-

OR is equally effective to use with mentally disordered and nonmentally disordered samples in the

prediction of violent recidivism.

Table 93

Analysis of Variance of Specific Risk/Need Factors Total Score by Mentally Disordered Factor and

Violent Recidivism

Source	df	MS	F
Violent recidivism (VR)	1	458.843	92.716 ***
Mentally disordered (MD)	1	219.949	44.444 ***
VR x (MD)	1	15.182	3.068
Explained	3	230.534	46.583 ***
Residual (error)	692	4.949	

*** $p \leq .001$.

The means for the Specific Risk/Need Factor total score by mentally disordered status and

violent recidivism status. From Table 94, it can be seen that mentally disordered offenders whether

violent recidivists or all other offenders had significantly higher mean Specific Risk/Need Factor total

scores compared to nonmentally disordered offenders whether violent recidivists or all other offenders.

Table 94

Mean Specific Risk/Need Factor Total Score for Mentally Disordered Group by Violent Recidivism

Status

	Mentally disordered		Nonmentally disordered	
Specific risk/need	Violent recidivists	General offenders	Violent recidivists	General offenders
M	5.88 [1,4]	3.38 [2]	4.01 [3]	2.30
SD	3.21	2.39	2.49	1.93
n	43	145	118	390

Note. [1] 5.88 vs. 4.01, $t = -3.90$, $df = 159$, $p \leq .001$. [2] 3.38 vs. 2.30, $t = -5.41$, $df = 533$, $p \leq .001$.

[3] 4.01 vs. 2.30, $t = -7.88$, $df = 506$, $p \leq .001$. [4] 5.88 vs. 3.38, $t = -5.55$, $df = 186$, $p \leq .001$.

Violent Recidivism and Domestic Violence Offenders. Chi-square tests of independence for violent recidivism and nonviolent offender status by final risk levels for each of domestic and nondomestic violence groups produced significant findings (gamma = .4691, n = 150, p < .001 and gamma = .4392, n = 547, p = .000, respectively). As risk level increased, so did the rate of recidivism with slight decreases in the very high level for either domestic or nondomestic violence groups. These frequencies can be found in Table 95. The association between the General Risk/Need Factor total score and violent recidivism were: r = .322, p < .001 and r = .230, p < .001 for domestic violent and nondomestic violent offenders, respectively. The association between the Specific Risk/Need Factor total score with violent recidivism were: r = .343, p < .001 and r = .256, p < .001 for domestic violence and nondomestic violence groups, respectively.

Table 95

Violent Recidivism Rates by Risk Level for Domestic Violence and Nondomestic Violent Offender Groups

	Domestic violence [1]				Nondomestic violence [2]			
	Violent recidivists		General offenders		Violent recidivists		General offenders	
Level	n	%	N	%	n	%	N	%
1 (0 – 4)	0	0	6	100	0	0	34	100
2 (5 – 10)	2	16.7	10	83.3	7	9.6	66	90.4
3 (11 – 19)	18	33.3	36	66.7	24	14.0	147	86.0
4 (20 – 29)	17	38.6	27	61.4	45	23.2	149	76.8
5 (30 +)	22	64.7	12	35.3	26	34.7	49	65.3
Total	59	39.3	91	60.7	102	18.6	445	81.4

Note. [1] Domestic violence n = 150. [2] Nondomestic violence n = 548.

A 2 X 2 ANOVA was performed to test the mean General Risk/Need Factor score by violent

recidivism status and domestic violence group status as the independent variables. There was a

significant main effect for the violent recidivism status (F = 53.500, df = 1, p < .001). As already

indicated, violent reoffenders (M= 24.11, SD = 8.31) had higher General Risk/Need Factors than all

other offenders whether nonviolent recidivists or nonrecidivists (M= 18.14, SD = 8.77). The findings of

the ANOVA are presented in Table 96.

Table 96

Analysis of Variance of General Risk/Need Factor Total Score by Domestic Violence Factor and Violent

Recidivism

Source	df	MS	F
Violent recidivism (VR)	1	4023.90	53.500 ***
Domestic violence (DV)	1	467.232	6.212**
VR x (MD)	1	3.953	.053
Explained	3	1498.375	19.922 ***
Residual (error)	693	75.213	

*** p ≤ .001.

The means of the General Risk/Need Factor total score for domestic violence offender groups

by violent recidivism status can be found in Table 97. As can be seen, both domestic violent groups,

violent recidivists and all other offender nonrecidivists, obtained significantly mean higher General

Risk/Need Factor total scores compared to nondomestic violent offenders whether violent reoffenders

or not.

Table 97

Mean General Risk/Need Factor Total Scores for Domestic Violence Offender Groups by Violent Recidivism Status

	Domestic violence		Nondomestic violence	
	Violent recidivists	General offenders	Violent recidivists	General offenders
General risk/need				
$\underline{M}$	24.78 [1]	23.73 [2]	18.68	18.02
$\underline{SD}$	9.06	7.86	8.68	8.80
$\underline{N}$	59	102	91	445

Note. [1] 24.78 vs. 18.68, $\underline{t}$ = -4.13, $\underline{df}$ = 148, $\underline{p} \leq .001$. [2] 23.73 vs. 18.02, $\underline{t}$ = -6.02, $\underline{df}$ = 545, $\underline{p} \leq .001$.

The 2 X 2 ANOVA was repeated using Specific Risk/Need Factors score as the dependent variable and can be viewed in Table 98. The results yielded a significant main effect for domestic violence group ($\underline{F}$ = 60.536, $\underline{df}$ = 1, $\underline{p} < .001$) and violent recidivism status ($\underline{F}$ = 88.684, $\underline{df}$ = 1, $\underline{p} < .001$). Violent recidivists ($\underline{M}$ = 4.51, $\underline{SD}$ = 2.82) have greater Specific Risk/Need factor score compared to all other offenders ($\underline{M}$ = 2.59, $\underline{SD}$ = 2.80). Domestic violence offenders also have higher mean Specific Risk/Need factor scores, ($\underline{M}$ =4.79, $\underline{SD}$ = 2.77) compared to nondomestic violent offenders ($\underline{M}$ = 2.55, $\underline{SD}$ = 2.09).

Table 98

Analysis of Variance of Specific Risk/Need Factors Total Score by Domestic Violence Factor and

Violent Recidivism

Source	df	MS	F
Violent recidivism (VR)	1	282.797	60.536***
Domestic violence (DV)	1	587.803	125.825 ***
VR x (DV)	1	8.242	1.764
Explained	3	292.947	62.708 ***
Residual (error)	693	4.672	

***$p \leq .001$.

In Table 99, the mean Specific Risk/Need Factor total score for domestic violence offender

groups by violent recidivism status can be found. As can be seen for domestic violent offenders both

violent recidivists and nonviolent offenders had significantly higher mean Specific Risk/Need Factor

total scores compared to nondomestic violent offenders whether violent recidivist or nonviolent

offender.

Table 99

Mean Specific Risk/Need Factor Total Score for Domestic Violence Offender Groups by Violent

Recidivism Status

	Domestic violence		Nondomestic violence	
	Violent recidivists	General offenders	Violent recidivists	General offenders
Specific risk/need				
M	5.97 [1,4]	4.02 [3]	3. 67 [2]	2.30
SD	3.01	2.33	2.32	1.95
n	59	91	102	445

Note. [1] 5.97 vs. 4.02, $t = -4.44$, $df = 148$, $p \leq .001$. [2] 3.67 vs. 2.30, $t = -6.18$, $df = 545$, $p \leq .001$.

[3] 4.02 vs. 2.30, $t = -7.44$, $df = 534$, $p \leq .001$. [4] 5.97 vs. 3.67, $t = -5.42$, $df = 159$, $p \leq .001$.

Violent Recidivism and Sex Offender Group. Chi-square tests of independence for violent

recidivism status by final risk level for the sex offender and nonsex offender groups yielded significant

gamma statistics (gamma = .4890, $n = 51$, $p = .041$ and gamma = .45201, $n = 647$, $p < .001$,

respectively). As can be seen from Table 100, violent recidivists and nonviolent offenders were not

specific to the sex offender group across risk level categories. The association of General Risk/Need

Factor total score and violent recidivism were: $r = .337$, $p = .016$ and $r = .275$, $p < .001$ for sex

offender and nonsex offender groups, respectively. The association between the Specific Risk/Need

Factor total score with violent recidivism were: $r = .337$, $p = .015$ and $r = .339$, $p < .001$ for sex offender

and nonsex offender groups, respectively.

Table 100

Violent Recidivism Rates by Risk Level for Sex and Nonsex Offender Groups

| | Sex offenders [1] | | | | Nonsex offenders [2] | | | |
| | Violent recidivists | | General offenders | | Violent recidivists | | General offenders | |
Level	n	%	N	%	n	%	N	%
1 (0 – 4)	0	0	5	100	0	0	35	100
2 (5 – 10)	1	14.3	6	85.7	8	10.3	70	89.7
3 (11 – 19)	1	8.3	11	91.7	41	19.2	172	80.8
4 (20 – 29)	4	26.7	11	73.3	58	26.0	165	74.0
5 (30 +)	4	33.3	8	66.7	44	45.4	53	54.6
Total	10	19.6	41	80.4	151	23.4	495	76.6

Note. [1] Sex offender n = 51. [2] Nonsex offender n = 647.

Separate 2 X 2 ANOVA's were performed in order to test the mean General Risk/Need Factor score and the mean Specific Risk/Need Factor score by violent recidivism status and sex offender status as grouping variables. For the 2 X 2 ANOVA testing the mean General Risk/Need Factor score which can be found in Table 101, there was a significant main effect for violent recidivism (F = 89.795, df = 1, p < .001) and sex offender grouping variables (F = 73.023, df = 1, p < .001). The interaction was not significant (F = .271, df = 1, p < .001). Violent recidivists (M = 24.11, SD = 8.31) obtained significantly higher mean General Risk/Need Factor scores compared to all other nonviolent offenders (M = 18.14, SD = 8.77). Sex offenders (M = 19.41, SD = 10.49) also obtained significantly higher mean General Risk/Need Factor scores than nonsex offenders (M = 19.53, SD = 8.90).

Table 101

Analysis of Variance of General Risk/Need Factor Total Score by Sex Offender Factor and Violent

Recidivism

Source	df	MS	F
Violent recidivism (VR)	1	4421.005	58.775 ***
Sex offender (SO)	1	.594	.008
VR x (SO)	1	69.339	.922
Explained	3	1496.983	19.902 ***
Residual (error)	(693)	(75.219)	

*** $p \leq .001$.

The mean General Risk/Need Factor total scores for sex offender groups by violent recidivism

status can be found in Table 102. Violent recidivists whether sex offender or nonsex offender have

similar mean scores which were significantly greater than those of all other offenders in general.

Table 102

Mean General Risk/Need Factor Total Scores for Sex Offender Groups by Violent Recidivism Status

	Sex offender		Nonsex offender	
	Violent recidivists	General offenders	Violent recidivists	General offenders
General risk/need				
M	26.50 [1]	17.68	23.95 [2]	18.17
SD	10.51	9.85	8.16	8.69
N	10	41	151	495

Note. [1] 26.50 vs. 17.68, $t = -2.51$, $df = 49$, $p \leq .016$. [2] 23.95 vs. 18.17, $t = -7.26$, $df = 644$, $p \leq .001$.

The 2 X 2 ANOVA, which can be found in Table 103, was repeated testing the mean Specific

Risk/Need Factor total score. The ANOVA yielded a significant main effect for violent recidivism status

(F = 89.795, df = 1, p < .001) and for sex offender groups (F = 14.114, df = 1, p <.001). The violent

recidivists (M = 4.51, SD = 2.82) obtained significantly greater Specific Risk/Need Factor total scores

compared to the all other offender group (M = 2.59, SD = 2.11). Sex offender (M = 4.12, SD = 2.78)

also obtained significantly higher mean Specific Risk/Need Factor total scores compared to nonsex

offenders (M = 2.95, SD = 2.38). There was no significant interaction.

Table 103

Analysis of Variance of Specific Risk/Need Factors Total Score by Sex Offender Factor and Violent

Recidivism

Source	df	MS	F
Violent recidivism (VR)	1	464.591	89.795 ***
Sex offender (SO)	1	73.023	14.114 ***
VR x (SO)	1	1.402	.271
Explained	3	176.910	34.193 ***
Residual (error)	693	(5.174)	

*** p ≤ .001.

The mean Specific Risk/Need Factor total scores for sex offender groups by violent recidivism

status can be found in Table 104. Nonviolent sex offenders had significantly greater Specific Risk/Need

factors than the nonviolent nonsex offenders.

Table 104

Mean Specific Risk/Need Factor Total Score for Sex Offender Groups by Violent Recidivism Status

	Sex offender		Nonsex offender	
Specific risk/need	Violent recidivists	General offenders	Violent recidivists	General offenders
$\underline{M}$	6.00 [1]	3.66 [3]	4.41 [2]	2.50
$\underline{SD}$	3.89	2.28	2.72	2.08
$\underline{N}$	10	41	151	495

Note. [1] 6.00 vs. 3.66, $\underline{t}$ = -2.51, $\underline{df}$ = 49, $\underline{p} \leq$ .015. [2] 4.41 vs. 2.50, $\underline{t}$ = -9.15, $\underline{df}$ = 644, $\underline{p} \leq$ .001.

[3] 3.66 vs. 2.50, $\underline{t}$ = -3.40, $\underline{df}$ = 534, $\underline{p} \leq$ .001.

Discussion

At the very least, the risk/need measure of choice for Ontario, should be able to identify

risk/need factors which discriminate between recidivists and nonrecidivists and predict reoffending at

least as well as the LSI-VI. The results of this study provide ample support for the use of the LSI-OR as

the risk/needs measure throughout the Ministry (Ontario, 1997). This discussion will review the findings

of the current study with respect to the original hypotheses. It will also consider sampling and

recidivism issues, the innovations of the LSI-OR, comment upon the LSI-OR's ability to predict

recidivism, and state a position on the use of the LSI-OR with special offender populations.

Sample Characteristics

Early in the research project, there was some question of whether the samples were

representative of the larger provincial offender population. Of the 73, 738 provincial offenders in

Ontario on any given day, 11% are in custodial settings, while 74% are under some kind of community

supervision (Underhill, 1998). Comparatively, in the current sample, over 72% of adult males came

from institutional settings from the eastern Ottawa region, and 28% came from community settings from

the same geographic region. The pilot project was not designed to sample proportionately across the

province, and consequently, the community sample of offenders was underrepresented in the current

study.

The young offender population was also underrepresented in the current study. Of the total

offender population in Ontario, 15% are young offenders, 2% from institutions and 13% from

community programs. In the current study, there were only 31 young offenders which comprised 4% of

the current sample, 0.5% from institutions and 4% from community settings. A similar pattern for

females was noted. Of the total offender population in the province of Ontario, 22% are females, 6%

from institutions, while 16% are under community supervision. In the current study, there were 43

females, one of whom was from an institution and the remaining 42 were from community settings,

which comprised 6% of the offender sample. There were few females from institutional settings

because there were no facilities for female offenders in the pilot project catchment area.

Separate analyses were performed on each of the institution and community samples partly

because there was an overrepresentation of the incarcerates and partly because they were very

different in terms of risk level and recidivism. As already indicated, analyses for the females and young

offenders, were reported separately in tables that can be found in Appendices X and Y, respectively.

Regarding the community sample, there was little reason to suspect that it was not

representative of the larger community offender population across the province because three

probation and parole offices from both urban and rural settings were sampled. These probation and

parole offices were not characteristically different from others across the province. In fact, even the

females were not significantly disproportionate, that is, 13% of the current probation sample were

females (compared to 16% for the provincial population). Furthermore, when the mean LSI-OR General

Risk/Need Factor score for the community group was tested with the mean of the provincial community

population (μ = 11.24, $\underline{SD}$ = 6.99 vs $\underline{M}$ = 13.04, $\underline{SD}$ = 7.65), no significant mean difference was found.

Therefore, the LSI-OR score of the current probation sample was comparable to that of the probation

population. These findings provide evidence that the current community sample is representative of the

larger probation offender population.

For the institutional sample, there was some question of its representation since neither

minimum nor maximum security institutions were included in the pilot study. The sentenced offenders

were primarily from the Rideau Correctional Centre, a medium security institution. Secondly, the ratio of

institutional offenders was not reflective of the ministry institutional population ratio. However, when the

mean LSI-OR General Risk/Need Factor score for the sentenced inmate group and that for the

institutional provincial mean (μ = 20.36, $\underline{SD}$ = 7.75 vs $\underline{M}$ = 22.90, $\underline{SD}$ = 7.63) were tested, no significant

difference was found. Therefore, although the institutional sample was not proportionate of the ministry offender population, it may indeed have been a true institutional sample of the larger offender population.

Offender Recidivism as an Outcome Measure

Recidivism as a Construct. Recidivism should be operationalized in ways that are reasonable from theoretical and data-acquisition standpoints (Maltz, 1984). It is well known that relying on charges or convictions alone can be problematic because data are based on reported crimes from official records, not all crimes (Maltz, 1984). While conducting the research on the current study, the researcher noted that information was frequently missing from the CPIC offender records. Relying solely on reported convictions from CPIC would have resulted in an underestimation of actual convictions and contact with the law. This provides the rationale for multiple sources of follow-up data in order to maximize accuracy and prediction.

In the current research project, recidivism referred to any conviction that led to incarceration or probation. In addition to the binary recidivism variables, a wide variety of recidivism measures were used in order to explore the relationship between risk/need factors and reoffending. Several operational definitions also provided a diversity of ways of predicting recidivism. Charges, number of convictions, offence severity, offence diversity, number of sets of convictions, sentence length, time served, remands, withdrawn and outstanding charges, and level of offence, risk time, and time to first reconviction were just a few of the recidivism measures used in the current research. Each of these variations provided information that revealed different aspects of recidivism.

Previous studies, which examined post-release offender activity, used measures of reincarceration (a limited number used parole violations and remands as well) when investigating recidivism for probationers and inmates alike(Bonta & Motiuk, 1985, 1987,1992,1990, 1991; Motiuk, Motiuk, & Bonta, 1992; Motiuk, Bonta & Andrews, 1986; Andrews, 1994). Although reincarceration may

be a more restrictive measure, it provides little information about the time served in prison. The time served, however, does not accurately reflect the severity of an offence or offences for which the offender is serving prison time. Additionally, an offender may have an extensive history of criminal activity that is not reflected in the sentence received for a particular criminal offence. The actual time served in prison can also be affected by parole and intermittent sentences that are received in special circumstances. More importantly, these recidivism variables tell little about the diversity and variety of reoffences committed from which behavior patterns may be established. There is also the issue of offenders who received suspended sentences and conditional sentences. Choosing any single one of these recidivism variables can be arbitrary and, therefore, multiple operational definitions are recommended (Maltz, 1984). Consequently, a number of recidivism variables were used in the multiple regressions in the current research.

However, having built the case for the use of multiple measures of recidivism, the outcome variables in the current study needed to be meaningful and interpretable. They were, therefore, subjected to a principal components analysis for reduction into meaningful and interpretable factors. The three principal factors were a Sentence Length/Time Served factor, an Offence Severity/Diversity factor, and an Outstanding Charges factor. These factors were highly loaded and measured independent aspects of reoffending. Future research would do well to use measures of sentence length and actual time served. Additionally, variables, which measured offence severity and diversity were important as well. Although the Ministry offence severity variable was derived from early empirical studies relating offence severity to sentence length (Underhill, personal communication, November 1998), the analysis revealed that there are aspects of the time served factor which were unrelated to the severity of offences. In this project, time served included any post-release incarceration including remands. Outstanding charges made up the third factor, which related to offences for which the offender was awaiting a disposition. Although the offender has not been reconvicted of the offences,

outstanding charges provided information about an offender's repeated contact with the law during the follow-up time.

The measurement of offence severity as used by the Ministry requires some attention. In the current project, offence severity was measured in two ways, namely, based on the Ministry's 26 offence categories and a dichotomous two level system. It has been shown that the two systems measure offence severity in two separate ways. As a result, correlations with recidivism may be difficult to interpret. The level system is a dichotomous system, in which Level I offences are considered very serious in nature and Level II offences are all other offences. On the other hand, the 26 categories are ordered in terms of severity based on sentence length. As a result, some nonviolent offences are rated as more serious than violent offences. For example, a conviction of Break and Enter is more serious than a Weapons Offence, which is considered a violent offence category. Therefore, coding solely on the basis of offence severity means that one would lose the information that an offender committed a violent offence. Likewise, using only the Level system for coding offence severity, one runs the risk of losing information regarding violent reoffending because there are many violent offences which are not considered Level I offences. More specifically, with regards to the 26 offence category system, some offence categories include a combination of violent and nonviolent offences, such as the Arson and Property Damage category. This complicates coding offence severity further and leaves much room for confusion for researchers and practitioners alike. It is recommended that the Ministry review its use of the two systems of classifying offences and reassess severity levels based on sentence lengths, since sentencing patterns may have changed in recent years.

Recidivism Rates of the Current Study. As already established, the rates of recidivism of the institutional and community samples had to be interpreted separately. The institutional base rate of 61.9% was compared to those of other LSI recidivism studies conducted on Ontario provincial offenders. Lower base rates of 40% to 44% (Bonta, 1989; Bonta & Motiuk, 1990, 1987; Motiuk, Motiuk

& Bonta, 1992) by inmate samples were reported. However, several differences were noted in the methodology, such as a one-year follow-up, a narrower definition of recidivism, namely, reincarceration and/or parole violations, and a single source of follow-up information. For one of the studies, the sample consisted of only low risk/need subjects. These comparisons may reflect the importance of the length of follow-up, a broader definition of recidivism, and multiple sources of follow-up information. In order to compare the current study base rate with those of one year follow-up studies, a review of the survival analyses indicated that at one year post-release, 40% of the institutional offenders in the given sample recidivated. This base rate is consistent with those already reported.

The recidivism base rate for the community sample was 35.2% based on any convictions received. The base rates of probation studies were reported as 42.8% (Motiuk & Bonta, 1991) and 31% (Andrews, 1994) for a one-year follow-up. Survival analyses revealed that at one-year post-release, 19.5% of the community offender sample in the current study recidivated. The higher base rate may be a result of the operational definition of recidivism. For example, the 42.8% base rate was based on what might be considered a more liberal definition of recidivism, that is, recidivism included reincarceration and remands.

The reported base rates also confirm that the institutional offenders reoffend at greater rates than their community counterparts. Additionally, institutional and community offenders differed in that prisoners recidivated not only more often but also more violently. According to the survival analyses, institutional offenders also recidivated more quickly than the community based offenders.

Overall the survival analyses provided yearly comparisons of the recidivism base rates over the three year follow-up period. As already mentioned, at one year post-release across all risk level groups, 19.5% of community offenders recidivated, while 40% of institutional offenders recidivated; at two years post-release, 28% of community offenders recidivated, while 42.5% of institutional offenders recidivated; and at three years post-release for community offenders 35.2% of community offenders

recidivated and at a near three year post-release for institutional offenders, 62% had recidivated. The largest increase in recidivism occurred within the first year of follow-up across groups.

It should also be noted that the overall recidivism rate of 54.4% in the current study cannot be treated as an estimate of the population base rate, since the institutional offenders were overrepresented and they recidivated more often than the community offenders.

Psychometric Evaluation of the General Risk/Need Factors Section of the LSI-OR

Since there were substantial changes, additions, and revisions made to the LSI-OR, it was essential to assess its psychometric properties. Overall, the General Risk/Need Factor section of the LSI-OR performed very well. The new innovations to the LSI-OR are discussed later. Reliability estimates for the LSI-OR were greater or comparable to those for the LSI-VI and the PCL-R (Hare, 1991). The LSI-OR internal consistency measure (r = .91) was comparable to those reported for the LSI-VI (r = .72, .75, .90, .90; Andrews, 1982; Andrews, Kiessling & Robinson, 1986; Loza & Simourd, 1994; Stevenson & Wormith, 1987, respectively) and the PCL-R (r = .87; Hare, 1991). The General Risk/Need Factor total score obtained better temporal stability than the LSI-VI as demonstrated by the one month test/re-test reliability coefficient (r = .88 vs r = .80, Bonta & Motiuk, 1990; 1992) and was comparable to that of the PCL-R (r = .89; Alterman, Cacciola & Rutherford, 1993). Kappa coefficients of agreement between independent raters was .58 and comparable to those of the PCL-R which were reported to range from .50 to .80 (Hart, Forth & Hare, 1991; Hart & Hare, 1989, respectively). The LSI-OR General Risk/Need Factor total score also demonstrated very good parallel form reliability, r = .74, when correlated with the LSI-VI total score, r = .62, and when correlated with the LSI-VI risk level. Additionally, the Specific Risk/Need Factor total score correlated very significantly with the total LSI-VI score (r = .42). Elsewhere, the total General Risk/Need Factor total score of the LSI-OR was found to correlate with the PCL-R total score (r = .84, p < .001), and with the two PCL-R subscale scores (r = .73 and r = .82, respectively, p < .001; Vitelli, 1998). Based on these findings the LSI-OR demonstrated

more than adequate reliability in a variety of forms.

A factor analysis was also performed as an exploratory psychometric analysis in order to group the 43 items from the General Risk/Need Factor section and, then, to determine how the resulting factors corresponded to the initial subscales. The Factor Analysis demonstrated that the General Risk/Need Factors subscales reduced to six factors: (1) Criminal History Factor, (2) Employment Factor, (3) Drug Abuse Factor, (4) Alcohol Factor, (5) No Anticriminal Friends factor, and (6) Some Criminal Companions Factor. These findings revealed that both the Substance Abuse subscale, and the Companions subscales of the LSI-OR are each a combination of two discrete factors. Based on their factor loadings, the Substance Abuse subscale of the General Risk/Need Factor section consists of a drug factor and an alcohol factor. Regarding the Employment Factor, it was employment difficulties rather than educational difficulties which was significantly loaded, thereby, indicating that the Education/Employment subscale is also comprised of two distinct factors. The six factors accounted for approximately 40% of the total variance which is quite respectable when one considers that the two factors of the PCL-R account for 30% of the total variance during the first principal components analysis (Hare, 1991). However, the two-factor model of the PCL-R was factor analyzed on six samples of male prison inmates (Harpur, et al, 1988) and in general, the two-factor model has been replicated. It is suggested that future research consider replicating the 6-factor model of the LSI-OR.

General Risk/Need Factors Section and Recidivism

In order for a risk/needs assessment tool to be useful for the purposes of risk management, it must not only provide the assessor with information, it must also be able to evaluate the probability of future criminal behavior (Quinsey & Walker, 1992). This was achieved by reviewing the General Risk/Need Factor section's ability to differentiate recidivists from nonrecidivists, by examining the strength of the association between the LSI-OR major and minor risk factors with a variety of recidivism variables, and by reviewing survival analyses.

LSI-OR Differentiation between Recidivists and Nonrecidivists. According to the current

research findings, the LSI-OR as a risk/need instrument proved to differentiate recidivists from

nonrecidivists. As hypothesized in the second hypothesis, analyses revealed that recidivists had

significantly higher General Risk/Need scores compared to nonrecidivists. Recidivists scored higher on

all LSI-OR scales and subscales. As already explained, the LSI-OR General Risk/Need Factors scale

is comprised of the eight major risk factors, which have been identified in the criminological literature as

the best predictors of criminal behavior. For the combined sample, recidivists scored significantly

higher than nonrecidivists on all of the eight major risk/need factors, specifically, on criminal history

factors, education/employment related factors, family/marital related factors, leisure and recreation

factors, procriminal attitudes, antisocial companions, substance abuse, and antisocial

pattern/personality factors. However, the LSI-OR subscales did not differentiate recidivists and

nonrecidivists equally well across the institutional and community samples. For example, for the

institutional group, all subscales did differentiate recidivists and nonrecidivists with the exception of the

Family/Marital subscale. For the community group, the Education/Employment, Family/Marital,

Leisure/Recreation subscales did not differentiate. The difference in the differentiation of

recidivists/nonrecidivists for the institutional and community groups was likely due to the lower $\underline{n}$ and

resulting reduced power in the community sample. Only, the Family/Marital subscale did not

differentiate between recidivists/nonrecidivists in both samples. This finding is inconsistent with the

results reported by Motiuk (1995) ($\underline{r} = .46$, $\underline{p} < .001$ with recidivism) and Paolucci, Violato, and Schofield

(1998) which implicate early history and family relationships with criminality.

Predictors of Recidivism. Based on previous research, it was expected that the best predictors

of recidivism would be a combination of static and dynamic variables, namely, extensive criminal

history, substance abuse, employment difficulties, antisocial attitudes as well as peers, and financial

problems (Andrews, 1994; Andrews & Bonta, 1994; Gendreau, Goggin, & Little, 1996; Blanchette &

Motiuk, 1996). When recidivism was considered as a binary variable and defined as any conviction for

a new offence, the highest and expected correlate across all adult male offenders was criminal history

(Andrews & Bonta, 1994; Gendreau et al, 1996; Bonta et al, 1998). Other consistent correlates

identified by the LSI-OR were antisocial patterns, antisocial companions, substance abuse, procriminal

attitudes, leisure/recreation difficulties, education and employment difficulties as well as family/marital

problems.

According to the meta-analysis of Gendreau and colleagues (1996), predictor domains that

produced the highest correlations with recidivism were adult criminal history, antisocial personality,

companions, and antisocial attitudes. Moreover, composite measures of risk/needs produced even

higher correlations with recidivism and the LSI-VI outperformed other risk/need measures including the

PCL-R. The LSI-VI in that meta-analysis produced the highest correlation with recidivism (r= .35) but it

was not significantly different than other risk scales such as the SFS and Wisconsin risk/need scales.

The current study lends partial support for the prediction of recidivism beyond the .40 level. Criminal

History (r = .40) and the General Risk/Need Factor total score (r = .39) performed well for the adult

male sample on the Any Recidivism variable. For the community group, the Criminal History subscale

correlated .40 with Any Recidivism. Therefore, the magnitude of these results is quite respectable given

that change scores and/or treatment effects were not considered, and is consistent with the higher

correlations with recidivism in the prediction literature.

For institutional male offenders, the best correlates mirrored the results of the adult male

sample, with the exception of the Family/Marital subscale, which was not significantly associated with

recidivism. As mentioned, this finding is contrary to reported findings (Motiuk, 1995; Paolucci, Violato &

Schofield, 1998). The best correlates of Any Recidivism for the community based offenders, were

criminal history, substance abuse, as well as procriminal companions. For the community group,

family/marital problems, leisure/recreation, as well as education/employment problems were not significantly correlated with recidivism as a binary variable. In fact, the Education/Employment subscale was nonsignificantly and negatively associated with recidivism. The inverse relationship indicates that problems in these areas for community offenders are not related to reoffending whereas the role of associates and problems with substance abuse are more central to reoffence.

LSI-OR and Survival Analyses. Survival curves were based on the three risk level classification and the analyses supported the general findings, that the risk level categories differentiated recidivists from nonrecidivists. Essentially, survival analyses combined the recidivism event with the speed of reoffending. The differences in the speed of reoffending by risk level categories emerged almost immediately. Recidivism rates at six-month intervals, that is, at 6, 12, 18, 24, 30, and 36 months were examined and found to be incrementally greater with increased risk. For the low risk level group, the corresponding rates of recidivism were: 4%, 12%, 15%, 17%, 20%, and 21%, respectively. For the medium risk level group the corresponding rates of recidivism were: 10%, 25%, 33%, 38%, 45%, and 46%. For the high risk level offender group the corresponding rates of recidivism were 26%, 45%, 56%, 64%, 67% and 67%. These findings indicate that as the length of follow-up increased so did the cumulative rate of reoffence. In the 'snap-shot' view of the current study, it appears that increases in the rate of recidivism beyond 2.5 years was minimal. Based on these findings, it was evident that the greatest time of risk for reoffending across risk levels was during the first year post-release which is consistent with reported findings (Maltz, 1984).

LSI-OR Innovations

The new components of the LSI-OR included the addition of the Specific Risk/Need Factor section, the client strengths, the clinical override, and the creation of the five levels of risk instead of three. Two additional sections sampling other offender needs were also added to the LSI-OR, namely, the Other Mental Health Issues and the Special Responsivity section. All of these components provide

the assessor with a wealth of client information, which may be related to criminal behavior.

Specific Risk/Need Factors Section. The Specific Risk/Need Factor section samples dynamic risk/need factors, which are also related to reoffending but are not considered the major risk/need factors sampled in the General Risk/Need Factor section. Therefore, the relationship of the Specific Risk/Need Factor section to the General Risk/Need Factor section was important to review. The Specific Risk/Need Factor section and the General Risk/Need Factor section were highly correlated (r = .55). However, the relationship of each of these sections to recidivism demonstrated their independent role in the LSI-OR risk/needs assessment. Since the General Risk/Need Factor section better predicted general recidivism whereas the Specific Risk/Need factor section better predicted violent recidivism, each of these sections represents independent aspects of prediction, in spite of their high intercorrelations.

The high association between the Specific Risk/Need Factors total and the Antisocial Patterns subscale (r = .52) supports the idea that the Specific Risk/Need Factors scale, assesses criminogenic factors related to antisocial personality. The Specific Risk/Need Factors section also correlated highly with Criminal History (r = .44) and Procriminal Attitudes (r = .48) subscales. The Specific Risk/Need factor section also correlated significantly with the total strengths in the expected negative direction. Furthermore, the Specific Risk/Need Factors section correlated highly with the other sections, namely, the Institutional factors, Other Client Issues, and Special Responsivity sections (all r's > .40) of the LSI-OR suggesting strong interrelations between the scales. Additionally, the scale correlated with the LSI-VI total score and level (r's > .40).

In terms of its ability to predict recidivism, the Specific Risk/Need Factor scale performed very well. The Specific Risk/Need Factor section differentiated recidivists from nonrecidivists for the adult male sample which means that recidivists also have more specific personal problems as well as variables related to violent offending compared to nonrecidivists. Specific items that were significantly

related to reoffending were problems with compliance, self-management skill deficits, underachievement, a history of physical assault, assault on an authority figure, and a history of escapes.

Furthermore, the addition of the Specific Risk/Need Factor section was an attempt to add dynamic risk/need factors of particular clinical significance for violent reoffending. Consequently, the overall Specific Risk/Need Factor section performed better than the General Risk/Need Factor section in predicting violent recidivism. The particularly interesting finding was the high correlations achieved by the History subscale of the Specific Risk/Need Factors section with violent recidivism across the institutional and community samples. A review of specific item correlations with violent outcome revealed that the historical variables related to histories of extrafamilial and intrafamilial assault, and against authority, in addition to the use of weapons, histories of escapes and impaired driving were significant. For the community sample, the Criminal History subscale of the General Risk/Need Factor section performed slightly better than the History subscale of the Specific Risk/Need Factor section in predicting violent recidivism. The reason for the better performance of the Criminal History subscale can be accounted for by two items which correlated as highly as the overall subscale, namely, a charge laid or parole/probation suspension during prior community supervision, and three or more prior adult/youth dispositions. Items associated with violent reoffending were problems with compliance, anger management deficits, intimidating/controlling behaviors, and peers outside the age range. These findings are consistent with the conclusions of a recent meta-analysis of violent recidivism (Bonta, Law & Hanson, 1998) which found that predictors which were more conceptually related to the criterion improved the predictive validity estimates.

Strengths. A series of strength items also represented an addition to the LSI-OR. The current findings determined that the strengths correlated negatively with all of the LSI-OR section totals, that is, the total strength score correlated negatively with all risk/need factor sections. With respect to the

prediction of recidivism, the strength scores were also associated significantly and in the negative direction across recidivism variables including violent recidivism, when both institutional and community offender samples were combined. These expected findings lend support to the idea that the strengths of an offender could essentially serve as protective features to future criminality (Andrews & Hoge, 1996). However, only 23% of LSI-OR's had one or more strengths endorsed ($\underline{n}$ = 145) and any conclusions are made with caution. The strengths did not emerge as strong predictor variables of recidivism nor did they contribute to the multiple regression analyses, therefore, the possibility of their incremental validity to predict recidivism is still in question. Future research is necessary to provide more information regarding how the strengths are being used by assessors.

Override. An additional important goal of the current project was to assess the validity of the override, that is, its utility in the standardized assessment process. However, the override was endorsed less than 3% of the time during the time of data collection. As a result, the current research was only able to provide very preliminary findings. The rate of overriding across the province is currently reported as 15%. There may be several reasons for the increased use of the override from the time of the pilot study. It is likely that assessors have benefited from training on the LSI-OR, which is provided on a regular basis throughout the Ministry of Solicitor General and Correctional Services. The increased use may be evidence that assessors have developed strategies as to when and how to override a risk level either upward or downward. Additionally, corporate policy and directives have affected the use of the override. For example, at the start of their community supervision period, Level I sex offenders are required to be treated as maximum supervision cases (Ontario, 1997).

As hypothesized, the use of the override did improve prediction of recidivism, albeit only slightly, from the initial to final risk level across a variety of recidivism measures, particularly, with the community sample in which a majority of the overrides were used. These findings, then, are consistent with the principle of professional discretion (Andrews, 1994). Moreover, since including the opportunity

to override the risk level determined by the General Risk/Need Factor total score, has proven to enhance predictive accuracy of reoffending, then, one may conclude that there is partial support for the use of clinical judgement as part of the standardized assessment process. This finding would be contrary to the proponents of the sole use of actuarial based assessments (Meehl, 1957; Grove & Meehl, 1996; Quinsey, 1997). Future research is strongly encouraged to assess the use of the override on a larger sample.

Although there was some minimal support for the benefits of the use of the override, the mechanisms for the finding were less clear. The relationship between the strengths and the use of the override was hypothesized to be such a mechanism for which there was only partial support. The association between the strengths and the override proved to be significant (r = .48, p < .05) but not in the expected direction. Since the strengths correlated in the negative direction with the General Risk/Need Factor total score (r = -.55), this finding indicates that the higher the risk/need total score, the fewer strengths an offender obtained. A review of the data revealed that there was an association between raising the risk level of an offender who tended to have few strengths, based on the severity of the index offence. There was no apparent association between lowering a risk level based on greater numbers of strengths. Therefore, it cannot be concluded that the strengths have a clear relationship to overriding a risk level either upward or downward. Future research would do well, not only to replicate the findings, but to clarify the relationship of strengths to the final risk level.

Five Levels of Risk. The five level risk system versus the three level risk system of the LSI-VI was another modification to the current LSI version. The increased level system was intended to provide practitioners with a more precise and individualized framework for decision-making. For example, the five categories indicated that 6.9% of the very low, 27.1% of the low risk, 45.9% of the medium, 64.3% of the high, and 80.4% of the very high risk offenders recidivated. Additionally, the final risk level correlated .38 with recidivism and .26 with violent recidivism. In comparison, when the risk

levels were collapsed, the corresponding rates of recidivism were 21.2% for low, 45.9% for medium, and 69.1% for high risk offenders. The association between the collapsed risk level and general recidivism was .35 while the association between risk level with violent recidivism was .21. Clearly, the five level system provides practitioners with a more accurate comparison group with which to anchor a case in terms of the probability of reoffending.

Other Mental Health Issues. The current study findings indicated that recidivists scored significantly greater on the Other Mental Health Issues section compared to nonrecidivists. Interestingly, these risk/need factors, namely, the Other Mental Health Issues section differentiated between recidivists and nonrecidivists for the adult male sample. The Other Mental Health Issues section for the combined sample has also been shown to relate to general recidivism and violent recidivism. In other words, recidivists have more mental health related issues. These findings are consistent with research which shows that mental disorders such as personality disorders and psychopathy in particular may be predictive of an increased risk for violence (Monahan, 1991). Specific items which were significantly related to reoffending were: financial problems, homeless/transient problems, problems with accommodation, and barrier to release items. The barrier to release item correlated relatively higher than the overall section total with recidivism. Financial and accommodation problems, as well as victim of physical assault and barrier to release were also predictive of violent reoffending. These findings are consistent with other research that has found that recidivists, in addition to having extensive criminal histories, also have significant antisocial associations, difficulties specific to accommodation, finances, substance abuse, employment, and family stability. Moreover, these variables are all consistent correlates of criminal behavior (Andrews and Bonta, 1994; Gendreau, Goggin & Little, 1996). However, it should be noted that the items that were significantly correlated to recidivism were not representative of items related to mental health or clinical issues. In fact some of these items appear to be residual of the LSI-VI. Therefore, the association with general and violent

recidivism in the current study cannot be accounted for by true mental health or clinical issues. Future research is needed to clarify the relationship of mental health issues to the prediction of recidivism.

Since Other Mental Health Issues section also correlated moderately well with the General Risk/Need Factor section (r = .37, p < .001) and highly with the Specific Risk/Need Factor section (r = .51, p < .001), partial correlations were calculated to determine whether the Other Mental Health Issues actually contributed uniquely to the prediction of general and violent recidivism. When partial correlations were calculated controlling for the effects of the General Risk/Need Factors section, the associations with general and violent recidivism disappeared. When the shared variance of mental health issues with both the General and Specific Risk/Need Factor sections was removed, the Other Mental Health Issues section was inversely related to general and violent recidivism, but only the correlation with violent recidivism was significant. This overall finding bears minimal resemblance to the results of the Harris, Rice, and Cormier (1993) whose large studies assessing dangerousness in high risk offender facilities, reportedly, found that major psychiatric factors such as psychotic disorders or schizophrenia were negative predictors of recidivism.

Special Responsivity Factors. Other factors that differentiated between recidivists and nonrecidivists were the factors, which affect treatment readiness and responsivity. In other words, recidivists also have more responsivity factors demonstrated by the significant associations with general and violent recidivism. The Responsivity Factor section performed better than the Other Mental Health Issues in predicting recidivism. In fact, the Responsivity Factor section performed better than the Family/Marital subscale of the General Risk/Need Factor section in the prediction of recidivism. Motivation across all offender groups was related to general recidivism, while low intelligence for the institutional sample, and engaging in denial and minimization for the community offenders were related to violent reoffending. These factors were clearly related to both violent and general recidivism although minimally.

As hypothesized in the fourth hypothesis, the Special Responsivity Factors are more strongly associated with the Specific Risk/Need Factors section (r = .41), however, they are also significantly related to the General Risk/Need Factor section (r = .26). Since the responsivity factors were more related to personal problem areas rather than the major risk/need factors, partial correlations were examined removing the effects of the General and Specific Risk/Need Factors. A similar pattern as that of the Other Mental Health Issues arose, although the associations were negative and nonsignificant.

It is not surprising, nor was it predicted, that responsivity items would be correlated with recidivism, since responsivity, by definition, interacts with treatment to effect recidivism. Therefore, the reported findings were not unexpected. Future researchers and clinicians are encouraged to conceptualize responsivity as a broad construct, which incorporates treatability (treatment readiness and motivation) and is related to treatment response and outcome (Serin & Kennedy, 1997). The theory suggests that internal and external factors affect individual characteristics that interfere with or facilitate learning (Serin & Kennedy, 1997). Internal factors refer to individual client characteristics: motivation, personality characteristics, cognitive intellectual deficits, and demographic variables. External factors refer to the therapist and setting characteristics, which in isolation do not affect responsivity. However, therapist and/or setting characteristics interact with offender characteristics to either impede or assist responsivity. Effective matching of offenders' and therapists' styles, as well as intensity of intervention are central to the principle of treatment responsivity (Bonta, 1997). By matching the style and treatment modality to the learning style and abilities of the offender, the potential for positive treatment effects may be enhanced. This, in turn, would indirectly affect an offender's risk level and the probability of reoffending (Andrews & Bonta, 1994). Future research should investigate the differential impact of responsivity factors on recidivism and the mechanisms for the changes in recidivism.

LSI-OR and Violent Recidivism

Interesting findings were noted for the prediction of violent recidivism as a binary variable. In general, the LSI-OR subscales and section totals, including the total strength scores correlated significantly with violent recidivism with the exception of the noncriminogenic factors such as Institutional Factors, Other Mental Health Issues, and Special Responsivity sections. As already established, across all offender groups, including the special offender groups such as the mentally disordered, domestic violence, and sex offender groups, the Specific Risk/Need Factor section performed better than the General Risk/Need Factor section in the prediction of violent recidivism.

For the institution and community groups, of particular interest was the performance of the History subscale of the Specific Risk/Need Factor section. For the combined sample as well as the institutional group, the best predictor of violent recidivism was the History subscale of the Specific Risk/Need Factor scale. The correlation between the History subscale and violent recidivism approached the .40 level. In the prediction of violence, the importance of the General Risk/Need Factor total score and criminal history were also noted. For the community group, however, the Criminal History subscale associated slightly higher than the History subscale of the Specific Risk/Need Factor section. Nonetheless, across groups, the History subscale was central and specific to the prediction of violence. In spite of the fact that the Specific Risk/Need Factor scale is comprised of dynamic and specific risk/need factors directly related to criminal behavior, the History subscale is largely comprised of historical variables related to violent offending. Specifically, the items that were highly correlated with violent reoffending were histories of physical or sexual assault, histories of weapons use, escapes, and impaired driving. As discussed earlier, the Specific Risk/Need Factor section samples items that are more conceptually related to violent recidivism, therefore, the correlations with violent recidivism were significant (Bonta, Law & Hanson, 1998). Since it was the History subscale, which was more significantly predictive of violent recidivism, the findings support previous research, which indicates

that, generally, historical factors related to violence are best predictive of reoffending.

<u>Predictive Models of Recidivism</u>

Several multiple regressions were performed to determine the best combinations of predictors for general and violent recidivism, as well as a variety of other recidivism measures. The subscales from the General and Specific Risk/Need Factor sections were entered into the multiple regressions because they represent the major and minor risk/need factors related to reoffending. In general, consistent findings across several recidivism measures, both binary and continuous, supported the research findings (Gendreau, Goggin, & Little, 1996). Criminal history, procriminal attitudes, companions and antisocial patterns were the best combined predictors for recidivism as a binary variable for both the adult male and institutional sample. Since recidivism was operationally defined in several ways and there were several different predictors, the multiple regressions were expected to vary. Indeed the patterns were somewhat different for the community based offenders with only criminal history contributing uniquely to all regression models across all recidivism variables, with procriminal attitudes also contributing to the prediction of total number of charges.

When recidivism variables were reduced and the recidivism factors were used as the dependent variables, interesting and differing patterns emerged for the institutional and community samples. For the institutional offenders, criminal history, companions, and attitudes were the best combined predictors of the Sentence Length Factor. Even when the LSI-OR Factors were used as the predictors, criminal history and associates emerged as significant predictors of incarceration time. These findings were similar to the regression models produced with the individual recidivism variables such as charges and time served. However, for the community offenders, the Leisure subscale in addition to the Criminal History subscale were related to Sentence Length/Time Served. When the continuous recidivism variables such as time served, charges, and the in-to-risk variables were used, the pattern of predictors replicated that of the Sentence Length factor which parallel closely the findings

obtained with the LSI-OR subscales with the addition of education and drug factors. The same LSI-OR factors entered the regression models for both the adult male sample and the institutional sample. The LSI-OR factors were Criminal History, Education, Drug, No Anticriminal Friends and Some Criminal Friends factors. For the community offenders only the Criminal History factor contributed uniquely to the regression models.

In relation to the Offence Severity/Diversity factor, criminal history and substance abuse were the only predictors for the combined male sample. Combinations of predictors varied for the institutional and community groups. Criminal history and companions were the best predictors for the institutional group. For the community-based offenders, criminal history, education/employment, procriminal attitudes, as well as substance abuse were the best combined predictors for offence severity and diversity. In addition to histories of past criminal behavior, antisocial associates play an important role in the prediction of offence severity and the variety of offences committed by institutional offenders. On the other hand, education and employment related problems, as well as procriminal attitudes, and substance abuse problems are predictive of the severity and variety of offences for community offenders. Using the LSI-OR factors as predictors emphasized the relationship of antisocial associates and revealed the significance of alcohol problems for both institutional and community offenders. In fact, when the samples were combined the drug factor also emerged as a significant predictor of offence severity and diversity.

For the prediction of violent recidivism for the combined sample, Antisocial Pattern and the History subscale of the Specific Risk/Need Factor section contributed uniquely to the regression equation. For the institutional group the Criminal History and Education/Employment, and History subscale entered the regression model. Only the Criminal History subscale and the Criminal History Factor entered the regression equations for predicting violent recidivism for the community sample.

When the LSI-OR factors were used as predictor variables for violent recidivism, interestingly,

for the adult males, the Alcohol Factor in addition to the Criminal History and Education/Employment Factors emerged as unique variables in the regression equations. For the institutional group the same factors were predictive with the addition of No Anticriminal Friends. Only the Criminal History factor was predictive of violent reoffending for community based offenders. For institutional violent offenders, alcohol problems and the lack of prosocial companions played a central role in violent reoffending.

The LSI-OR sections were also entered into regression equations in order to determine the combinations of the LSI-OR sections which best predict general and violent recidivism. A very important finding emerged. Across samples, the General Risk/Need Factor section was the sole predictor of general recidivism. This finding suggested that the composite score of the major risk/need factors sampled in the section was sufficient to predict general recidivism at very respectable levels (r = .39 for combined sample, .35 for institutional offenders, .26 for probationers). With regards to the prediction of violent recidivism, once again, the importance of the Specific Risk/Need Factor section was evident, but with the addition of the Other Mental Health Issues section for the combined sample and institutional offenders. However, it must be stressed that it was the absence of Other Mental Health Issues which added incremental validity to the model, that is, the Other Mental Health Issues section was negatively associated with violence. Once again, these findings resemble the Harris, Rice and Cormier (1993) study that developed the Violence Risk Appraisal Guide on a large sample of high-risk offenders. The researchers found that schizophrenia was a significant negative correlate of violent reoffending, that is, schizophrenia added incremental validity over a diagnosis of psychopathy as measured by the PCL-R. Criticism of the research is centred on the large sample of mentally disordered high-risk offenders, who were either schizophrenic or psychopathic. The current findings should be taken with caution and further research is required to determine whether there is any predictive validity in the Other Mental Health Issues section that is related to mental health or clinical issues.

The LSI-OR and Exceptional Offender Groups

The LSI-OR General and Specific Risk/Need factor sections performed well with clinical offender groups. Analyses testing the General Risk/Need Factor total score identified that both the mentally disordered and domestic violence offenders had significantly greater General and Specific Risk/Need Factor total scores compared to nondisordered and nondomestic violent offenders. Therefore, mentally disordered and domestic violence offenders both have greater psychosocial risk/need factors related to reoffending as well as personal problems with criminogenic potential. However, sex offenders and nonsex offenders did not differ on their General Risk/Need Factor total scores, but they did differ on their mean Specific Risk/Need Factor total score. In other words, sex offenders do not have significantly greater psychosocial risk/needs factors compared to nonsex offenders. Sex offenders do have significantly more personal problems (specific risk/needs) which discriminated them from nonsex offenders. As a result, the specific risk factors have an important role in identifying special offenders with specific needs with criminogenic potential, which require intervention or treatment planning. Furthermore, this finding substantiates the importance of the Specific Risk/Need Factor section as an important mechanism for identifying special offender populations with specific risk factors. This mechanism should be used for the purposes of overriding offender risk level.

The final risk levels for each of the special offender groups was able to differentiate recidivists from nonrecidivists. Additionally, a review of the correlations between recidivism and the General and Specific Risk/Need Factor scores indicated that the LSI-OR performed well as a predictor of both general and violent recidivism for the mentally disordered, domestic violence, and sex offender groups. Specifically, the General Risk/Need Factor total score predicted general recidivism equally well across mentally and nonmentally disordered offenders and sex and nonsex offenders. For the domestic violence group, the General Risk/Need Factor total score performed better with the nondomestic

violence group (r = .33 vs. .43, respectively) but nonetheless predicted general recidivism significantly. When predicting violent recidivism, the General Risk/Need Factor total score performed better for the domestic violence and sex offender groups than the nondomestic and nonsex offender groups. For the mentally disordered offenders, the reverse occurred, that is, the General Risk/Need Factor total score performed better with the nonmentally disordered group in predicting violent recidivism. These findings lend partial support for research such as that of a recent meta-analysis that examined 64 samples of mentally disordered offenders. The researchers concluded that the major predictors of general and violent recidivism (such as antisocial personality, substance abuse, and family dysfunction) were comparable for mentally disordered and general offenders alike (Bonta, Law, Hanson, 1998). In another meta-analysis examining predictors of sexual offender recidivism, the predictors of nonsexual violent recidivism and general recidivism were similar to those recidivism predictors found among nonsexual criminals (Hanson & Bussiere, 1995).

The associations between the Specific Risk/Need Factor total score and general recidivism for each of the special offender groups were higher than those across the general offender groups (nonmentally disordered, nondomestic violence, and nonsex offender groups). The Specific Risk/Need Factor total score was more strongly related to violent than general recidivism across all special offender groups. The associations were moderately high for the prediction of violent recidivism and consistently higher than the associations with the general offender groups (the nondisordered, nondomestic violence, and nonsex offender groups). Interestingly, it should be noted that for the sex offender group the General and Specific Risk/Need Factor total scores performed equally well in predicting both general and violent recidivism.

For mentally disordered offenders, the General Risk/Need Factor total score was a good predictor of general but not violent recidivism with this group. The Specific Risk/Need Factor total score was a better predictor of violent recidivism. In fact, a significant interaction effect for the Specific

Risk/Need factor score and violent recidivism indicated that a mentally disordered offender recidivist will tend to have significantly increased Specific Risk/Need factors compared to all other offenders. This finding lends support for the idea that mentally disordered offenders have personal problems with criminogenic potential. In a study by Loza and Simourd (1994) using the LSI-VI, violent offending was associated with higher scores on the LSI total, problems with alcohol and drug use, but, in particular, with emotional/personal problems in addition to high scores in the psychosocial areas of family/marital, leisure/recreation. As already established in the current project, across all offenders, high scores on the Specific Risk/Need Factor section were related to violent reoffending. Since the Specific Risk/Need Factor total score performed better than the General Risk/Need Factor total score in predicting violent recidivism, mentally disordered offenders may be at increased risk for violent reoffending should they reoffend. This suggests that this population may have some special programming needs related to the identified specific criminogenic risk factors.

One should be reminded that the assignment to the above mentioned offender clinical groups was based on items of the LSI-OR as opposed to detailed reviews or corroborating information from offender files. There was no opportunity to examine the validity of this classification and differentiation system. Specifically, the mentally disordered offenders were identified using variables from the Other Mental Health Issues section. Additionally, it is not known how the assessors determined that an offender had a mental disorder. For example, when the item "depression" was checked, it was not known whether the assessor indicated the item to mean an adjustment reaction to prison life or whether a diagnosable clinical syndrome was referenced in the offender file. It is recommended that future researchers use a standardized method of identifying mentally disordered offenders. For example, Wormith and McKeague (1996) in their mental health survey of community correctional clients in Canada, used three specific criteria to identify mentally disordered offenders, namely, a psychiatric diagnosis, psychiatric hospitalizations, or a Global Assessment of Functioning (GAF: DSM-

VI, 1994) score. Finally, the absence of significant findings with the domestic violence, sex offender,

and mentally disordered groups suggests that there is little need for an approach significantly different

from that of general offender risk assessment with these exceptional offender groups (Bonta et al,

1998).

Shortcomings of the Research and Direction of Future Research

Although many of the study findings were as expected, there were methodological problems

that need to be considered. One of the concerns deals with the generalizability of the study findings to

other provincial offenders because of the overrepresentation of the institutionals in the current research

project. Future research should be concerned with sampling more representatively across the province

particularly for institutional offender groups to include samples of minimum, medium, as well as

maximum security institutional settings. It is recommended that future research include a larger

community sample in order to increase the statistical power of the analyses, as is the recommendation

for the female and young offender samples.

There were several multiple comparisons made in the current study, and although the results

seemed favourable for the LSI-OR overall, there is the possibility that some of the significant findings

were simply due to chance factors. Setting the probability level of an event is often an arbitrary matter,

and setting alpha too stringently may result in the loss of significant findings. Therefore, future studies

are called upon to replicate the findings of the current research.

When examining exceptional offender groups, one of the most critical factors remains the

operational definition of exceptional offender status particularly mental disorder and the means by

which it is assessed (Wormith & McKeague, 1996). To ensure the quality of groupings and increase

accuracy and precision, different variables other than those from the LSI-OR are encouraged. It is

possible that some disordered, domestic violence, or sex offenders were missed by having used LSI-

OR items for the purposes of grouping the special offenders. However, in the current research project,

there was no opportunity to have done otherwise. Since the findings in the literature have been

inconsistent with mentally disordered offenders (Bonta, Law & Hanson, 1998) future research is

recommended with the above mentioned considerations.

Once again, there were too few numbers with respect to the test-retest reliability investigation

($\underline{n}$ = 18). Furthermore, there was no information available regarding whether treatment occurred during

the first and second administration of the LSI-OR. As a result, any treatment effects on recidivism are

unknown. Since the greatest precision in recidivism prediction have been achieved by changes in LSI

risk levels (Andrews, 1986; Rowe, 1996), future studies should be concerned with more proximal cues

in the offenders' environment as opposed to those which are distal and related to the index offence

(Serin, 1996). Consequently, there is a demand for research investigating treatment effects on

recidivism. These kinds of studies involve models which are more interactional, that is, models which

assert internal and external factors which influence the change process. These influences involve

factors associated with the clinician, the offender, and environmental factors. Currently, there is little

empirical data to indicate the relative contribution of these factors to the treatment process or the

effects on recidivism. Future studies should examine treatment effects on recidivism, to determine the

dynamic predictive validity of change scores.

<u>Conclusion</u>

In order to plan for the delivery of correctional programs, systematic assessment and

reassessment of criminogenic needs and offender risk are required (Motiuk, 1997). Strategies must

then be developed to ensure that each offender receives a correctional treatment plan that reflects this

assessment and risk level. Risk management, then, involves applying the level of risk to intervention

strategies and treatment plans. In this way, risk is dynamic and individualized (Andrews, 1994). Given

the study findings, the LSI-OR has proven to be a very reliable and valid risk/need instrument. As a

risk/need measure, the LSI-OR demonstrated more than adequate ability to differentiate recidivists

from nonrecidivists across demographic and clinically based samples. The LSI-OR also performed very well in predicting recidivism both general and violent. Therefore, the findings lend support for the role of the LSI-OR as the assessment instrument in determining the overall level of an offender's risk, programming needs, prison security levels, and in predicting post-release outcome, using a combination of static criminal history factors as well as social learning factors. Overall, the present results indicated that the LSI-OR has significant value as the risk/need assessment instrument in the Ministry for provincial offenders and has excellent promise as a tool for criminal justice decision making.

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Appendix A: LSI-IV

Surname	Given	Date of Birth	Sex
		DD MM YY	☐ M ☐ F

PSR	Probation intake	Parole intake	Other

CRIMINAL HISTORY

— 1 Any prior convictions. adult/number

— 2 Two or more prior convictions

— 3 Three or more prior convictions

— 4 Three or more present offences/number

— 5 Arrested under age 16

— 6 Ever incarcerated upon conviction

— 7 Escape history · institution

— 8 Ever punished for institutional misconduct/number

— 9 Charge laid or parole suspended during prior community supervision

— 10 Official record of assault/violence

EDUCATION/EMPLOYMENT

When in labour market:

— 11 Currently unemployed

— 12 Frequently unemployed

— 13 Never employed for full year

— 14 Ever fired School or when in school:

— 15 Less than grade 10

— 16 Less than regular grade 12

— 17 Suspended or expelled at least once

Homemaker, pensioner: 18 only
School, work, unemployed:
18, 19, 20

— 18 Participation/Performance ( )

— 19 Peer interactions ( )

— 20 Authority interactions ( )

FINANCIAL

— 21 Problems ( )

— 22 Reliance upon social assistance

FAMILY/MARITAL

— 23 Dissatisfaction with marital or equivalent situation ( )

— 24 Nonrewarding, parental ( )

— 25 Nonrewarding, other relatives ( )

— 26 Criminal · Family/Spouse

ACCOMMODATION

— 27 Unsatisfactory ( )

— 28 3 or more address changes last year/number

— 29 High crime neighbourhood

LEISURE/RECREATION

— 30 No recent participation in an organized activity

— 31 Could make better use of time ( )

COMPANIONS

— 32 A social isolate

— 33 Some criminal acquaintances

— 34 Some criminal friends

— 35 Few anti-criminal acquaintances

ALCOHOL/DRUG PROBLEMS

— 36 Alcohol problem, ever

— 37 Drug problem, ever

— 38 Alcohol Problem, currently ( )

— 39 Drug problem, currently ( )

Specify drug _____

_____

_____

— 40 Law violations

— 41 Marital/Family

— 42 School/Work

— 43 Medical

— 44 Other clinical indicators · Specify:

_____

EMOTIONAL/PERSONAL

— 45 Moderate interference

— 46 Severe interference

— 47 Psychiatric treatment, past

— 48 Psychiatric treatment, current

— 49 Psychological assessment indicated

Area _____

_____

PROBATION/PAROLE CONDITIONS

— 50 Improvement indicated Specify conditions

— 51 _____

— 52 _____

— 53 _____

ATTITUDES/ORIENTATION

— 54 Supportive of crime

— 55 Unfavourable toward convention

— 56 Poor, toward sentence

— 57 Poor, toward supervision

TOTAL LSI SCORE _____

— 58 _____

— 59 _____

— 60 _____

— 61 _____

— 62 _____

Negative/Positive circumstances not given sufficient attention in the LSI

Notes:

Date DD MM YY

Appendix B: Pilot Version of LSI-OR

Level of Service Inventory: Ontario Revision (LSI-OR)

Ontario

Surname	Given Name	OMS Number	Status ☐ Youth ☐ Adult

Setting:	Sources of information:	Date of Birth DD MM YY	Sex ☐ M ☐ F

Context: Community
- ☐ PSR/PDR
- ☐ Parole Intake
- ☐ Probation Intake
- ☐ P&P Reassessment

Institution
- ☐ Classification
- ☐ Reclassification

- ☐ Internal/Program
- ☐ Parole Hearing
- ☐ Community Release

Youth
- ☐ Secure Custody
- ☐ Open Custody

A. GENERAL RISK/NEED FACTORS

1. CRIMINAL HISTORY _____
- __ 1 Any prior y.o. dispositions (number =) or adult dispositions (number =)
- __ 2 Two or more prior adult/youth dispositions
- __ 3 Three or more prior adult/youth dispositions
- __ 4 Three or more present offences (number =)
- __ 5 Arrested under age 16
- __ 6 Ever incarcerated upon judiction
- __ 7 Ever punished for institutional misconduct (number =)
- __ 8 Charge laid or parole/probation suspended during prior community supervision
- __ Subtotal _____ Strength __

2. EDUCATION/EMPLOYMENT
- __ 9 Currently unemployed
- __ 10 Frequently unemployed
- __ 11 Never employed for full year
- __ 12 Less than grade 10 or equivalent
- __ 13 Less than regular grade 12 or equivalent
- __ 14 Suspended or expelled at least once
- __ 15 Participation/Performance ( )
- __ 16 Peer Interactions ( )
- __ 17 Authority Interactions ( )
- __ Subtotal _____ Strength __

3. FAMILY/MARITAL
- __ 18 Dissatisfaction with marital or equivalent situation ( )
- __ 19 Nonrewarding, parental ( )
- __ 20 Nonrewarding, other relatives ( )
- __ 21 Criminal - Family/Spouse
- __ Subtotal _____ Strength __

4. LEISURE/RECREATION
- __ 22 No recent participation in an organized activity
- __ 23 Could make better use of time ( )
- __ Subtotal _____ Strength __

5. COMPANIONS
- __ 24 Some criminal acquaintances
- __ 25 Some criminal friends
- __ 26 No anti-criminal acquaintances
- __ 27 No anti-criminal friends
- __ Subtotal _____ Strength __

6. PROCRIMINAL ATTITUDE/ORIENTATION
- __ 28 Supportive of crime ( )
- __ 29 Unfavourable toward convention ( )
- __ 30 Poor, toward sentence
- __ 31 Poor, toward supervision/treatment
- __ Subtotal _____ Strength __

7. SUBSTANCE ABUSE
- __ 32 Alcohol problem, ever
- __ 33 Drug problem, ever
- __ 34 Alcohol problem, currently ( )
- __ 35 Drug problem, currently ( )
- __ 36 Law violations
- __ 37 Marital/Family
- __ 38 School/Work
- __ 39 Medical or other clinical indicators
- __ Subtotal _____ Strength __

8. ANTISOCIAL PATTERN
- __ 40 Psychological assessment indicated for ASP
- __ 41 Early and diverse antisocial behaviour:
  Arrested under age 16 (Item 5 ___), plus at least one of:
  a) official record of assault/violence (___)
  b) escape history (___)
  c) charge laid during prior community supervision (Item 8 ___)
- __ 42 Criminal attitude. At least one of:
  (Item 28 ___), (Item 29 ___), (Item 31 ___)
- __ 43 A pattern of generalized trouble. At least four of:
  Financial problems (___),
  3 or more address changes (___)
  (Item 11 ___), (Item 12 ___), (Item 14 ___),
  (Item 19 ___), (Item 23 ___), (Item 27 ___)
- __ Subtotal _____ Strength __

B. SPECIFIC RISK/NEED FACTORS

1. PERSONAL PROBLEMS WITH CRIMINOGENIC POTENTIAL
- __ 1 Clear problems of compliance (specific conditions)
- __ 2 Diagnosis of "psychopathy"
- __ 3 Diagnosis of other personality disorder
- __ 4 Threat from third party
- __ 5 Problem-solving/self-management skill deficit
- __ 6 Anger management deficit
- __ 7 Intimidating/Controlling
- __ 8 Inappropriate sexual activity
- __ 9 Learning disability
- __ 10 Poor social skills
- __ 11 Peer outside age range
- __ 12 Resistant behaviour
- __ 13 Underachievement
- __ 14 Other (specify) _____

2. HISTORY OF
- __ 1 Sexual assault
- __ 2 Physical assault (extrafamilial)
- __ 3 Physical assault (intrafamilial)
- __ 4 Assault on an authority figure
- __ 5 Weapon use
- __ 6 Fire setting
- __ 7 Escape/UAL
- __ 8 Impaired Driving

C. RISK/NEED SUMMARY

Total LSI-OR Score (A) _____   Total Strengths (A) _____   Total Personal Problems (B) _____
(Criminogenic Potential)

Summary of strengths (Positives: reasons for lowering security/supervision or releasing clients)

_____

_____

Summary of added concerns (Negatives: reasons for increasing security/supervision or not releasing clients)

_____

_____

D. INSTITUTIONAL FACTORS
(For Institutions Only)

___ 1 Last classification maximum
___ 2 Last classification medium
___ 3 Last classification minimum
___ 4 Protective custody
___ 5 Treatment recommended/ordered
___ 6 Misconduct/behaviour report
       current incarceration (number = ____)
___ 7 Administrative segregation
___ 8 Security management concerns
___ 9 Outstanding charges
___ 10 Past federal penitentiary

E. RISK/NEED PROFILE
Please circle appropriate subscale score, total score and override decision

Risk Category	Crim. Hist.	Employ. Educ.	Fam. Mar.	Leis. Rec.	Comp.	Procr. Attit.	Subs. Abuse	Antisoc. Pattern	Total	Override: Yes No
Very High	·	·	·	·	·	·	·	·	30+	Very High
High	7-8	·	·	·	4	4	·	4	20-29	High
Medium	5-6	8-9	3-4	2	3	3	6-8	2-3	11-19	Medium
Low	3-4	3-7	1-2	1	1-2	1-2	2-5	1	5-10	Low
Very Low	0-2	0-2	0	0	0	0	0-1	-	0-4	Very Low

F. OTHER CLIENT ISSUES

1. SOCIAL, HEALTH, AND MENTAL HEALTH

___ 1 Financial problems
___ 2 Homeless or transient
___ 3 Accomodation problems
___ 4 Health problems
___ 5 Depressed
___ 6 Physical disability
___ 7 Low self-esteem
___ 8 Shy/withdrawn
___ 9 Diagnosis of psychosis
___ 10 Suicide attempts/threat
___ 11 Other evidence of emotional distress
       Specify: _____

       _____

___ 12 Immigration issues
___ 13 Victim: family violence
___ 14 Victim: physical assault
___ 15 Victim: sexual assault
___ 16 Victim of neglect
___ 17 Other (specify) _____

2 BARRIER TO RELEASE
___ 1 Community supervision inappropriate
       Specify reason: _____

       _____

G. SPECIAL RESPONSIVITY CONSIDERATIONS

___ 1 Motivation as a barrier
___ 2 Engages in denial/minimize
___ 3 Interpersonally anxious
___ 4 Cultural issues
___ 5 Ethnicity issues
___ 6 Low intelligence
___ 7 Communication barriers
___ 8 Other (specify) _____

H. PROGRAM/PLACEMENT DECISION

☐ Institution, Secure/Open Custody   ☐ Release Recommendation   ☐ Community

Security/Supervision Level: ☐ Minimum   ☐ Medium   ☐ Maximum

Program Placement: _____   Institutional Placement: _____

Comments: _____

_____

Assessor's Name	Assessor's Position	Assessor's Signature	DD	MM	YY

Placement Decision:		Explanation (if different from above)			

Authorizing Name	Authorizing Position	Authorizing Signature	DD	MM	YY

The following is supplementary information which may affect the offender's institution classification/reclassification, release planning or community supervision. The information should relate to factors checked on the LSI-OR form.

DISPOSITION/SENTENCE LENGTH:

Institution Admission DD	MM	YY	Sentence Date DD	MM	YY	Parole Eligibility Date DD	MM	YY	Discharge Possible Date DD	MM	YY	Final Warrant Expiry Date DD	MM	YY

GENERAL RISK/NEED FACTORS:

Criminal History	Information Source(s)

Previous Offences (Most Recent Serious Offences)

Offence(s)	Year	Disposition	Institution Placement (if applicable)	Comments

Circumstances of Current Offence(s)	Information Source(s)

Details, including date of offence(s), type, planned, weapon type, victim's age/sex, extent of injuries, damage or value of goods, motive, remorse, etc.

Court Recommendations (if applicable)

Summary of Findings	Information Source(s)

DISCHARGE SUMMARY | Discharge/Completion Date | DD | MM | YY

Type of Discharge/Completion: ☐ Bail ☐ Fine Paid ☐ Probation to Follow

☐ Parole Granted ☐ Sentence Satisfied ☐ Probation Complete ☐ Parole Complete ☐ Other_____

SUMMARY (Recommendations for future placements)

Summary Completed by (Name/Title)	Signature	DD	MM	YY
Authorizing Signature	Setting	DD	MM	YY

This document to be forwarded to:

Appendix C: Current Version of LSI-OR

Freedom of Information (F.O.I.) Notice: *This personal information is being collected under the authority of Section 5 of the Ministry of Correctional Services Act (RSO 1990, Chapter M.22) and may be used for the purposes of assessment, classification and program placement during this and future periods of community supervision / incarceration. Questions about the collection of this information should be directed to the Probation and Parole Officer, Area Manager, or Superintendent.*

| Surname | Given Name | OMS Client Number | Status __ Youth __ Adult |
| Setting | Sources of Information | Birthdate DD MM YY | ☐ Male __ Female |

Context: Community
- __ PSR/PDR
- __ Probation Intake
- ☐ Parole Intake
- ☐ P&P Reassessment

Institution
- ☐ Classification
- ☐ Reclassification
- ☐ Internal/Program
- ☐ Parole Hearing
- ☐ Community Release

Youth
- ☐ Secure Custody
- ☐ Open Custody

A. GENERAL RISK/NEED FACTORS

1. CRIMINAL HISTORY
- __ 1 Any prior y.o. dispositions (number = ___) or adult dispositions (number = ___)
- __ 2 Two or more prior adult/youth dispositions
- __ 3 Three or more prior adult/youth dispositions
- __ 4 Three or more present offences (number = ___)
- __ 5 Arrested or charged under age 16
- __ 6 Ever incarcerated upon adjudication
- __ 7 Ever punished for institutional misconduct/ behaviour report (number = ___)
- __ 8 Charge laid, probation breached or parole suspended during prior community supervision
- __ **Subtotal**   **Strength**   __

2. EDUCATION/EMPLOYMENT
- __ 9 Currently unemployed
- __ 10 Frequently unemployed
- __ 11 Never employed for full year
- __ 12 Less than regular grade 10 or equivalent
- __ 13 Less than regular grade 12 or equivalent
- __ 14 Suspended or expelled at least once
- __ 15 Participation/Performance (__)
- __ 16 Peer interactions (__)
- __ 17 Authority interactions (__)
- __ **Subtotal**   **Strength**   __

3. FAMILY/MARITAL
- __ 18 Dissatisfaction with marital or equivalent situation (__)
- __ 19 Nonrewarding, parental (__)
- __ 20 Nonrewarding, other relatives (__)
- __ 21 Criminal - Family/Spouse
- __ **Subtotal**   **Strength** __

4. LEISURE/RECREATION
- __ 22 No recent participation in an organized activity
- __ 23 Could make better use of time (__)
- __ **Subtotal**   **Strength** __

5. COMPANIONS
- __ 24 Some criminal acquaintances
- __ 25 Some criminal friends
- __ 26 No anti-criminal acquaintances
- __ 27 No anti-criminal friends (__)
- __ **Subtotal**   **Strength** __

6. PROCRIMINAL ATTITUDE/ORIENTATION
- __ 28 Supportive of crime (__)
- __ 29 Unfavourable toward convention (__)
- __ 30 Poor, toward sentence/offence
- __ 31 Poor, toward supervision/treatment
- __ **Subtotal**   **Strength** __

7. SUBSTANCE ABUSE
- __ 32 Alcohol problem, ever
- __ 33 Drug problem, ever
- __ 34 Alcohol problem, currently (__)
- __ 35 Drug problem, currently (__)
- __ 36 Law violations
- __ 37 Marital/Family
- __ 38 School/Work
- __ 39 Medical or other clinical indicators
- __ **Subtotal**   **Strength** __

8. ANTISOCIAL PATTERN
- __ 40 Specialized assessment for Antisocial pattern
- __ 41 Early and diverse antisocial behaviour: Arrested/charged under age 16 (Item 5 ___), plus at least one of:
  - a) official record of assault/ violence (___)
  - b) escape history (___)
  - c) charge laid, probation breached or parole suspended during prior community supervision (Item 8 ___)
- __ 42 Criminal attitude. At least one of: (Item 28 ___), (Item 29 ___), (Item 31 ___)
- __ 43 A pattern of generalized trouble. At least four of: Financial problems (___), 3 or more address changes (___) (Item 11 ___), (Item 12 ___), (Item 14 ___), (Item 19 ___), (Item 23 ___), (Item 27 ___)
- __ **Subtotal**   **Strength** __

B. SPECIFIC RISK/NEED FACTORS

1. PERSONAL PROBLEMS WITH CRIMINOGENIC POTENTIAL
- __ 1 Clear problems of compliance (specific conditions)
- __ 2 Diagnosis of "psychopathy"
- __ 3 Diagnosis of other personality disorder
- __ 4 Threat from third party
- __ 5 Problem-solving/self-management skill deficits
- __ 6 Anger management deficits
- __ 7 Intimidating/Controlling
- __ 8 Inappropriate sexual activity
- __ 9 Poor social skills
- __ 10 Peers outside age range
- __ 11 Racist/sexist behaviour
- __ 12 Underachievement
- __ 13 Outstanding charges
- __ 14 Other (specify) _____

2. HISTORY OF PERPETRATION
- __ 1 Sexual assault (extrafamilial)
- __ 2 Sexual assault (intrafamilial)
- __ 3 Physical assault (extrafamilial)
- __ 4 Physical assault (intrafamilial)
- __ 5 Assault on an authority figure
- __ 6 Weapon use
- __ 7 Fire setting
- __ 8 Escapes/U.A.L.
- __ 9 Impaired Driving

C. PRISON EXPERIENCE: INSTITUTIONAL FACTORS
- __ 1 Last classification maximum
- __ 2 Last classification medium
- __ 3 Last classification minimum
- __ 4 Protective custody
- __ 5 Treatment recommended/ordered
- __ 6 Misconduct/Behaviour Report current incarceration (number = ___)
- __ 7 Administrative segregation
- __ 8 Security management concerns
- __ 9 Past federal penitentiary

71-9866 075-388 (01/96)

D. RISK/NEED SUMMARY

Total LSI-OR Score _____
(From Section A)

Total Strengths _____
(From Section A)

Specific risk/need factors _____
(From Section B)

Summary of strengths *(Positives: reasons for lowering security/supervision or releasing clients, From Section A)*

_____

_____

Summary of added concerns *(Negatives: reasons for increasing security/supervision or not releasing clients, From Sections B & C)*

_____

_____

E. RISK/NEED PROFILE

Risk										
Very High	-	-	-	-	-	-	-	-	30+	Very High
High	7-8	-	-	-	4	4	-	4	20-29	High
Medium	5-6	8-9	3-4	2	3	3	6-8	2-3	11-19	Medium
Low	3-4	3-7	1-2	1	1-2	1-2	2-5	1	5-10	Low
Very Low	0-2	0-2	0	0	0	0	0-1	0	0-4	Very Low
Risk Category	Crim. Hist.	Employ. Educ.	Fam. Mar.	Leis. Rec.	Comp.	Procr. Attit.	Subs. Abuse	Antisoc. Pattern	Total *(Section A)*	Override: Yes No

F. OTHER CLIENT ISSUES

1. SOCIAL, HEALTH, AND MENTAL HEALTH

- __ 1 Financial problems
- __ 2 Homeless or transient
- __ 3 Accommodation problems
- __ 4 Health problems
- __ 5 Depressed
- __ 6 Physical disability
- __ 7 Low self-esteem
- __ 8 Shy/withdrawn
- __ 9 Diagnosis of psychosis
- __ 10 Suicide attempts/threat
- __ 11 Learning disability
- __ 12 Other evidence of emotional distress
  - *(Specify)* _____
  - _____

- __ 13 Immigration issues
- __ 14 Victim: family violence
- __ 15 Victim: physical assault
- __ 16 Victim: sexual assault
- __ 17 Victim: emotional abuse
- __ 18 Victim of neglect
- __ 19 Other *(specify)* _____

2. BARRIER TO RELEASE

- __ 1 Community supervision inappropriate

  (Specify reason) _____

  _____

  _____

G. SPECIAL RESPONSIVITY CONSIDERATIONS

- __ 1 Motivation as a barrier
- __ 2 Engages in denial/minimization
- __ 3 Interpersonally anxious
- __ 4 Cultural issues
- __ 5 Ethnicity issues
- __ 6 Low intelligence
- __ 7 Communication barriers
- __ 8 Other *(specify)* _____
  - _____
  - _____

H. PROGRAM/PLACEMENT DECISION

Type of Decision	Recommendation/Decision			Program/Institutional Placement
☐ Institution, Secure/Open Custody:	__ Minimum	☐ Medium	☐ Maximum	
☐ Release Recommendation:	__ Yes	☐ No		
☐ Community:	__ Minimum	☐ Moderate *medium*	☐ Maximum	

Comments

_____

_____

Assessor's Name	Assessor's Position	Assessor's Signature	DD	MM	YY

Placement Decision	Explanation *(if different from above)*				

Authorizing Name	Authorizing Position	Authorizing Signature	DD	MM	YY

Ministry of the
Solicitor General and
Correctional Services
Ontario

Level of Service Inventory: Ontario Revision (LSI-OR)
Supplementary Information

The following is supplementary information which may affect the offender's institution classification/reclassification, release planning or community supervision. The information should relate to factors checked on the LSI-OR form.

I. DISPOSITION/SENTENCE LENGTH

Institution Admission			Sentence Date			Parole Eligibility			Discharge Possible			Final Warrant Expiry		
DD	MM	YY	DD	MM	YY	DD	MM	YY	DD	MM	YY	DD	MM	YY

J. GENERAL AND SPECIFIC RISK/NEED FACTORS

CRIMINAL HISTORY   Information Source(s)

PREVIOUS OFFENCE(S) *(Most Recent Serious Offences)*

Offence(s)	Year	Disposition	Institution Placement *(if applicable)*	Comments

CIRCUMSTANCES OF CURRENT OFFENCE(S)   Information Source(s)

Details, including date of offence(s), type, planned, weapon type, victim's age/sex, extent of injuries, damage or value of goods, motive, remorse, etc.

Court Recommendations *(if applicable)*

SUMMARY OF FINDINGS   Information Source(s)

K. PROGRESS RECORD
(Specify name and date with each new entry)

L. DISCHARGE SUMMARY

Discharge/Completion Date   DD   MM   YY

Type of Discharge/Completion: ☐ Bail   ☐ Fine Paid   ☐ Probation to Follow   ☐ Parole Granted

☐ Sentence Satisfied   ☐ Probation Complete   ☐ Parole Complete   ☐ Other (specify)_____

SUMMARY *(Recommendations for future placements)*

Summary Completed by (Name/Title)	Signature			
		DD	MM	YY

Authorizing Signature	Setting			
		DD	MM	YY

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Appendix D: Offence Categories

Table D1

Offence Severity/Category

Severity	Offence category	Severity	Offence category
01 *	Homicide & related	14	Obstruction of justice
02 *	Serious violent	15	Drug possession
03 *	Violent sexual	16	Criminal code traffic
04	Break & enter & related	17	Breach of court order/escape
05 *	Nonviolent sexual	18	Drinking driving
06	Traffic/import drug	19	Misc. against public order
07 *	Weapons	20	Other federal statute
08	Fraud & related	21	Parole violations
09 *	Misc. against the person	22	Highway traffic act
10	Theft possession	23	Liquor licence act
11 *	Assault & related	24	Other provincial
12 *	Arson/property damage	25	Municipal bylaw
13	Morals & gaming	26	Unknown

Note. *refers to violent offences.

Table D2

Level 1 Offences

Level 1 offences
Causing injury with intent
Use of a firearm during commission of offence
Pointing a firearm
Sexual interference
Invitation to sexual touching
Sexual exploitation
Incest
Anal intercourse
Bestiality, compelling, in presence of or by child
Parent or guardian procuring sexual activity by child
Householder permitting sexual activity by or in presence of child
Corrupting children
Living off the avails of prostitution by a child
Obtaining sexual services of a child
Causing death by criminal negligence
Causing bodily harm by criminal negligence
Murder
Manslaughter
Attempt to commit murder
Causing bodily harm with intent
Overcoming resistance to commission of offence
Dangerous operation of motor vehicles, vessels & aircraft causing bodily harm
Dangerous operation of motor vehicles, vessels & aircraft causing death
Impaired driving causing bodily harm
Impaired driving causing death
Criminal harassment
Uttering threats
Assault with weapon or causing bodily harm
Aggravated assault
Unlawfully causing bodily harm
Assaulting a peace officer
Sexual assault
Sexual assault with weapon, threats to third party or causing bodily harm
Aggravated sexual assault
Kidnapping/forcible confinement
Robbery
Arson – disregard for human life
Arson – own property
Arson by negligence
Conspiracy to commit murder

Appendix E: Coding Manual

Coding Manual

CLIENT VARIABLES

Subject number

OMS number

Race: 1 White   2 Native   3 Black   4 Oriental   5 Unknown

Citizenship: 1 Unknown   2 Canadian   3 Other

Status :   1   Youth   2   Adult

Setting: 1   Community   2   Institutional

Date of Birth

Age at time of assessment

Age at time of CPIC

Sex: 1   Male   2 Female

Context: 1 Pre-Treatment 2 Probation Intake 3 Parole Intake   4 P & P

Reassessment 5 Classification   6 Reclassification   7 Internal Programming   8 Parole

Hearing   9 Community Release 10 PSR/PDR   11 Institutional Intake

LSI-OR VARIABLES

Assessor: (1 to 17 unknown)

LSI-OR Assessment Date

General Risk/Need Factors (Section A)

      Criminal History Subscale Total: (0-8)

      Education/Employment Subscale Total: (0-9)

      Family/Marital Subscale Total: (0-4)

Leisure Recreation Subscale Total: (0-2)

Companions Subscale Total: (0-4)

Procriminal Attitude/Orientation Subscale Total: (0-4)

Substance Abuse Subscale Total: (0-8)

Antisocial Pattern: (0-4)

All LSI-OR Section A items

LSI-OR Section A Total: (0-43)

Specific Risk/Need Factors (Section B)

Personal Problems with Criminogenic Potential Subscale Total: (0-14)

History of Subscale Total: (0-8)

All Section B items

Total Strengths: (0-8)

Institutional Factors (Section D): (0-10)

All Section D items

Initial Risk Level: (prior to use of override) (1-5)

Final Risk Level: (following use of override) (1-5)

Other Client Issues Total (Section F): (1-18)

All Section F items

Special Responsivity Factors (Section G): (1-8)

All Section G items

Program Placement Decision (Section H): 0 not checked 1 Institution/Secure/Open Custody

2 Release Recommendation 3 Community

Security/Supervision Level: 0 less than minimum 1 Minimum 2 Medium 3 Maximum 4 Yes

LSI-VI DATA

Last Classification Date

Last LSI-VI Total Score

Last LSI-VI Level

SECOND LSI-OR ADMINISTRATION

General Risk/Need Factors (Section A)

    Criminal History Subscale Total: (0-8)

    Education/Employment Subscale Total: (0-9)

    Family/Marital Subscale Total: (0-4)

    Leisure Recreation Subscale Total: (0-2)

    Companions Subscale Total: (0-4)

    Procriminal Attitude/Orientation Subscale Total: (0-4)

    Substance Abuse Subscale Total: (0-8)

    Antisocial Pattern: (0-4)

    LSI-OR Section A Total: (0-43)

Specific Risk/Need Factors (Section B)

    Personal Problems with Criminogenic Potential Subscale Total: (0-14)

    History of Subscale Total: (0-8)

Total Strengths: (0-8)

Institutional Factors (Section D):   (0-10)

Initial Risk Level: (prior to use of override) (1-5)

Final Risk Level: (following use of override) (1-5)

Other Client Issues Total (Section F): (1-18)

Special Responsivity Factors (Section G): (1-8)

Program Placement Decision (Section H): 0 not checked   1   Institution/Secure/Open Custody

2   Release Recommendation   3   Community

Security/Supervision Level: 0 less than minimum 1 Minimum 2 Medium 3 Maximum 4 Yes

Assessor Code of Second Administration of LSI-OR: (1-17)

Assessment Date #2

INDEX OFFENCE VARIABLES

Index Offence Date

Index Offence Sentence Length

Index Offence Severity: (1-26)

Index Offence Level: 1 Level I   2 Level II

Index Offence Types

Index Offence Total Number Convictions

Index Offence Open Custody: 0   No   1   Yes

Index Offence Probation: 0   No   1   Yes

Index Offence Suspended Sentence: 0   No   1   Yes

Index Offence Conditional Sentence: 0   No   1   Yes

Index Offence Intermittent Sentence: 0   No   1   Yes

VARIABLES RELATED TO FOLLOW-UP TIME

Follow-up Start Date: Institutionals: Date of release from institution.   Probationers: Date of

Probation Intake

CPIC Date

Total Risk Time/Follow-up Time: (days)

In-To-Risk Percentage: (proportion of Time-In to Time-Out x 100)

Release Mode: 0 not applicable 1 Probation Following Incarceration 2 Paroled

3 Straight Release 4 Federal Penitentiary

Total Time Served: (days)

VARIABLES RELATED TO FIRST RECIDIVISM

Time to First Reconviction: (days)

Date of First Recidivism

Recidivism #1 Severity: (1-26)

Recidivism #1 Level: 1 Level I 2 Level II

Recidivism #1 Sentence Length: (days)

Recidivism #1 Total Number of Types

Recidivism #1 Convictions

Recidivism #1 Probation:	0 No	1 Yes
Recidivism #1 Suspended Sentence:	0 No	1 Yes
Recidivism #1 Fine:	0 No	1 Yes
Recidivism #1 Conditional Sentence:	0 No	1 Yes
Recidivism #1 Intermittent Sentence:	0 No	1 Yes
Recidivism #1 Open Custody:	0 No	1 Yes

VARIABLES RELATED TO ALL RECIDIVISM SETS COMBINED

Recidivism: 0 No 1 Yes

Recidivism: General/Violent: 0 None 1 General 2 Violent 3 Unknown

Any Violent Recidivism Based on Recidivism #1 & Subsequent Recidivism Sets: 0   None or

General   1   Violent

Recidivism Total Number of Sets

Recidivism Sets Most Severe Offence Severity: (1-26)

Recidivism Sets Most Severe Offence Level: 1   Level I   2   Level II

Recidivism Sets Total Number of Types

Recidivism Sets Total Number of Convictions

Recidivism Sets Total Sentence Length: (days)

Recidivism Most Severe Offence Suspended Sentence: 0   No   1   Yes

Recidivism Most Severe Offence Fine Received: 0   No   1   Yes

Recidivism Most Severe Offence Probation Received: 0   No   1   Yes

Recidivism Most Severe Offence Conditional Sentence: 0   No   1   Yes

Recidivism Most Severe Offence Intermittent Sentence: 0   No   1   Yes

Recidivism Most Severe Offence Open Custody: 0   No   1   Yes

Recidivism Most Severe Offence Federal Penitentiary: 0   No   1   Yes

Total Withdrawn Charges

Outstanding Charges: 0   No   1   Yes

Total Outstanding Charges

Outstanding Charges Most Severe Offence Severity: (1-26)

Outstanding Charge Most Severe Offence Level: 1   Level I   2   Level II

Total Number of Remands

Appendix F: Nonstatistical Analysis Override

Nonstatistical Analysis of the Override.

Since there were only 19 LSI-OR's for which the override was used, a nonstatistical analysis was conducted. There were no apparent differences in the context for which the LSI-OR was administered for adjusting the risk level of an offender either up or down. The override to lower an offender's risk level was used in a total of 9 cases for which 7 cases were lowered by only one risk level, while the remaining 2 were lowered by 2 risk levels. When an assessor used the override to lower the obtained risk level, an association between the strengths and risk level was expected. According to the LSI-OR manual, strengths can be used by an assessor to indicate circumstances of exceptional quality, which are judged by the assessor to impact an offender's criminogenic behavior. Therefore, endorsing a strength could provide the assessor a rationale for lowering a risk level. It was hypothesized that 'positive comments' would provide a similar rationale for an assessor.

In the 9 cases for which the override was used to lower an offender's risk level, only one assessor indicated above average strengths (3, M = 1.67, SD = 1.95) for the offender, positive comments were indicated by 7 of 9 assessors, and an absence of negative comments was noted in all cases. It was suspected that a less than average Specific Risk/Need Factors score (M = 2.31, SD = 1.99) would be another possible reason for endorsing to a lower risk level. In 4 of 9 cases, a below average Specific Risk/Need total score was obtained, however, in another 4 of 9 cases, an above average total Specific Risk/Need Factors score was obtained. An examination of the index offence revealed that 2 of the index offences were violent offences, specifically, an Assault and a Sexual offence. The offender with the sexual offence was the same offender who had an above average total number of strengths. Two offenders had Break and Enter offences, two others had Theft related offences, another an Assault offence, another a Breach of Court Order offence, one a Drug possession related offence, and another an Impaired Driving offence. As a result, no apparent trend could be established, other than the weak association with positive comments.

The override was used in 10 of 698 cases in order to raise the risk level of an offender. It was speculated that an absence of strengths, a presence of negative comments, more serious index offences committed compared to those offenders whose risk levels were lowered, and above average Specific Risk/Need Factor total scores were possible trends associated with raising the risk level of an offender. There was an absence of strengths in 7 of 10 cases. However, in the 3 remaining cases, the assessor indicated above average strengths for the offender. In 3 cases above average number of strengths were endorsed, while two of the offenders had average number of strengths endorsed. Therefore, 5 cases had strengths noted either at an above or average number. In spite of strengths being endorsed, in one of these cases, at least 3 negative comments were also recorded. The offender also had an assault as the index offence. In general, only 5 of 10 cases had negative comments, which could be related to raising the risk level of the offender.

The best possible explanation for raising the risk level, according to the data, comes from a review of the index offence, for which 7 of 10 cases were violent offences, and another had a history of sexual abuse. In 5 of 10 cases, there were above average ($\underline{M}$ = 2.31, $\underline{SD}$ = 1.99) Specific Risk/Need Factors endorsed, one of which also had corresponding Other Client Issues indicated. In 3 additional cases, Other Client Issues were also endorsed, 3 out of which had corresponding sexual abuse histories. Two of the offenders had personality diagnoses, while one was recommended to be assessed for antisocial pattern. In 9 of 10 of the cases, the risk level was raised by one risk level, and in one case the risk level was raised by two levels from very low to medium. In 5 of 10 cases the offender was raised to a medium risk level, while in two cases the offender was raised to a high level. Both of the offenders raised to a very high level had histories of sexual and violent sexual assaults, one of which additionally had a diagnosis of psychopathy. Since the $\underline{n}$ was very small, these findings were nongeneralizable. It is speculated that since the LSI-OR was new to assessors at the time of the data collection, the assessors were inexperienced and consequently, uncertain about the manner in which

to systematically use the override. According to Ministry staff, the override is currently being endorsed approximately 15% of the time across the province in community and institutional settings (Kathy Underhill, personal communication, November 1998).

Appendix G: Analyses of Recidivists Only

Analyses of Recidivists Only

According to Table G1, of all adult male recidivists, 55.4% recidivated nonviolently, compared

to 44.3% who recidivated violently. Specifically, of all incarcerated male recidivists 56.2% recidivated

nonviolently, while 43.8% recidivated violently. For the community recidivists, 51.6% recidivated

nonviolently, while 46.8% recidivated violently. A chi-square test of independence revealed

nonsignificant group differences in violent and nonviolent recidivism (χ^2 = 4.83, df = 2, p = .089).

Interestingly, these rates indicate that although institutionals recidivate more often than community

based offenders, when the community offenders do recidivate, they tend to recidivate violently in

comparison to institutional recidivists.

Table G1

General & Violent Recidivism Rates by Group

	Adult male recidivists		Institutional recidivists		Community recidivists	
	N	%	n	%	n	%
General recidivism	190	55.4	158	56.2	32	51.6
Violent recidivism	152	44.3	123	43.8	29	46.8
Unknown recidivism	1	0.3	---	---	1	1.6
Total	343	100	281	100	62	100

A number of comparison tests were performed on the recidivist group in order to determine

whether institutional and community recidivists differ on a number of other outcome variables.

Institutional and community recidivists were compared on a number of outcome variables, those related

to follow-up time (Table G2), a set related to their first conviction during the follow-up (Table G3 and

G4), and a third set related to all subsequent recidivating events (Table G5) through the follow-up. A

significant difference was found for length of follow-up time with community recidivists having a greater mean follow-up time compared to incarcerated recidivists (1007.23 vs 911.00, $t=$ 8.41, $\underline{df}$ = 132.58, $\underline{p}$ < .001). The two types of recidivists also differed in their length of time to first reconviction, where institutional recidivists tended to reoffend sooner than the community offenders (412.00 vs 317.40, $\underline{t}$ = 2.38, $\underline{df}$ = 77.25, $\underline{p}$ = .02).

Table G2

Group Comparisons for Recidivists on Follow-up Variables

	Adult males N = 343		Institutionals n = 281		Community n = 62	
	M	SD	M	SD	M	SD
Risk time (days)	928.40	112.19	911.00	111.93	1007.23	73.16
Time served	225.34	215.73	244.59	213.02	138.08	207.82
In-to-risk % [1]	24.58	23.49	27.02	23.48	13.48	20.28
Time to first reconviction	334.50	240.52	317.40	223.87	412.00	294.70

Note. [1] In-to-risk % refers to the percentage of incarceration time as a function of risk time.

From Table G3 and G4, it can be seen that recidivists, whether institutional or community, did not differ with regards to Level or offence severity for first reconviction (21.7% vs 14.5%, χ^2 = 1.489, $\underline{df}$ = 1, $\underline{p}$ = .222; 78.3 vs 83.9%, χ^2 = 17.920, $\underline{df}$ = 17, $\underline{p}$ = .394, respectively) or with respect to sentence length, or total number of convictions received for the first set of reconvictions ($\underline{t}$ = 1.04, $\underline{df}$ = 70.33, $\underline{p}$ = .301; $\underline{t}$ = -1.62, $\underline{df}$ = 341, $\underline{p}$ < .001, respectively).

A series of chi-square tests of independence on a number of disposition variables related to first reconviction yielded only a significant difference for suspended sentences (3.9% vs 17.7%, χ^2 =

16.1786, $\underline{df}$ = 1, $\underline{p}$ < .001), that is, community recidivists received greater numbers of suspended sentences compared to institutional recidivists. These frequencies can be found in Table G4.

Table G3

Group Comparisons for Recidivists on Outcome Variables Related to First Reconviction

	Adult males $\underline{N}$ = 343		Institutionals $\underline{n}$ = 281		Community $\underline{n}$ = 62	
	$\underline{M}$	$\underline{SD}$	$\underline{M}$	$\underline{SD}$	$\underline{M}$	$\underline{SD}$
Sentence length	155.46	255.38	165.95	264.67	107.92	203.26
Convictions	2.33	2.66	2.24	2.29	2.77	3.94
Types	1.86	1.29	1.84	1.27	1.95	1.38
Offence severity	11.15	4.83	11.19	4.97	10.97	4.17

Table G4

Group Frequencies of Disposition Variables and Offence Level for First Reconviction

Disposition & Level	Adult males n = 343		Institutionals n = 281		Community n = 62	
	n	%	n	%	N	%
Conditional sentence	11	3.2	8	2.8	3	4.8
Fine	43	12.5	33	11.7	10	16.1
Suspended sentence	22	6.4	11	3.9	11	17.7
Intermittent sentence	12	3.5	9	3.2	3	4.8
Probation	116	33.8	85	30.2	31	50.0
Sentenced	256	74.6	220	78.3	36	58.1
Level I	70	20.4	61	21.7	9	14.5
Level II	272	79.3	220	78.3	52	83.9

With respect to dispositions received for subsequent recidivism events as found in Table G5, recidivists did not differ except for community recidivists who tended to receive probation and suspended sentences more often than institutional recidivists (41.4% vs 38.8%, χ^2 = 4.363, df = .1, p = .037; 8.2% vs 21.0%, χ^2 = 8.835, df = 1, p < .003, respectively). Recidivists, whether from community or institution, did not differ in terms of Level I or Level II offences nor in most serious reoffence severity for which they were reconvicted (χ^2 = 1.489, df = 1, p = .222; 8.83% vs 10.11%; χ^2 = 28.407, df = 18, p = .056, respectively) although most serious offence did approach significance indicating that institutionals tended to be reconvicted of more serious offences.

Table G5

Group Frequencies of Disposition Variables and Offence Level for All Recidivism Events

Disposition & Level	Adult males n = 343		Institutionals n = 281		Community n = 62	
	n	%	n	%	n	%
Conditional sentence	19	5.5	16	5.7	3	4.8
Fine	56	16.3	45	16.0	11	17.7
Suspended sentence	36	10.5	23	8.2	13	21.0
Intermittent sentence	22	6.4	16	5.7	6	9.7
Probation	142	41.4	109	38.8	33	53.2
Sentenced	275	80.2	236	84.0	39	62.9
Level I	70	20.4	61	21.7	9	14.5
Level II	272	79.3	220	78.3	52	83.9

Institutional recidivists were reconvicted of a significantly greater number of different types of offences (t = -2.49, df = 102.91, p = .014), received longer sentence lengths (t = -4.17, df = 141.52, p < .001), spent more time incarcerated during the follow-up time (t = -3.58, df = 341, p < .001), and received more remands (t = -2.76, df = 333, p = .006) than community recidivists. Furthermore, the In-to-Risk percentage was significantly greater for institutional recidivists than community recidivists (t = -4.62, df = 100.49, p < .001). These findings can be found in Table G6. No significant differences for institutional and community recidivisits were found for the total number of reconvictions (t = -1.11, df = 341, p = .270) or total number of sets of recidivism (t = -1.74, df = 341, p = .082).

Table G6

Group Comparisons for Recidivists on Variables Related to All Recidivism Events

	Adult males N = 343		Institutionals N = 281		Community n = 62	
	M	SD	M	SD	M	SD
Sentence length	344.57	441.81	378.98	462.63	188.61	285.95
Convictions	4.98	4.77	5.11	4.51	4.37	5.81
Sets	2.29	1.86	2.37	1.94	1.92	1.42
Offence severity	9.06	4.63	8.83	4.63	10.11	4.52
Types	3.41	2.42	3.54	2.47	2.79	2.07
Remands	1.63	1.99	1.77	2.08	1.00	1.40
Withdrawn [1]	1.13	2.29	1.05	2.06	1.48	3.12
Outstanding [1]	.96	1.93	.36	.48	.74	1.47
Outstanding [1] severity	3.63	5.80	3.77	5.91	2.98	5.27

Note. [1] refers to Charges.

The most serious recidivating offence for recidivists was examined and the results are provided in Table G7. The most common recidivating offence for all recidivists was Break and Enter related offences committed by 21.9% of the recidivists. Theft and related possession offences were the next most frequent recidivating offences at 16.0% followed by Assault and Related Offences at 13.4%.

Comparisons between the institutional and community groups were also examined. A chi-square test of independence revealed that, in general, institutionals recidivated more severely than the community males (χ^2 = 57.2601, df = 19, p < .001, N = 630). Specific comparisons of proportions were examined more closely. The following offence proportions were tested and institutionals were found to

commit the following offences more frequently than community males: Break and Enter related offences (24.2% vs. 11.3%, χ^2 = 49.6133, $\underline{df}$ = 1, $\underline{p}$ < .001, $\underline{n}$ = 75); Weapons (4.6% vs. 1.6%, χ^2 = 10.2857, $\underline{df}$ = 1, $\underline{p}$ < .001, $\underline{n}$ = 14); Fraud (5.7% vs. 4.8%, χ^2 = 8.8947, $\underline{df}$ = 1, $\underline{p}$ = .003, $\underline{n}$ = 19); Arson (2.5% vs. 1.6%, χ^2 = 4.5000, $\underline{df}$ = 1, $\underline{p}$ = .004, $\underline{n}$ = 8); Drug Possession (3.6% vs. 3.2%, χ^2 = 5.3333, $\underline{df}$ = 1, $\underline{p}$ < .021, $\underline{n}$ = 12); and Criminal Code offences (6.1% vs. 1.6%, χ^2 = 14.2222, $\underline{df}$=1, $\underline{p}$ < .001, $\underline{n}$ = 18). For the following offence categories, the institutionals were found to have committed less of these offences compared to the community offenders: Miscellaneous against the Person (6.4% vs. 8.1%, χ^2 = 7.3478, $\underline{df}$ =1, $\underline{p}$ = .007, $\underline{n}$ = 23); Theft (15.7% vs. 17.7%, χ^2 = 19.8000, $\underline{df}$ = 1, $\underline{p}$ < .001, $\underline{n}$ = 55); and Breaches of Court Orders (3.9% vs. 4.8%, χ^2 = 4.5714, $\underline{df}$ = 1, $\underline{p}$ < .033, $\underline{n}$ = 17).

Table G7

Rates of Recidivism for Each Offence Category

Offence	All adult males n = 343		Institutionals n = 281		Community n = 62	
	n	%	n	%	n	%
Homicide & related	1	0.3	1	0.4	---	---
Serious violent	20	5.8	18	6.4	2	3.2
Break & enter & related	75	21.9	68	24.2	7	11.3
Nonviolent sexual	1	0.3	1	0.4	---	---
Traffic import drug	19	5.5	13	4.6	5	8.1
Weapon	12	3.5	13	4.6	1	1.6
Fraud & related	20	5.8	16	5.7	3	4.8
Misc. against the person	23	6.7	18	6.4	5	8.1
Theft/possession	55	16.0	44	15.7	11	17.7
Assault & related	46	13.4	29	10.3	17	27.4
Arson & property damage	8	2.3	7	2.5	1	1.6
Obstruction of justice	5	1.5	5	1.8	---	---
Drug possession	12	3.5	10	3.6	2	3.2
Criminal code traffic	18	5.2	17	6.1	1	1.6
Breach of court order	14	4.1	11	3.9	3	4.8
Drinking driving	10	2.9	8	2.8	2	3.2
Other federal statute	1	0.3	1	0.4	---	---
Parole violations	2	0.6	1	0.4	1	1.6
Unknown	1	0.3	---	---	1	1.6
Total recidivism rate	343	100	281	100	61	100

A number of disposition outcome variables were examined for their intercorrelations for each group. They can be found in Table G8, G9, and G10. As can be seen, sentence length was significantly associated with federal penitentiary dispositions and negatively associated with intermittent and conditional sentences. Community supervision was significantly negatively associated with a federal penitentiary disposition and as expected, positively associated with sentence length, suspended sentence, and intermittent sentence.

Table G8

Correlation Coefficients Between Disposition Variables for Adult Male Recidivists n = 343

	Fed pen	Intermit	Cond	Sent length	Fine	Probation	Suspended
Federal penitentiary	X						
Intermittent sentence	-.072	X					
Conditional sentence	-.066	-.011	X				
Sentence length	.637 ***	-.131 *	-.093	X			
Fine	-.028	-.019	.065	-.075	X		
Probation	-.138 **	.070	.211 ***	-.014	.061	X	
Suspended sentence	-.094	-.090	.083	-.099	-.023	.369 ***	X

*$p \leq .05$, **$p \leq .01$, ***$p \leq .001$.

Table G9

Correlation Coefficients Between Disposition Variables for Institutional Recidivists n =281

	Fed pen	Intermit	Cond	Sent length	Fine	Probation	Suspended
Federal penitentiary	X						
Intermittent sentence	-.070	X					
Conditional sentence	-.070	.006	X				
Sentence length	.641 ***	-.126 *	-.091	X			
Fine	-.013	-.065	.102	-.064	X		
Probation	-.115 *	.025	.214 ***	.017	.051	X	
Suspended sentence	-.085	-.073	.151 **	-.052	.011	.375 ***	X

$^*p \le .05$, $^{**}p \le .01$, $^{***}p \le .001$.

Table G10

Correlation Coefficients Between Disposition Variables for Community Recidivists n = 62

	Fed pen	Intermit	Cond	Sent length	Fine	Probation	Suspended
Federal penitentiary	X						
Intermittent sentence	-.074	X					
Conditional sentence	-.051	-.074	X				
Sentence length	.651 ***	-.132	-.144	X			
Fine	-.105	.134	-.105	-.143	X		
Probation	-.241	.198	.211	-.077	.097	X	
Suspended sentence	-.116	-.169	-.116	-.211	-.136	.324 **	X

$^*p \le .05$, $^{**}p \le .01$, $^{***}p \le .001$.

Violent and Nonviolent Recidivists. According to Table G11, of all recidivists 20.5% were reconvicted of Level I offences, while 79.5% were reconvicted of Level II offences. Similar results were found for the incarcerated offenders. For the community based offenders, there were slightly fewer recidivists reconvicted of Level I offences. A chi-square test of independence for setting by Level of offence was significant (χ^2 = 6.02, $\underline{df}$ = 2, $\underline{p}$ = .049, $\underline{n}$ = 342) indicating a positive association between level of offences and setting. Additionally, level of offences is differentiated regardless of whether an offender is from the community or an institutional setting.

Table G11

Recidivism by Offence Level and Group

Level	Adult male recidivists		Institutional recidivists		Community recidivists	
	$\underline{n}$	%	$\underline{n}$	%	$\underline{n}$	%
I	70	20.5	61	21.7	9	14.8
II	272	79.5	220	78.3	52	85.2
Total	342	100	281	82.2	61	17.8

Violent and nonviolent recidivists were compared on time to first reconviction followed by comparisons on the percentage of incarceration time to risk time. For time to first reconviction, $\underline{t}$-tests revealed nonsignificant differences whether for violent or nonviolent offender ($\underline{t}$ = -.05, $\underline{df}$ = 340, $\underline{p}$ = .960). In order to assess violent reoffending further, an examination of time to first reconviction by Level I and Level II offenders was conducted. Consistent with the previous findings, a $\underline{t}$-test revealed a nonsignificant difference ($\underline{t}$ = 1.67, $\underline{df}$ = 340, $\underline{p}$ = .096, $\underline{n}$ = 341).

Similar results were found when violent/nonviolent and Level 1/Level II offenders by setting were compared on time to first reconviction. As can be seen in Table G12, for the institutional (t = 1.18, df = 279, p = .241) and community (t = -1.93, df = 52.53, p = .059) groups, no significant difference on time to first reconviction was found for violent/nonviolent reoffenders, however, the mean difference did approach significance for the community group. Time to first reconviction for Level I and Level II offenders was nonsignificant for the community reoffenders (t = -.96, df = 59, p = .340) but significant for the institutional offenders (t = 2.23, df = 279, p = .027), that is, Level I institutional offenders recidivated more quickly than Level II offenders.

Table G12

Violent/Nonviolent & Level I and II Recidivist Comparisons on Time to First Reconviction by Group

	Adult males	Institutionals	Community
	$\underline{n}$ = 343	$\underline{n}$ = 281	$\underline{n}$ = 62
Violent recidivists			
$\underline{M}$	333.23	299.62	476.14
$\underline{SD}$	250.28	220.35	316.43
$\underline{N}$	152	123	29
Nonviolent recidivists			
$\underline{M}$	331.98	331.25	335.59
$\underline{SD}$	228.71	226.30	244.02
$\underline{N}$	190	158	33
Level I recidivists			
$\underline{M}$	290.31	261.23	487.44
$\underline{SD}$	234.47	207.29	318.97
$\underline{N}$	70	61	9
Level II recidivists			
$\underline{M}$	343.44	332.98 *	387.69
$\underline{SD}$	238.34	226.24	282.14
$\underline{N}$	272	220	52

Note. * 332.98 is significantly greater than 261.23, $\underline{p} \leq .05$.

An examination of the percentage of incarceration time to risk time variable (Table G13), for violent and nonviolent recidivists, revealed a significant mean difference in the proportion of time that a violent reoffender spent incarcerated compared to a nonviolent reoffender (t = -5.87, df = 94.52, $p <$ .001). For Level I and Level II recidivism, the results were replicated (t = -5.87, df = 94.52, $p <$ .001).

Table G13

Violent/Nonviolent & Level I and II Recidivist Comparisons on In-to-Risk Time Percentage by Group

	Adult males	Institutionals	Community
	n = 343	n = 281	n = 62
Violent recidivists			
M	28.29	31.90 **	14.24
SD	24.00	23.70	21.98
N	152	123	29
Nonviolent recidivists			
M	21.71	23.23	12.94
SD	22.74	22.65	18.90
N	190	158	33
Level I recidivists			
M	38.66	41.19 ***	21.53
SD	25.99	25.10	26.86
N	70	61	9
Level II recidivists			
M	21.02	23.10	12.25
SD	21.43	21.46	19.09
N	272	220	52

Note. ** 31.90 is significantly greater than 23.20, p = .002. *** 41.19 is significantly greater than 23.10, p ≤ .001.

The mean percentage of incarceration time as a function of risk time for violent/nonviolent and Level I/Level II reoffenders for the community group were nonsignificant (t = 0.25, df = 59, p < .001; t = -1.26, df = 59, p = .211, respectively). For the institutional group, however, the mean percentage of incarceration time as a function of risk time for either violent/nonviolent and Level I/Level II reoffenders was significant (t = -3.12, df =279, p =.002, t = -5.61, df = 279, p < .000, respectively).

A review of violent and nonviolent recidivism by Level I and Level II offence categories was also conducted for the male offender group and then for each of institutional and community groups in order to explore the relationship between violent recidivism and Level of offence. All chi-square tests of independence generated significant findings (χ^2 = 93.699, df = 1, p < .001, n = 342, r = .523, p < .001), (χ^2 = 83.342, df = 1, p < .001, n = 281 r,= .545, p < .001), (χ^2 = 11.650, df = 1, p < .001, n = 61 r = .437, p < .001, respectively) and can be found in Tables G14, G15, and G16. From these findings, it is evident that the level categories are not pure categories, that is, all Level I offences are not violent offences, and all Level II offences are not nonviolent offences. In other words, there is overlap between the Level and violence categories. There are some violent offences which are not considered Level I offences and there are some nonviolent offences which are considered Level I offences. For example, assault, arson, or weapons offences are considered violent offences according to the Ministry's 26 offence categories, but are not considered Level I offences. An impaired driving offence causing death or bodily harm, however, provides an example of an offence which would be considered a nonviolent offence according to the Ministry category system and is considered a Level I offence.

Table G14

Violent/Nonviolent Recidivism by Offence Level for Adult Males n = 342

Level	Violent recidivists		Nonviolent recidivists		Total	
	n	%	n	%	n	%
I	67	44.1	3	1.6	70	20.5
II	85	55.9	187	98.4	272	79.5
Total	152	100	190	100	342	100

Table G15

Violent/Nonviolent Recidivism by Offence Level for Institutionals n = 281

Level	Violent recidivists		Nonviolent recidivists		Total	
	n	%	n	%	n	%
I	58	47.2	3	1.9	61	21.7
II	65	52.8	155	98.1	220	78.3
Total	123	100	158	100	281	100

Table G16

Violent/Nonviolent Recidivism by Offence Level for Community n = 61

Level	Violent recidivists		Nonviolent recidivists		Total	
	n	%	n	%	n	%
I	9	31	---	--	9	14.8
II	20	69	32	100	52	85.2
Total	29	100	32	100	61	100

Appendix H: Correlations Between Outcome Variables

Correlations Between Outcome Variables

A Pearson intercorrelation matrix is provided in Table H1, of the association between all of the recidivism variables. All variables were significantly associated at the .001 alpha level and in the desired direction except for variables associated with outstanding charges. For Any Recidivism and Level category r = .896, while with the most serious or subsequent recidivating events r = .843 and .798, respectively. Very high associations surpassing .80 were reached by the number of recidivating events/sets with number of different types of offences (r = .807) as well as with total convictions (r = .802), and offence severity with most serious first offence (r = .876). Similarly, high associations were observed between types of recidivating offences and convictions (r = .874). Total charges also had similarly high associations with the total number of recidivating events/sets (r = .832), with recidivism types (r = .858), total convictions (r = .931), and total number of remands (r = .807). Weak associations of Any Recidivism were observed with outstanding charges severity (r = .075, p < .05). The findings were replicated and nonsignificant with violent recidivism and outstanding charges (r = .050). For outstanding charges and related variables, in general, the association was weak with other recidivism variables.

Table H1

Pearson Correlations Between Recidivism Variables for Adult Males N = 630

	Recid	Violent recid	Severity	Level	Types	Convictions.	Sent length +
Recid	X						
Violent recid	.517 ***	X					
Severity +	.843 ***	.382 ***	X				
Level +	.896 ***	.662 ***	.733 ***	X			
Types +	.699 ***	.400 ***	.464 ***	.652 **	X		
Convictions +	.510 ***	.230 ***	.278 ***	.452 **	.787 ***	X	
Sent length +	.381 ***	.135 ***	.141 ***	.357 **	.443 ***	.465 ***	X
Severity ++	.798 ***	.291 ***	.876 ***	.646 **	.487 ***	.317 ***	.193 ***
Levels ++	.896 ***	.662 ***	.732 ***	1.00 ***	.652 ***	.452 ***	.357 ***
Types ++	.690 ***	.471 ***	.541 ***	.704 **	.677 ***	.538 ***	.268 ***
No. of sets ++	.640 ***	.372 ***	.563 ***	.619 **	.420 ***	.296 ***	.140 ***
Convictions ++	.576 ***	.359 ***	.422 ***	.572 **	.619 ***	.679 ***	.274 ***
Sent length ++	.466 ***	.294 ***	.324 ***	.508 **	.385 ***	.337 ***	.582 ***
Charges +++	.120 **	.050	.075	.105 **	.101 **	.054	.021
Severity +++	.081 *	.085 *	.026	.098 *	.102 **	.044	.021
Levels +++	.159 ***	.136 ***	.090 *	.179 **	.187 ***	.113 **	.040
Remands	.456 ***	.309 ***	.371 ***	.457 **	.358 ***	.258 ***	.120 **
Withdrawn	.267 ***	.154 ***	.206 ***	.289 **	.194 ***	.165 ***	.122 **
Time served	.569 ***	.391 ***	.372 ***	.616 **	.491 ***	.409 ***	.496 ***
In-to-risk %	.569 ***	.392 ***	.371 ***	.621 **	.484 ***	.403 ***	.506 ***
Total charges	.587 ***	.377 ***	.445 ***	.593 **	.558 ***	.562 ***	.239 ***

(table continues)

Note. +refers to First Recidivism, ++refers to Recidivism sets, +++refers to Outstanding charges; * p ≤.05; **p ≤.01; ***p ≤.001

	Severity ++	Levels ++	Types ++	No. of sets ++	Convictions ++	Sent length ++
Recid						
Violent recid						
Severity +						
Level +						
Types +						
Convictions +						
Sent length +						
Severity ++	X					
Levels ++	.646 ***	X				
Types ++	.368 ***	.704 ***	X			
No. of sets ++	.353 ***	.619 ***	.807 ***	X		
Convictions ++	.281 ***	.572 ***	.874 ***	.802 ***	X	
Sent length ++	.161 ***	.508 ***	.585 ***	.570 ***	.591 ***	X
Charges +++	.035	.105 **	.103 ***	.112 **	.065	.013
Severity +++	-.009	.098 **	.064	.094 *	.056	.005
Levels +++	.042	.179 ***	.165 ***	.180 ***	.140 ***	.053
Remands	.180 ***	.457 ***	.663 ***	.775 ***	.676 ***	.422 ***
Withdrawn	.105 **	.289 ***	.315 ***	.265 ***	.269 ***	.292 ***
Time served	.214 ***	.616 ***	.698 ***	.655 ***	.675 ***	.778 ***
In-to-risk %	.214 ***	.621 ***	.689 ***	.633 ***	.654 ***	.777 ***
Total charges	.265 ***	.593 ***	.858 ***	.832 ***	.931 ***	.595 ***

(table continues)

Note. + refers to First Recidivism, ++ refers to Recidivism sets, +++ refers to Outstanding charges;
* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

	Charges +++	Severity +++	Levels +++	Remands	Withdrawn
Recid					
Violent recid					
Severity +					
Level +					
Types +					
Convictions +					
Sent length +					
Severity ++					
Levels ++					
Types ++					
No. of sets ++					
Convictions ++					
Sent length ++					
Charges +++	X				
Severity +++	.479 ***	X			
Levels +++	.685 ***	.757 ***	X		
Remands	.201 ***	.152 ***	.247 ***	X	
Withdrawn	.099 **	.023	.181 ***	.290 ***	X
Time served	.102 **	.068	.159 ***	.597 ***	.313 ***
In-to-risk %	.104 **	.070	.159 ***	.579 ***	.311 ***
Total charges	.132 ***	.092 *	.222 ***	.807 ***	.540 ***

(table continues)

Note. + refers to First Recidivism, ++ refers to Recidivism sets, +++ refers to Outstanding charges;
* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

	Time served	In-to risk %	Charges
Recid			
Violent recid			
Severity +			
Level +			
Types +			
Convictions +			
Sent length +			
Severity ++			
Levels ++			
Types ++			
No. of sets ++			
Convictions ++			
Sent length ++			
Charges +++			
Severity +++			
Levels +++			
Remands			
Withdrawn			
Time served	X		
In-to-risk %	.991 ***	X	
Total charges	.706 ***	.685 ***	X

Note. + refers to First Recidivism, ++ refers to Recidivism sets, +++ refers to Outstanding charges; * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

The above intercorrelations were examined for each group. For the institutional group, the results are reported in Table H2 and similar patterns were observed.

For the community sample, similar patterns were noted, with the addition that total time served during the follow-up as well as the percent of incarceration time to risk time variable associated highly with the sentence length for either first reconviction or subsequent reconvictions (r = .867, .957, respectively). However, the outstanding charges variables did not meet the significance level of even .05. These findings can be found in Table H3. It should be noted that the association between time served variable and the in-to-risk percentage variable surpassed .90 across groups because the latter variable is derived from the former variable.

Table H2

Pearson Correlations Between Recidivism Variables for Institutionals n = 454

	Recid	Violent recid	Severity	Level	Types	Convictions	Sent length +
Recid	X						
Violent recid	.478 ***	X					
Severity +	.813 ***	.323 ***	X				
Level +	.877 ***	.649 ***	.691 ***	X			
Types +	.668 ***	.383 ***	.404 ***	.614 ***	X		
Convictions +	.518 ***	.236 ***	.245 ***	.452 ***	.780 ***	X	
Sent length +	.362 ***	.113 *	.104 *	.325 ***	.431 ***	.504 ***	X
Severity ++	.763 ***	.214 ***	.853 ***	.588 ***	.428 ***	.291 ***	.178 ***
Levels ++	.877 ***	.649 ***	.691 ***	1.00	.614 ***	.452 ***	.325 ***
Types ++	.664 ***	.458 ***	.503 ***	.685 ***	.624 ***	.517 ***	.225 **
No. of sets ++	.604 ***	.333 ***	.526 ***	.588 ***	.363 ***	.268 ***	.090 *
Convictions ++	.574 ***	.352 ***	.417 ***	.577 ***	.557 ***	.639 ***	.240 ***
Sent length ++	.452 ***	.279 ***	.302 ***	.493 ***	.357 ***	.351 ***	.550 ***
Charges +++	.156 ***	.070	.104 *	.136 **	.114 **	.076	.019
Severity +++	.099 *	.114 *	.047	.121 **	.123 **	.053	.007
Levels +++	.173 ***	.183 ***	.112 *	.202 ***	.191 ***	.101 *	.028
Remands	.452 ***	.304 ***	.358 ***	.456 ***	.333 ***	.251 ***	.078
Withdrawn	.275 ***	.191 ***	.215 ***	.308 ***	.195 ***	.212 ***	.132 **
Time served	.569 ***	.403 ***	.356 ***	.619 ***	.473 ***	.438 ***	.422 ***
In-to-risk %	.569 ***	.404 ***	.353 ***	.624 ***	.468 ***	.436 ***	.438 ***
Total charges	.579 ***	.379 ***	.436 ***	.594 ***	.496 ***	.531 ***	.199 ***

(table continues)

Note. + refers to First Recidivism, ++ refers to Recidivism sets, +++ refers to Outstanding charges;
* p ≤.05; ** p ≤.01; *** p ≤.001

	Severity ++	Levels ++	Types ++	No. of sets ++	Convictions ++	Sent length ++
Recid						
Violent recid						
Severity +						
Level +						
Types +						
Convictions +						
Sent length +						
Severity ++	X					
Levels ++	.588 ***	X				
Types ++	.300 ***	.685 **	X			
No. of sets ++	.286 ***	.588 ***	.784 ***	X		
Convictions ++	.239 ***	.577 ***	.872 ***	.814 ***	X	
Sent length ++	.127 **	.493 ***	.565 ***	.545 ***	.591 ***	X
Charges +++	.054	.136 **	.110 *	.127 **	.079	.013
Severity +++	.007	.121 **	.062	.102 *	.048	-.011
Levels +++	.051	.202 ***	.154 ***	.174 ***	.125 **	.043
Remands	.136 **	.456 ***	.660 ***	.791 ***	.702 ***	.397 ***
Withdrawn	.071	.308 ***	.354 ***	.280 ***	.330 ***	.348 ***
Time served	.181 ***	.619 ***	.703 ***	.652 ***	.705 ***	.750 ***
In-to-risk %	.181 ***	.624 ***	.690 ***	.625 ***	.681 ***	.747 ***
Total charges	.211 ***	.594 ***	.856 ***	.844 ***	.942 ***	.593 ***

(table continues)

Note. + refers to First Recidivism, ++ refers to Recidivism sets, +++ refers to Outstanding charges; * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

	Charges +++	Severity +++	Levels +++	Remands	Withdrawn
Recid					
Violent recid					
Severity +					
Level +					
Types +					
Convictions +					
Sent length +					
Severity ++					
Levels ++					
Types ++					
No. of sets ++					
Convictions ++					
Sent length ++					
Charges +++	X				
Severity +++	.468 ***	X			
Levels +++	.677 ***	.776 ***	X		
Remands	.216 ***	.158 ***	.223 ***	X	
Withdrawn	.051	.026	.122 **	.301 ***	X
Time served	.110 *	.060	.160 ***	.357 ***	.357 ***
In-to-risk %	.112 *	.062	.162 ***	.359 ***	.359 ***
Total charges	.136 **	.093 *	.189 ***	.554 ***	.554 ***

(table continues)

Note. + refers to First Recidivism, ++ refers to Recidivism sets, +++ refers to Outstanding charges;
* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

	Time served	In-to risk %	Charges
Recid			
Violent recid			
Severity +			
Level +			
Types +			
Convictions +			
Sent length +			
Severity ++			
Levels ++			
Types ++			
No. of sets ++			
Convictions ++			
Sent length ++			
Charges +++			
Severity +++			
Levels +++			
Remands			
Withdrawn			
Time served	X		
In-to-risk %	.990 ***	X	
Total charges	.732 ***	.707 ***	X

Note. + refers to First Recidivism, ++ refers to Recidivism sets, +++ refers to Outstanding charges; * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

Table H3

Pearson Correlations Between Recidivism Variables for Community n = 176

	Recid	Violent recid	Severity	Level	Types	Convictions	Sent length +
Recid	X						
Violent recid	.609 ***	X					
Severity +	.906 ***	.538 ***	X				
Level +	.934 ***	.693 ***	.813 ***	X			
Types +	.756 ***	.415 ***	.587 ***	.731 **	X		
Convictions +	.497 ***	.206 **	.337 ***	.469 **	.830 ***	X	
Sent length +	.396 ***	.171 *	.177 *	.414 **	.464 ***	.418 ***	X
Severity ++	.876 ***	.495 ***	.944 ***	.778 **	.606 ***	.355 ***	.184 **
Levels ++	.934 ***	.693 ***	.813 ***	1.00	.731 ***	.460 ***	.414 ***
Types ++	.737 ***	.481 ***	.593 ***	.709 **	.864 ***	.662 ***	.376 ***
No. of sets ++	.740 ***	.500 ***	.646 ***	.681 **	.595 ***	.396 ***	.289 ***
Convictions ++	.521 ***	.334 ***	.351 ***	.484 **	.766 ***	.784 ***	.359 ***
Sent length ++	.472 ***	.322 ***	.289 ***	.506 **	.494 ***	.372 ***	.785 ***
Charges +++	.012	-.028	-.029	-.002	.053	.005	.017
Severity +++	.009	-.027	-.072	.006	.023	.016	.066
Levels +++	.143	-.002	.038	.136	.183 *	.139	.103
Remands	.392 ***	.267 **	.313 ***	.351 **	.405 ***	.316	.238 **
Withdrawn	.280 ***	.073	.209 **	.286 **	.206 **	.089	.119
Time served	.471 ***	.270 ***	.273 ***	.493 **	.495 ***	.357 ***	.867 ***
In-to-risk %	.471 ***	.266 ***	.270 ***	.493 **	.489 ***	.352 ***	.877 ***
Total charges	.559	.323 ***	.393 ***	.526 **	.712 ***	.663 ***	.352 ***

(table continues)

Note. + refers to First Recidivism, ++ refers to Recidivism sets, +++ refers to Outstanding charges;
* p ≤.05; ** p ≤.01; *** p ≤.001

	Severity ↔	Levels ↔	Types ↔	No. of sets ↔	Convictions ↔	Sent length ↔
Recid						
Violent recid						
Severity +						
Level +						
Types +						
Convictions +						
Sent length +						
Severity ↔	X					
Levels ↔	.778 ***	X				
Types ↔	.541 ***	.709 ***	X			
No. of sets ↔	.546 ***	.681 ***	.880 ***	X		
Convictions ↔	.330 ***	.484 ***	.890 ***	.758 ***	X	
Sent length ↔	.209 **	.506 ***	.616 ***	.626 ***	.612 ***	X
Charges +++	-.030	-.002	.067	.040	.012	-.012
Severity +++	-.073	.006	.050	.040	.061	.062
Levels +++	.022	.136	.237 **	.236 **	.190 **	.127
Remands	.269	.351 ***	.594 ***	.605 ***	.562 ***	.436 ***
Withdrawn	.184 *	.286 ***	.271 ***	.286 ***	.153 *	.197 **
Time served	.211 **	.493 ***	.564 ***	.554 ***	.517 ***	.957 ***
In-to-risk %	.209 **	.493 ***	.555 ***	.546 ***	.507 ***	.952 ***
Total charges	.359 ***	.526 ***	.863 ***	.777 ***	.891 ***	.603 ***

(table continues)

Note. + refers to First Recidivism, ↔ refers to Recidivism sets, +++ refers to Outstanding charges;
* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

	Charges +++	Severity +++	Levels +++	Remands	Withdrawn
Recid					
Violent recid					
Severity +					
Level +					
Types +					
Convictions +					
Sent length +					
Severity ++					
Levels ++					
Types ++					
No. of sets ++					
Convictions ++					
Sent length ++					
Charges +++	X				
Severity +++	.513 ***	X			
Levels +++	.710 ***	.707 ***	X		
Remands	.146 *	.116	.402 ***	X	
Withdrawn	.213 **	.018	.306 ***	.346 ***	X
Time served	.063	.072	.199 **	.431 ***	.257 ***
In-to-risk %	.065	.080	.193 **	.430 ***	.259 ***
Total charges	.116	.071	.329 ***	.731 ***	.559 ***

(table continues)

Note. + refers to First Recidivism, ++ refers to Recidivism sets, +++ refers to Outstanding charges;
* p ≤.05; ** p ≤.01; *** p ≤.001

	Time served	In-to risk %	Charges
Recid			
Violent recid			
Severity +			
Level +			
Types +			
Convictions +			
Sent length +			
Severity ++			
Levels ++			
Types ++			
No. of sets ++			
Convictions ++			
Sent length ++			
Charges +++			
Severity +++			
Levels +++			
Remands			
Withdrawn			
Time served	X		
In-to-risk %	.999 ***	X	
Total charges	.557 ***	.550 ***	X

Note. + refers to First Recidivism, ++ refers to Recidivism sets, +++ refers to Outstanding charges;
* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

Appendix I: Multiple Regressions Analyses and Factor Variables

Multiple Regression Analyses and Factor Variables

The next series of multiple regression analyses repeated the use of the General and Specific

Risk/Need Factor subscales and the total strengths score as the independent variables and the

recidivism factors obtained from the principal components analysis, namely, Sentence Length/Time

Served Factor, Diversity/Severity of Offence Factor, and Outstanding Charges Factor as the dependent

variables. As can be seen from Table I1, the first multiple regression for Sentence Length/Time Served

yielded a multiple R of .3645, with Criminal History (Beta = .1780), Companions (Beta = .1382), and

Procriminal Attitudes (Beta = .1452) entering the regression equation. The R square was .1329;

therefore, these variables explained approximately 13% of the variance. The findings for the

institutional group can be found in Table I2, and the results were replicated with a multiple R of .3516

and the same variables as those for the adult male group entering the regression equation. Criminal

History had a corresponding Beta of .1363, Companions had a Beta of .1600, and Procriminal Attitudes

had a Beta of .1592. The R square was .1236 for the equation; therefore, the variables accounted for

12% of the variance. The findings for the community group can be found in Table I3, the multiple R

obtained was .2555, with Criminal History (Beta = .1620) and Leisure/Recreation (Beta = .1652)

entering the regression equation. The R square was .0653; therefore, the 2 variables accounted for

17% of the variance of the Sentence Length/Time Served Factor variable.

Table I1

Summary of Stepwise Regression Analysis for LSI-OR Subscale Predictors of Sentence Length/Time Served Factor for Adult Males N = 630

Variable	B	SE B	Beta
Step 1			
Criminal history	.1330	.0167	.3058 ***
Step 2			
Criminal history	.1026	.0179	.2361 ***
Procriminal attitudes	.1612	.0378	.1755 ***
Step 3			
Criminal history	.0774	.0196	.1780 ***
Companions	.1177	.0382	.1382 **
Procriminal attitudes	.1334	.0386	.1452 ***

Note. R = .3058 for Step 1. R = .3456 for Step 2. R = .3645 for Step 3. ** p ≤ .01. *** p ≤ .001.

Table I2

Summary of Stepwise Regression Analysis for LSI-OR Subscale Predictors of Sentence Length/Time Served Factor for Institutional Sample n = 454

Variable	B	SE B	Beta
Step 1			
Procriminal attitudes	.2858	.0471	.2770 ***
Step 2			
Companions	.1954	.0489	.1964 ***
Procriminal attitudes	.2034	.0507	.1971 ***
Step 3			
Criminal history	.0804	.0296	.1363 **
Companions	.1591	.0503	.1600 **
Procriminal attitudes	.1643	.0524	.1592 **

Note. R = .2770 for Step 1. R = .3300 for Step 2. R = .3516 for Step 3. ** $p \leq .01$. *** $p \leq .001$.

Table I3

Summary of Stepwise Regression Analysis for LSI-OR Subscale Predictors of Sentence Length/Time Served Factor for Community Sample n = 176

Variable	B	SE B	Beta
Step 1			
Leisure/recreation	.1681	.0623	.2008 **
Step 2			
Criminal history	.0497	.0232	.1620 *
Leisure/recreation	.1383	.0633	.1652 *

Note. R = .2001 for Step 1. R = .2555 for Step 2. * $p \leq .05$, ** $p \leq .01$.

In the next series of regressions, the Offence Diversity/Severity Factor was used as the dependent variable. For the adult male sample, the findings can be found in Table I4, and the multiple R for the regression equation was .2612, with Criminal History (Beta = .1744) and Substance Abuse (Beta = .1252) entering the regression equation. The R square was .0682 indicating that these 2 subscales accounted for 7% of the variance. The findings for the institutional sample can be viewed in Table I5, and the multiple R obtained was .2082 with Criminal History (Beta = .1329) and Companions (Beta = .1117) entering the regression equation. The R square was .0433 indicating that these 2 variables explained 4% of the variance of Offence Diversity/Severity Factor. Comparatively, the multiple R obtained for the community group on the Offence Diversity/Severity Factor was .4025, with Criminal History (Beta = .1935), Education/Employment (Beta = -.1539), Procriminal Attitudes (Beta = .1993), and Substance Abuse (Beta = .1994) entering the regression equation. These 4 subscales accounted for over 16% of the variance. The R squared was .1620. The largest contribution for the community group was from the Substance Abuse scale. It also appears that for the community group, the less the score on the education/employment subscale, the greater the offence severity. The results for the community group can be found in Table I6.

Table 14

Summary of Stepwise Regression Analysis for LSI-OR Subscale Predictors of Offence

Severity/Diversity Factor for Adult Males N = 630

Variable	B	SE B	Beta
Step 1			
Criminal history	.1033	.0170	.2379 ***
Step 2			
Criminal history	.0758	.0196	.1744 ***
Substance abuse	.0538	.0194	.1252 **

Note. R = .2379 for Step 1. R = .2612 for Step 2. ** $p \leq$ .01. *** $p \leq$ .001.

Table 15

Summary of Stepwise Regression Analysis for LSI-OR Subscale Predictors of Offence

Severity/Diversity Factor for Institutional Sample n = 454

Variable	B	SE B	Beta
Step 1			
Criminal history	.0975	.0257	.1776 ***
Step 2			
Criminal history	.0730	.0276	.1329 **
Companions	.1088	.0466	.1175 *

Note. R = .1776 for Step 1. R = .2082 for Step 2. * $p \leq$ .05. ** $p \leq$ .01. *** $p \leq$ .001.

Table 16

Summary of Stepwise Regression Analysis for LSI-OR Subscale Predictors of Offence

Severity/Diversity Factor for Community Sample n = 176

Variable	B	SE B	Beta
Step 1			
Criminal history	.1343	.0323	.3011 ***
Step 2			
Criminal history	.1001	.0356	.2244 **
Substance abuse	.0755	.0344	.1750 *
Step 3			
Criminal history	.0808	.0362	.1811 *
Procriminal attitudes	.1435	.0643	.1633 *
Substance abuse	.0790	.0341	.1831
Step 4			
Criminal history	.0863	.0360	.1935 *
Education/employment	-.0589	.0282	-.1539 *
Procriminal attitudes	.1751	.0654	.1993 **
Substance abuse	.0860	.0339	.1994 *

Note. R = .3011 for Step 1. R = .3397 for Step 2. R = .3748 for Step 3. R = .4025 for Step 4. *$p \leq$

.05. **$p \leq$ .01. ***$p \leq$ .001.

The above analyses were repeated using the Outstanding Charge Factor as the dependent

variable. For the adult male sample, the results can be found in Table 17. The multiple R of .1199 was

obtained with only Criminal History (Beta = .1199) entering the regression equation accounting for slightly over 1% of the variance. The R square was .0144. The findings were replicated for the institutional group and can be seen in Table I8 with only Criminal History (Beta = .1764) entering into the regression equation and R square was .0311. Therefore, Criminal History Factor accounted for approximately 18% of the variance. A stepwise regression was not produced for the community group because the variables failed to meet the criteria to enter the equation.

Table I7

Summary of Stepwise Regression Analysis for LSI-OR Subscale Predictors of Outstanding Charge Factor for Adult Males N = 630

Variable	B	SE B	Beta
Step 1			
Criminal history	.0521	.0173	.1199 **

Note. R = .1199 for Step 1. ** $p \leq .01$.

Table I8

Summary of Stepwise Regression Analysis for LSI-OR Subscale Predictors of Outstanding Charge Factor for Institutional Sample n = 454

Variable	B	SE B	Beta
Step 1			
Criminal history	.0989	.0262	.1764 ***

Note. R = .1764 for Step 1. *** $p \leq .001$.

The next series of multiple regressions were performed using the above recidivism factor variables as the dependent variables and the LSI-OR six factors derived from the factor analysis as the predictor variables. The six factors were: Criminal History Factor, Education/Employment Factor, Drug Abuse Factor, Alcohol Abuse Factor, No Anticriminal Friends Factor, and Criminal Companions Factor. When Incarceration/Sentence Length Factor was the dependent variable, the multiple R obtained was .3722 for the adult male sample that can be found in Table I9. Criminal History Factor (Beta = .1740), Education/Employment Factor (Beta = .1206), Drug Abuse (Beta = .1847), No Anticriminal Friends Factor (Beta = .2093), and Criminal Companions Factor (Beta = .0884) were the variables that entered the regression equation. The R square was .1386. These variables accounted for 14% of the variance with the largest contribution from the No Anticriminal Friends Factor. The results were replicated for the institutional sample and can be found in Table I10 with a multiple R of .3477. For the Criminal History Factor, Beta was .1519, for Education/Employment Factor, Beta was .1158, for Drug Abuse Factor, Beta was .1739, for No Anticriminal Friends Factor Beta was .2300, and for Criminal Companions Factor, Beta was .1036. The R square was .1209; therefore, the variables accounted for 12% of the variance. No stepwise regression model was produced by the LSI-OR factor variables for the community group.

Table I9

Summary of Stepwise Regression Analysis for LSI-OR Factor Predictors of Sentence Length/Time
Served Factor for Adult Males N = 630

Variable	B	SE B	Beta
Step 1			
No anti-criminal friends factor	.2198	.0401	.2155 ***
Step 2			
Drug factor	.2101	.0417	.1940 ***
No anti-criminal friends factor	.2150	.0393	.2109 ***
Step 3			
Criminal history factor	.1843	.0391	.1784 ***
Drug factor	.2076	.0410	.1917 ***
No anti-criminal friends factor	.2145	.0379	.2104 ***
Step 4			
Criminal history factor	.1834	.0388	.1775 ***
Education/employment factor	.1274	.0392	.1221 ***
Drug factor	.2047	.0407	.1890 ***
No anti-criminal friends factor	.2134	.0383	.2092 ***
Step 5			
Criminal history factor	.1797	.0387	.1740 ***
Education/employment factor	.1258	.0391	.1206 ***
Drug factor	.2000	.0406	.1847 ***
No anti-criminal friends factor	.2134	.3820	.2093 ***
Criminal friends factor	.0968	.0411	.0884 *

Note. R = .2155 for Step 1. R = .2899 for Step 2. R = .3404 for Step 3. R = .3616 for Step 4. R =
.3722 for Step 5. *$p \leq$ .05. ***$p \leq$ .001.

Table I10

Summary of Stepwise Regression Analysis for LSI-OR Factor Predictors of Sentence Length/Time

Served Factor for Institutional Sample n = 454

Variable	B	SE B	Beta
Step 1			
No anti-criminal friends factor	.2323	.0468	.2293 ***
Step 2			
Drug factor	.1739	.0503	.1580 ***
No anti-criminal friends factor	.2277	.0463	.2248 ***
Step 3			
Criminal history factor	.1903	.0629	.1377 **
Drug factor	.1886	.0501	.1713 ***
No anti-criminal friends factor	.2238	.0459	.2209 ***
Step 4			
Criminal history factor	.1916	.0624	.1387 **
Education/employment factor	.1398	.0529	.1188 **
Drug factor	.1931	.0498	.1754 ***
No anti-criminal friends factor	.2252	.0456	.2223 ***
Step 5			
Criminal history factor	.2098	.0627	.1519 ***
Education/employment factor	.1362	.0527	.1158 **
Drug factor	.1915	.0496	.1740 ***
No anti-criminal friends factor	.2330	.0455	.2200 ***
Criminal friends factor	.1321	.0578	.1036 *

Note. R = .2293 for Step 1. R = .2784 for Step 2. R = .3103 for Step 3. R = .3323 for Step 4. R = .3477 for Step 5. * $p \le .05$. ** $p \le .01$. *** $p \le .001$.

In the next series of regression analyses the Offence Severity/Diversity Factor was the dependent variable. For the adult male sample, the results can be found in Table I11 and the multiple R was .2572 with Criminal History Factor (Beta = .1436), Drug Abuse Factor (Beta = .0848), Alcohol Abuse Factor (Beta = .1322), and Criminal Friends Factor (Beta = .1274) in the regression equation. The R square was .0662, indicating that these variables explained 7% of the variance. For the institutional group the results can be found in Table I12 and the multiple R was .1812 with Criminal History Factor (Beta = .1030), Alcohol Abuse Factor (Beta = .1075), Criminal Friends Factor (Beta = .1283) entering the equation. The largest contribution was achieved by Criminal Friends Factor. The R square was .0328, indicating that these factors explained over 3% of the variance. For the community group the results can be found in Table I13 and the multiple R for Offence Severity/Diversity was .2820, with Criminal History (Beta = .2075) and Alcohol Abuse (Beta = .1887) entering the equation. The R square was .0795. These variables explained 8% of the variance.

Table I11

Summary of Stepwise Regression Analysis for LSI-OR Factor Predictors of Offence Severity/Diversity

Factor for Adult Males N = 630

Variable	B	SE B	Beta
Step 1			
Criminal history factor	.1592	.0415	.1541 ***
Step 2			
Criminal history factor	.1546	.0407	.1497 ***
Alcohol factor	.1433	.0422	.1340 ***
Step 3			
Criminal history factor	.1492	.0404	.1444 ***
Alcohol factor	.1426	.0418	.1333 ***
Criminal friends factor	.1441	.0428	.1316 ***
Step 4			
Criminal history factor	.1483	.0403	.1436 ***
Drug factor	.0918	.0424	.0848 *
Alcohol factor	.1414	.0417	.1322 ***
Criminal friends factor	.1395	.0428	.1274 ***

Note. $\cdot R$ = .1541 for Step 1. R = .2042 for Step 2. R = .2429 for Step 3. R = .2572 for Step 4. $^{*} p \leq$ .05. *** $p \leq$ .001.

Table I12

Summary of Stepwise Regression Analysis for LSI-OR Factor Predictors of Offence Severity/Diversity Factor for Institutional Sample n = 454

Variable	B	SE B	Beta
Step 1			
Criminal friends factor	.1303	.0561	.1098 *
Step 2			
Alcohol factor	.1125	.0519	.1020 *
Criminal friends factor	.1361	.0559	.1146 **
Step 3			
Criminal history factor	.1325	.0608	.1030 *
Alcohol factor	.1186	.0518	.1075 *
Criminal friends factor	.1524	.0562	.1283 **

Note. R = .1098 for Step 1. R = .1498 for Step 2. R = .1812 for Step 3. * $p \leq .05$. ** $p \leq .01$.

Table I13

Summary of Stepwise Regression Analysis for LSI-OR Factor Predictors of Offence Severity/Diversity Factor for Community Sample n = 176

Variable	B	SE B	Beta
Step 1			
Criminal history factor	.1728	.0613	.2096 **
Step 2			
Criminal history factor	.1711	.0603	.2075 **
Alcohol factor	.1919	.0744	.1887 **

Note. R = .2096 for Step 1. R = .2820 for Step 2. ** $p \leq .01$. *** $p \leq .001$.

The next series of regression analyses were performed with the Outstanding Charges Factor

as the dependent variable. For the adult male sample the results can be found in Table I14 and the

multiple R obtained was .0994 with only Criminal History (Beta = .0994) entering the equation. The R

square was only .0099 indicating that Criminal History Factor explained less than 1% of the variance of

the Outstanding Charges Factor. For the institutional group, the results can be found in Table I15, and

the multiple R was .1661 with Criminal History (Beta = .1166) and Drug Abuse (Beta = .1300) entering

the regression equation. The R square was .0276; therefore, these 2 factors explained approximately

3% of the variance. For the community group the findings can be found in Table I16 and the multiple R

was .1559 with only Drug Abuse (Beta = -.1559) entering the regression equation. The R square was

.0243; therefore, the Drug Abuse Factor explained 2% of the variance associated with the Outstanding

Charges Factor.

Table I14

Summary of Stepwise Regression Analysis for LSI-OR Factor Predictors of Outstanding Charges
Factor for Adult Males N = 630

Variable	B	SE B	Beta
Step 1			
Criminal history factor	.1027	.0414	.0994 **

Note. R = .0994 for Step 1. ** p ≤ .01.

Table I15

Summary of Stepwise Regression Analysis for LSI-OR Factor Predictors of Outstanding Charges

Factor for Institutional Sample n = 454

Variable	B	SE B	Beta
Step 1			
Drug Factor	.1243	.0494	.1188 **
Step 2			
Criminal history factor	.1530	.0619	.1166 **
Drug factor	.1360	.0492	.1300 **

Note. R = .1188 for Step 1. R = .1661 for Step 2. ** $p \leq$ .01.

Table I16

Summary of Stepwise Regression Analysis for LSI-OR Factor Predictors of Outstanding Charges

Factor for Community Sample n = 176

Variable	B	SE B	Beta
Step 1			
Drug Factor	-.2251	.1084	-.1559 *

Note. R = .1559 for Step 1. * $p \leq$ .05.

The next series of regression analyses were performed using the LSI-OR factor variables as the independent variables and recidivism binary variable, total Charges, Time Served, and the percentage of incarceration as a function of risk time (In-to-Risk Time Percentage) variables as the dependent variables. When recidivism was the dependent variable, for the adult male sample, the results can be found in Table I17. The multiple R was .4173 with Criminal History Factor (Beta = .2668), Education/Employment Factor (Beta = .0906), Drug Abuse Factor (Beta = .1800), No

Anticriminal Friends Factor (Beta = .0742) and Criminal Friends Factor (Beta = .2135). The R square

was .1742. For the institutional group the findings can be found in Table 118. The multiple R for the

regression equation was .3736 with Criminal History Factor (Beta = .2101), Education/Employment

Factor (Beta = .1421), Drug Abuse Factor (Beta = .1931), No Anticriminal Friends Factor (Beta = .1252)

and Criminal Friends Factor (Beta = .2067) entering the regression equation. The R square was .1395

indicating that these factors explained 17% of the variance. For the community group the findings can

be found in Table 119, the multiple R was .3547 with Criminal History (Beta = .3043) and Criminal

Friends (Beta = .1729) entering the equation. The R square was .1257. The two factors explained 13%

of the variance associated with Outstanding Charges Factor.

Table I17

Summary of Stepwise Regression Analysis for LSI-OR Factor Predictors of Recidivism for Adult Males

N = 630

Variable	B	SE B	Beta
Step 1			
Criminal history factor	.1430	.0198	.2767 ***
Step 2			
Criminal history factor	.1391	.0193	.2692 ***
Criminal friends factor	.1221	.0203	.2246 ***
Step 3			
Criminal history factor	.1383	.0199	.2676 ***
Drug factor	.0991	.0198	.1833 ***
Criminal friends factor	.1169	.0200	.2150 ***
Step 4			
Criminal history factor	.1381	.0189	.2670 ***
Education/employment factor	.0473	.0199	.0910 **
Drug factor	.0982	.0198	.1817 ***
Criminal friends factor	.1158	.0199	.2130 ***
Step 5			
Criminal history factor	.1379	.0188	.2668 ***
Education/employment factor	.0471	.0189	.0906 **
Drug factor	.0973	.0197	.1800 ***
No anti-criminal friends factor	.0377	.0185	.0742 *
Criminal friends factor	.1161	.0198	.2135 ***

Note. R = .2767 for Step 1. R = .3562 for Step 2. R = .4005 for Step 3. R = .4107 for Step 4. R = .4173 for Step 5. * $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Table I18

Summary of Stepwise Regression Analysis for LSI-OR Factor Predictors of Recidivism for Institutional

Sample n = 454

Variable	B	SE B	Beta
Step 1			
Criminal friends factor	.1014	.0265	.1774 ***
Step 2			
Criminal history factor	.1214	.0289	.1933 ***
Criminal friends factor	.1164	.0263	.2036 ***
Step 3			
Criminal history factor	.1330	.0285	.2117 ***
Drug factor	.0953	.0224	.1913 ***
Criminal friends factor	.1150	.0258	.2012 ***
Step 4			
Criminal history factor	.1334	.0282	.2122 ***
Education/employment factor	.0745	.0235	.1404 **
Drug factor	.0981	.0222	.1968 ***
Criminal friends factor	.1123	.0255	.1963 ***
Step 5			
Criminal history factor	.1320	.0280	.2101 ***
Education/employment factor	.0754	.0233	.1421 ***
Drug factor	.0962	.0220	.1931 ***
No anti-criminal friends factor	.0573	.0202	.1252 **
Criminal friends factor	.1182	.0254	.2067 ***

Note. R = .1774 for Step 1. R = .2610 for Step 2. R = .3230 for Step 3. R = .3521 for Step 4. R =

.3736 for Step 5. ** $p \leq .01$. *** $p \leq .001$.

Table I19

<u>Summary of Stepwise Regression Analysis for LSI-OR Factor Predictors of Recidivism for Community</u>

<u>Sample n = 176</u>

Variable	<u>B</u>	<u>SE B</u>	<u>Beta</u>
Step 1			
Criminal history factor	.1252	.0291	.3097 ***
Step 2			
Criminal history factor	.1230	.0288	.3043 ***
Criminal friends factor	.0868	.0357	.1729 **

<u>Note.</u> R = .3097 for Step 1. R = .3547 for Step 2. ** $p \leq .01$. *** $p \leq .001$.

When total charges was the dependent variable, for the adult male sample, the multiple R was .3642, with Criminal History Factor (Beta = .1892), Education/Employment Factor (Beta = .1001), Drug Abuse Factor (Beta = .1873), No Anticriminal Friends Factor (Beta = .1924), and Criminal Friends Factor (Beta = .0843) entering the regression equation. These findings can be found in Table I20. The R square was .1326 indicating that these factors explained over 13% of the variance associated with total number of charges. For the institutional group the findings can be found in Table I21 and the multiple R was.3629 with Criminal History Factor (Beta = .1684), Education/Employment Factor (Beta = .1100), Drug Abuse Factor (Beta = .1905), No Anticriminal Friends Factor (Beta = .2262), and Criminal Friends Factor (Beta = .1257) entering the regression equation. The R square was .1317. These factors accounted for 13% of the variance. For the community group the findings can be found in Table I22, the multiple R was .1970 with only Criminal History factor (Beta = .1969) entering the regression equation. The R square was .0388; therefore, Criminal History Factor accounted for 4% of the variance.

Table I20

Summary of Stepwise Regression Analysis for LSI-OR Factor Predictors of Charges for Adult Males N = 630

Variable	B	SE B	Beta
Step 1			
Drug factor	1.373	.2694	.2008 ***
Step 2			
Drug factor	1.3414	.2644	.1962 ***
No anti-criminal friends factor	1.2479	.2489	.1939 ***
Step 3			
Criminal history factor	1.2603	.2472	.1933 ***
Drug factor	1.3243	.2592	.1937 ***
No anti-criminal friends factor	1.2444	.2440	.1933 ***
Step 4			
Criminal history factor	1.2553	.2459	.1925 ***
Education/employment factor	.6689	.2485	.1016 **
Drug factor	1.3093	.2580	.1915 ***
No anti-criminal friends factor	1.2385	.2428	.1924 ***
Step 5			
Criminal history factor	1.2336	.2453	.1892 ***
Education/employment factor	.6595	.2477	.1001 **
Drug factor	1.2819	.2575	.1873 ***
No anti-criminal friends factor	1.2385	.2420	.1924 ***
Criminal friends factor	.5830	.2604	.0843 *

Note. R = .2008 for Step 1. R = .2791 for Step 2. R = .3395 for Step 3. R = .3543 for Step 4. R = .3642 for Step 5. * $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Table I21

Summary of Stepwise Regression Analysis for LSI-OR Factor Predictors of Charges for Institutional

Sample n = 454

Variable	B	SE B	Beta
Step 1			
No anti-criminal friends factor	1.3719	.2826	.2248 ***
Step 2			
Drug factor	1.1514	.3026	.1736 ***
No anti-criminal friends factor	1.3413	.2785	.2198 ***
Step 3			
Criminal history factor	1.2612	.3773	.1515 ***
Drug factor	1.2488	.3001	.1883 ***
No anti-criminal friends factor	1.3152	.2755	.2155 ***
Step 4			
Criminal history factor	1.3982	.3773	.1680 ***
Drug factor	1.2382	.2983	.1867 ***
No anti-criminal friends factor	1.3738	.2740	.2251 ***
Criminal friends factor	.9917	.3477	.1291 **
Step 5			
Criminal history factor	1.4019	.3752	.1684 ***
Education/employment factor	.7795	.3155	.1100 **
Drug factor	1.2633	.2967	.1905 ***
No anti-criminal friends factor	1.3804	.2725	.2262 **
Criminal friends factor	.9660	.3458	.1257 ***

Note. R = .2248 for Step 1. R = .2840 for Step 2. R = .3215 for Step 3. R = .3459 for Step 4. R = .3629 for Step 5. ** p ≤ .01. *** p ≤ .001.

Table 122

Summary of Stepwise Regression Analysis for LSI-OR Factor Predictors of Charges for Community

Sample n = 176

Variable	B	SE B	Beta
Step 1			
Criminal history factor	.9235	.3495	.1969 **

Note. R = .1970 for Step 1. ** p ≤ .01.

When Time Served was used as the dependent variable, for the adult male sample the findings can be found in Table 123 and the multiple R was .3901 with Criminal History Factor (Beta = .2080), Education/Employment Factor (Beta = .1216), Drug Abuse Factor (Beta = .1742), No Anticriminal Friends Factor (Beta = .1922), and Criminal Friends Factor (Beta = .1345) entering the regression equation. The R square was .1521; therefore, these variables accounted for 15% of the variance. The results were replicated for the institutional group and can be found in Table 124, with a multiple R of .3581, with the same variables entering the equation. The Criminal History Factor had a Beta of .1699, Education/Employment Factor had a Beta of .1269, Drug Abuse Factor had a Beta of .1673, No Anticriminal Friends Factor had a Beta of .2244, Criminal Friends Factor had a Beta of .1357. These variables accounted for 13% of the variance. The R square was .1282. For the community group the findings can be found in Table 125. The multiple R was .2001, with only the Criminal History Factor (Beta = .2001) entering the regression equation and accounting for 4% of the variance. The R square was .0400.

Table I23

Summary of Stepwise Regression Analysis for LSI-OR Factor Predictors of Time Served for Adult

Males N = 630

Variable	B	SE B	Beta
Step 1			
Criminal history factor	43.4763	7.8605	.2157 ***
Step 2			
Criminal history factor	43.3550	7.7065	.2151 ***
No anti-criminal friends factor	38.8404	7.5723	.1961 ***
Step 3			
Criminal history factor	42.9845	7.5700	.2132 ***
Drug factor	38.6659	7.9179	.1834 ***
No anti-criminal friends factor	38.0288	7.4396	.1920 ***
Step 4			
Criminal history factor	42.0692	7.4992	.2087 ***
Drug factor	37.1600	7.8502	.1763 ***
No anti-criminal friends factor	38.2075	7.3661	.1929 ***
Criminal friends factor	29.0756	7.8948	.1372 ***
Step 5			
Criminal history factor	41.9192	7.4407	.2080 ***
Education/employment factor	24.6544	7.4803	.1216 ***
Drug factor	36.7140	7.7900	.1742 ***
No anti-criminal friends factor	38.0641	7.3087	.1922 ***
Criminal friends factor	28.5088	7.8350	.1345 ***

Note. R = .2157 for Step 1. R = .2915 for Step 2. R = .3444 for Step 3. R = .3706 for Step 4. R =

.3901 for Step 5. *** $p \leq .001$.

Table l24

Summary of Stepwise Regression Analysis for LSI-OR Factor Predictors of Time Served for

Institutional Sample n = 454

Variable	B	SE B	Beta
Step 1			
No anti-criminal friends factor	42.3078	8.8563	.2195 ***
Step 2			
Drug factor	31.3706	9.5416	.1495 ***
No anti-criminal friends factor	41.5321	8.7647	.2154 ***
Step 3			
Criminal history factor	39.9595	11.9573	.1510 ***
Drug factor	34.5035	9.4816	.1644 ***
No anti-criminal friends factor	40.7092	8.6708	.2112 ***
Step 4			
Criminal history factor	44.8456	11.9481	.1694 ***
Drug factor	34.0698	9.3928	.1623 ***
No anti-criminal friends factor	42.9214	8.6182	.2226 ***
Criminal friends factor	33.7073	10.8600	.1400 **
Step 5			
Criminal history factor	44.9568	11.8529	.1699 ***
Education/employment factor	28.3935	9.8925	.1269 **
Drug factor	35.1204	9.3250	.1674 **
No anti-criminal friends factor	43.2541	8.5502	.2244 ***
Criminal friends factor	32.6784	10.7793	.1357 **

Note. R = .2195 for Step 1. R = .2655 for Step 2. R = .3050 for Step 3. R = .3349 for Step 4. R = .3581 for Step 5. ** $p \leq .01$. *** $p \leq .001$.

Table 125

Summary of Stepwise Regression Analysis for LSI-OR Factor Predictors of Time Served for

Community Sample n = 176

Variable	B	SE B	Beta
Step 1			
Criminal history factor	23.5050	8.7255	.2001 **

Note. R = .2001 for Step 1. ** p ≤ .01.

When the In-to-Risk Percentage variable was used as the dependent variable, the results

paralleled those of the Time Served recidivism variable. For the adult male sample, the findings can be

found in Table 126, the multiple R obtained was .3929, with Criminal History Factor (Beta = .2077),

Education/Employment Factor (Beta = .1289), Drug Abuse Factor (Beta = .1830), No Anticriminal

Friends Factor (Beta = .1795), and Criminal Friends Factor (Beta = .1403) entered the regression

equation. The R square was .1544. These variables accounted for 15% of the variance. The results

were replicated for the institutional group and the findings can be found in Table 127, and the multiple R

was .3537 with Criminal History Factor (Beta = .1701), Education/Employment Factor (Beta = .1312),

Drug Abuse Factor (Beta = .1738), No Anticriminal Friends Factor (Beta = .2084), and Criminal Friends

Factor (Beta = .1380) entering the regression equation. The R square was .1251. The variables

accounted for 13% of the variance. For the community group the results are presented in Table 128 and

the multiple R was .1957 with only Criminal History (Beta = .1957) entering the regression equation and

accounting for approximately 4% of the variance. The R square was .0383.

Table I26

Summary of Stepwise Regression Analysis for LSI-OR Factor Predictors of In-to-Risk Time Percentage
for Adult Males N = 630

Variable	B	SE B	Beta
Step 1			
Criminal history factor	4.740	.8567	.2157 ***
Step 2			
Criminal history factor	4.6961	.8399	.2138 ***
Drug factor	4.5192	.8783	.1967 ***
Step 3			
Criminal history factor	4.6850	.8256	.2132 ***
Drug factor	4.4271	.8636	.1927 ***
No anti-criminal friends factor	3.8722	.8114	.1794 ***
Step 4			
Criminal history factor	4.5809	.8172	.2085 ***
Drug factor	4.2559	.8554	.1853 ***
No anti-criminal friends factor	3.8925	.8027	.1803 ***
Criminal friends factor	3.3052	.8603	.1440 ***
Step 5			
Criminal history factor	4.5636	.8099	.2077 ***
Education/employment factor	2.8469	.8142	.1289 ***
Drug factor	4.2044	.8479	.1830 ***
No anti-criminal friends factor	3.8759	.7955	.1796 ***
Criminal friends factor	3.2400	.8528	.1403 ***

Note. R = .2157 for Step 1. R = .2920 for Step 2. R = .3426 for Step 3. R = .3712 for Step 4. R = .3929 for Step 5. *** p ≤ .001.

Table I27

Summary of Stepwise Regression Analysis for LSI-OR Factor Predictors of In-to-Risk Time Percentage for Institutional Sample n = 454

Variable	B	SE B	Beta
Step 1			
No anti-criminal friends factor	4.3257	.9807	.2034 ***
Step 2			
Drug factor	3.6073	1.0555	.1558 ***
No anti-criminal friends factor	4.236	.9696	.1992 ***
Step 3			
Criminal friends factor	4.4069	1.3230	.1509 ***
Drug factor	3.9529	1.0490	.1707 ***
No anti-criminal friends factor	4.1457	.9593	.1950 ***
Step 4			
Criminal friends factor	4.9556	1.3215	.1697 ***
Drug factor	3.9041	1.0389	.1686 ***
No anti-criminal friends factor	4.3942	.9532	.2066 ***
Criminal friends factor	3.7857	1.2012	.1424 **
Step 5			
Criminal history factor	4.9682	1.3102	.1701 ***
Education/employment factor	3.2380	1.0935	.1312 **
Drug factor	4.0239	1.0308	.1738 ***
No anti-criminal friends factor	4.4321	.9451	.2084 ***
Criminal friends factor	3.6684	1.1915	.1380 **

Note. R = .2034 for Step 1. R = .2561 for Step 2. R = .2969 for Step 3. R = .3285 for Step 4. R = .3537 for Step 5. ** $p \leq .01$. *** $p \leq .001$.

Table 128

<u>Summary of Stepwise Regression Analysis for LSI-OR Factor Predictors of In-to-Risk Time Percentage</u>

<u>for Community Sample n = 176</u>

<u>Variable</u>	<u>B</u>	<u>SE B</u>	<u>Beta</u>
Step 1			
Criminal history factor	2.2434	.8523	.1957 **

<u>Note.</u> <u>R</u> = .1957 for Step 1. ** <u>p</u> ≤ .01.

Multiple regression analyses were repeated for violent recidivism and the six LSI-OR factor scores. For the combined group the results are presented in Table 129 and the multiple R was .2331 with Criminal History Factor (Beta = .1431), Education/Employment Factor (Beta = .0982), Alcohol Abuse Factor (Beta = .1267), and No Anticriminal Friends Factor (Beta = .0798) entering the regression equation. The R square was .0543. The variables explained approximately 5% of the variance. For the institutional group the findings are presented in Table 130 and the multiple R was .2284, with Criminal History (Beta = .0969), Education/Employment (Beta = .1092), Alcohol Abuse (Beta = .1504), No Anticriminal Friends (Beta = .1023) entering the regression equation and explaining 5% of the variance associated with violent recidivism. The R square was .0522. For the community group, the findings can be found in Table 131 and the multiple R was .1908 with only Criminal History (Beta = .1908) entering the regression equation and accounting for approximately 4% of the variance. The R square was .0364.

Table 129

Summary of Stepwise Regression Analysis for LSI-OR Factor Predictors of Violent Recidivism for Adult

Males N = 630

Variable	B	SE B	Beta
Step 1			
Criminal history factor	.0663	.0176	.1489 ***
Step 2			
Criminal history factor	.0642	.0175	.1443 ***
Alcohol factor	.0577	.0179	.1266 ***
Step 3			
Criminal history factor	.0637	.0174	.1431 ***
Education/employment factor	.0441	.0174	.0988 **
Alcohol factor	.0580	.0178	.1271 ***
Step 4			
Criminal history factor	.0636	.0173	.1431 ***
Education/employment factor	.0438	.0174	.0982 **
Alcohol factor	.0578	.0178	.1267 ***
No anti-criminal friends factor	.0348	.0170	.0799 *

Note. R = .1489 for Step 1. R = .1954 for Step 2. R = .2190 for Step 3. R = .2331 for Step 4. R = .3537 for Step 5. * $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Table 130

Summary of Stepwise Regression Analysis for LSI-OR Factor Predictors of Violent Recidivism for

Institutional Males n = 454

Variable	B	SE B	Beta
Step 1			
Alcohol factor	.0697	.0227	.1429 ***
Step 2			
Education/employment factor	.0518	.0225	.1069 *
Alcohol factor	.0719	.0227	.1473 **
Step 3			
Education/employment factor	.0527	.0224	.1087 **
Alcohol factor	.0713	.0226	.1460 ***
No anti-criminal friends factor	.0438	.0193	.1048 *
Step 4			
Criminal history factor	.0556	.0264	.0969 *
Education/employment factor	.0530	.0223	.1092 *
Alcohol factor	.0734	.0225	.1504 ***
No anti-criminal friends factor	.0427	.0192	.1022 *

Note. R = .1428 for Step 1. R = .1784 for Step 2. R = .2069 for Step 3. R = .2284 for Step 4. * $p \le$ .05. ** $p \le$ .01. *** $p \le$ .001.

Table I31

Summary of Stepwise Regression Analysis for LSI-OR Factor Predictors of Violent Recidivism for

Community Males n = 176

Variable	B	SE B	Beta
Step 1			
Criminal history factor	.0602	.0235	.1901 **

Note. R = .1901 for Step 1. ** p ≤ .01.

Appendix J: Item Correlations

Table J1

General Risk/Need Factor (Section A) Item Correlations with General Recidivism and Violent Recidivism for Adult Males N = 630

LSI-OR Section A items	General recidivism	Violent recidivism
A1.1 Any prior	.25 ***	.15 ***
A1.2 Two or more priors	.30 ***	.16 ***
A1.3 Three or more priors	.32 ***	.19 ***
A1.4 Three or more present	.21 ***	.14 ***
A1.5 Arrested under 16	.25 ***	.17 ***
A1.6 Ever incarcerated	.24 ***	.12 **
A1.7 Institutional misconduct	.22 ***	.22 ***
A1.8 Charges during supervision	.33 ***	.21 ***
A2.9 Currently unemployed	.16 ***	.12 **
A2.10 Frequently unemployed	.23 ***	.15 ***
A2.11 Never employed	.25 ***	.18 ***
A2.12 Less than grade 10	.01	.04
A2.13 Less than grade 12	.07	.09 *
A2.14 Suspended or expelled	.06	.03
A2.15 Participation/performance	.20 ***	.15 ***
A2.16 Peer interaction	.10 **	.08 *
A2.17 Authority interaction	.12 **	.10 **
A3.18 Dissatisfaction with marital/family	-.00	.09 *
A3.19 Nonrewarding parent	.11 **	.10 **
A3.20 Nonrewarding other	.06	.10 *
A3.21 Criminal/family	.08 *	.07
A4.22 No organized activity	.17 **	.07
A4.23 Better use with time	.20 ***	.14 ***
A5.24 Some criminal acquaintances	.30 ***	.13 **
A5.25 Some criminal friends	.31 ***	.11 **
A5.26 No anti-criminal acquaintances	.14 ***	.09 *
A5.27 No anti-criminal friends	.13 ***	.11 **
A6.28 Supportive of crime	.21 ***	.12 **
A6.29 Unfavorable toward convention	.12 **	.19 ***
A6.30 Poor toward sentence	.07 *	.06
A6.31 Poor toward supervision	.22 ***	.18 ***
A7.32 Alcohol problems ever	.07	.14 ***
A7.33 Drug problems ever	.21 ***	.07
A7.34 Alcohol problems current	.10 **	.13 ***
A7.35 Drug problems current	.22 ***	.07
A7.36 Law violations	.17 ***	.11 **
A7.37 Marital/family	.23 ***	.14 ***
A7.38 School/work	.19 ***	.13 ***
A7.39 Medical/clinical indicators	.13 ***	.13 ***
A8.40 Psych assessment	.01	.01
A8.41 Early anti-social behavior	.27 ***	.20 ***
A8.42 Criminal attitude	.29 ***	.20 ***
A8.43 Generalized trouble	.21 ***	.16 ***

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Table J2

Specific Risk/Need Factor (Section B) Item Correlations with General Recidivism and Violent Recidivism for Adult Males N = 630

LSI-OR Section B items	General recidivism	Violent recidivism
B1.1 Problems with compliance	.19 ***	.16 ***
B1.2 Diagnosis of psychopathy	-.04	.03
B1.3 Diagnosis of personality disorder	-.04	.02
B1.4 Threat from third party	-.03	.04
B1.5 Problem-solving deficits	.11 **	.07
B1.6 Anger management deficits	.08	.23 ***
B1.7 Intimidating/controlling	.02	.10 **
B1.8 Inappropriate sexual activity	.04	.01
B1.9 Learning disability	.04	.07
B1.10 Poor social skills	.06	.05
B1.11 Peers outside age range	.07	.08 *
B1.12 Racist/sexist	.01	-.00
B1.13 Underachievement	.13 ***	.10 *
B1.14 Other	.06	.04
B2.1 Sexual assault	-.04	-.05
B2.2 Physical assault (extrafamilial)	.22 ***	.28 ***
B2.3 Physical assault (intrafamilial)	.00	.19 ***
B2.4 Assault on authority	.15 ***	.23 ***
B2.5 Weapon use	.04	.16 ***
B2.6 Fire setting	.00	.06
B2.7 Escapes/U.A.L.	.17 ***	.16 ***
B2.8 Impaired driving	.04	.09 *

* p ≤ .05. ** p ≤ .01. *** p ≤ .001.

Table J3

Institutional Factors (Section D) Item Correlations with General Recidivism and Violent Recidivism for Adult Males n = 454

LSI-OR Section D items	General recidivism	Violent recidivism
D 1 Last classification maximum	-.00	.03
D 2 Last classification medium	.01	.01
D 3 Last classification minimum	-.00	.02
D 4 Protective custody	-.09	-.03
D 5 Treatment recommendation	.06	.04
D 6 Misconduct	.02	.07
D 7 Administrative segregate	-.14 *	-.07
D 8 Management concerns	-.05	-.04
D 9 Outstanding charges	.11	.07
D10 Past federal penitentiary	-.05	.03

* p ≤ .05. ** p ≤ .01. *** p ≤ .001.

Table J4

Other Mental Health Issues (Section F) Item Correlations with General Recidivism and Violent Recidivism for Adult Males N = 630

LSI-OR Section F items	General recidivism	Violent recidivism
F1.1 Financial problems	.09 *	.10 *
F1.2 Homeless or transient	.12 **	.04
F1.3 Accommodation problems	.12 **	.09 *
F1.4 Health problems	-.00	.02
F1.5 Depressed	-.02	-.01
F1.6 Physical disability	.02	.03
F1.7 Low self-esteem	-.01	-.01
F1.8 Shy/withdrawn	-.02	-.02
F1.9 Diagnosis of psychosis	-.06	.00
F1.10 Suicide attempts/threat	.01	-.01
F1.11 Other evidence of emotional distress	-.06	-.02
F1.12 Immigration issues	-.04	-.03
F1.13 Victim: family violence	.06	.04
F1.14 Victim: physical assault	.07	.12 **
F1.15 Victim: sexual assault	-.01	.02
F1.16 Victim of neglect	.06	.07
F1.17 Other	-.07	-.03
F2.1 Barrier to release	.15 ***	.11 **

* $p \leq .05.$ ** $p \leq .01.$ *** $p \leq .001.$

Table J5

Special Responsivity Factors (Section G) Item Correlations with General Recidivism and Violent Recidivism for Adult Males N = 630

LSI-OR Section G items	General recidivism	Violent recidivism
G1 Motivation	.16 ***	.08 *
G2 Denial/minimization	.04	.03
G3 Interpersonally anxious	.04	.06
G4 Cultural issues	-.00	.04
G5 Ethnicity issues	.03	.02
G6 Low intelligence	-.03	.03
G7 Communication barrier	.00	.01
G8 Other	.07	.07

* $p \leq .05.$ ** $p \leq .01.$ *** $p \leq .001.$

Appendix X: LSI-OR and Females

The LSI-OR and Females

As with the young offender sample, the female sample was very small, however, since the data were accessible separate analyses were performed, and any significant findings were interpreted with caution. The General Risk/Need Factor total score, Criminal History, Education/Employment, Companions, Substance Abuse, Antisocial Patterns, and total strengths score were able to differentiate recidivists from nonrecidivists. The small sample size for the current research makes the results tentative. These findings are consistent with those reported by Rettinger (1998) on a larger female provincial offender sample, that LSI-OR subscales, specifically criminal history, antisocial attitudes, criminal peers, and antisocial pattern differentiated recidivists from nonrecidivists. In addition, adult female recidivists also had greater problems in the areas of substance abuse, employment and education, and accommodations. Risk levels also differentiated between recidivists and nonrecidivists for general recidivism but not for violent recidivism. The highest significant correlations with Any Recidivism were achieved with the Substance Abuse subscale ($r = .58$), the General Risk/Need factor score ($r = .55$), Final Risk Level ($r = .47$), Criminal History ($r = .42$), and Antisocial Patterns ($r = .41$), Procriminal Attitudes ($r = .32$), Education/Employment ($r = .33$), total strengths ($r = -.32$), and Companions ($r = .30$).

Table X1

Base Rates of Index Offence by Offence Category

Index offence	Females	
	n	%
Serious violent	1	2.3
Break & enter & related	2	4.7
Traffic import drug	3	7.0
Weapon	1	2.3
Fraud & related	5	11.6
Misc. offences against the person	2	4.7
Theft/possession	6	14.0
Assault & related	10	23.4
Arson & property damage	1	2.3
Morals & gaming	2	4.7
Obstruction of justice	2	4.7
Breach of court order	2	4.7
Drinking driving	5	11.6
Misc. offences against public order	1	2.3
Total	43	100

Table X2

Mean LSI-OR Subscale and Total Section Scores for Females n = 43

LSI-OR	M	SD
General risk/need factor	13.63	9.23
Criminal history	2.28	2.68
Education/employment	4.05	2.68
Family/marital	1.23	1.15
Leisure/recreation	.91	0.84
Companions	1.23	1.25
Procriminal attitudes	.72	1.35
Substance abuse	2.40	2.49
Antisocial patterns	.81	1.12
Total specific risk/need factor	1.47	1.47
Specific risk/need +	.98	1.14
History ++	.49	0.77
Total strengths	1.74	2.05
Other client issues	2.30	1.82
Responsivity factors	.86	1.37

Note. + refers to Specific risk/need factors with criminogenic potential. ++ refers to Specific risk/need factor subscale, History of.

Table X3

Initial & Final Risk Levels for Females n = 43

Risk Level	Initial		Final	
	n	%	n	%
Very low (0 – 4)	7	16.3	7	16.3
Low (5 – 10)	13	30.2	12	27.9
Medium (11 – 19)	15	34.9	17	39.5
High (20 – 29)	4	9.3	3	7.0
Very high (30+)	4	9.3	4	9.3

Table X4

Initial and Final Risk Level and General Risk/Need Factor Correlations for Females n = 43

LSI-OR Subscales	Initial risk level	Final risk level
Criminal history	.830 ***	.827 ***
Education/employment	.607 ***	.594 ***
Family/marital	.321 ***	.293 *
Leisure/recreation	.365 ***	.382 **
Companions	.706 ***	.672 ***
Procriminal attitudes/orientation	.673 ***	.692 ***
Substance abuse	.692 ***	.700 ***
Antisocial patterns	.637 ***	.656 ***
Total general risk/need factors	.963 **	.955 ***

Note. Initial by final risk level r = .976 ***. * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$.

Table X5

Internal Consistency Estimates of LSI-OR Subscales & Section Totals for Females n = 43

LSI-OR Subscales/Sections (items)	Alpha [1]
General risk/need factors (43)	.923
Criminal history (8)	.901
Education/employment (9)	.772
Family/marital (4)	.468
Leisure/recreation (21)	.625
Companions (4)	.724
Procriminal attitudes/orientation (4)	.897
Substance abuse (8)	.853
Antisocial patterns - subitems (19)	.886
total items (4)	.634
Specific risk/needs factors (21)	.395
Specific risk/need + (14)	.348
History ++ (8)	.251
Other client issues (18)	.453
Responsivity (8)	.686

Note. [1] refers to Cronbach's alphas. + refers to Specific risk/need factors with criminogenic potential.

++ refers to Specific risk/need factor subscale, History of.

Table X6

LSI-OR General Risk/Need Factors Intercorrelations and Internal Reliability Estimates for Females n = 43

LSI-OR (items)	History 1	Ed/empl 2	Fam/mar 3	Leis/rec 4	Comp 5	Procrim 6	Subst 7	Anti 8
History 1 (8)	X							
Ed/empl 2 (9)	.386 **	X						
Fam/mar 3 (4)	.294	-.053	X					
Leis/rec 4 (2)	.212	.363 *	.023	X				
Comp 5 (4)	.548 ***	.231	.408 **	.202 ***	X			
Procrim 6 (4)	.738 ***	.368 *	.364 *	.270	.476 ***	X		
Subst 7 (8)	.514 ***	.290	.233	.109	.589 ***	.310	X	
Anti 8 (4)	.668 ***	.325 *	.349 *	.463 **	.509 ***	.658 ***	.455 **	X
Total section A	.854 ***	.614 ***	.412 **	.407 **	.717 ***	.759 ***	.717 ***	.778 ***

Note. 1 refers to Criminal history subscale. 2 refers to Education/employment subscale. 3 refers to Family/marital subscale. 4 refers to Leisure/recreation subscale. 5 refers to Companions subscale. 6 refers to Procriminal attitudes subscale. 7 refers to Substance abuse subscale. 8 refers to Antisocial patterns subscale. * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$.

Table X7

Specific Risk/Need Factors Correlations with General Risk/Need Subscales and Total Scores for

Females n = 43

Strengths	Specific risk/need +	History ++	Total specific risk/need [1]
General risk/need	.711 ***	.478 ***	.654 ***
Criminal history	.460 **	.350 *	.546 ***
Education/employment	.439 **	.136	.413 **
Family/marital	.293	.057	.258
Leisure/recreation	.543 ***	.183	.518 ***
Companions	.487 ***	.152	.458 **
Procriminal attitudes	.566 ***	.135	.511 ***
Substance abuse	.154	.258	.254
Antisocial patterns	.480 ***	.303 *	.532 ***
Specific risk/need +	1.00	.746 ***	.953 ***
History ++		1.00	.913 ***
Total specific risk/need [1]			1.00

Note. + refers to Specific risk/need factors with criminogenic potential. ++ refers to Specific risk/need

factor subscale, History of. [1] refers to the Total specific risk/need factor score. $p \leq .05$, ** $p \leq .01$, *** p

$\leq .001$.

Table X8

LSI-OR Section Intercorrelations for Females n = 43

LSI-OR sections	General risk/need 1	Specific risk/need 2	Institutional 3	Client issues 4	Responsivity 5
General risk/need 1	1.00				
Specific risk/need 2	.620 ***	1.00			
Institutional 3	---	---	1.00		
Client issues 4	.273	.285	---	1.00	
Responsivity 5	.383 *	.493 ***	---	.294	1.00

Note. 1 refers to General risk/need factors, (Section A). 2 refers to Specific risk/need factors, (Section B). 3 refers to Institutional factors, (Section D). 4 refers to Other client issues, (Section F). 5 refers to Responsivity factors, (Section G). * $p \leq .05$; *** $p \leq .001$.

Table X9

Strength Correlations with Total General Risk/Need Factor and Subscales and Total Specific

Risk/Need Factor and Subscales for Females n = 43

LSI-OR	Pearson r
General risk/need factors	-.530 ***
Criminal history	-.485 ***
Education/employment	-.238
Family/marital	-.156
Leisure/recreation	-.194
Companions	-.413 **
Procriminal attitudes/orientation	-.371 **
Substance abuse	-.479 ***
Antisocial patterns	-.396 **
Total specific risk/need factors score	-.371
Specific risk/need factors +	-.236
History ++	-.358 *

Note. + refers to Specific risk/need factors with criminogenic potential. ++ refers to Specific risk/need

factor subscale, History of. * p ≤ .05, ** p ≤ .01, *** p ≤ .001.

Table X10

Strength Correlations with LSI-OR Section Scores for Females n = 43

LSI-OR sections	Pearson r
General risk/need factors (Section A)	-.530 ***
Specific risk/need factors (Section B)	-.371 *
Institutional factors (Section D)	---
Other client issues (Section F)	-.132
Responsivity factors (Section G)	-.209

* p ≤ .05, *** p ≤ .001.

Table X11

Use of Override for Females n = 43

Change	n	%
Up	1	2.3
No change	41	95.3
Down	1	2.3

Table X12

Recidivism Rates for Females n = 43

Recidivism status	n	%
Nonrecidivists	35	81.4
Recidivism	8	18.6
Violent recidivism	2	4.7
Nonviolent recidivism	6	13.9
Level I	1	2.3
Level II	7	16.3

Table X13

Outcome Variables for Females n = 43

Outcome variable	M	SD
Risk time (days)	995.14	50.92
Total time served	24.08	90.65
In-to-risk % [1]	2.29	8.40
Total remands	.33	.92
Total withdrawn charges	.28	1.08
Outstanding charges	.47	1.03

Note. [1] In-to-risk % refers to the percentage of total incarceration time as a function of risk time.

Table X14

General & Violent Recidivism Rates for Females n = 43

	Recidivists only	
	$\underline{n}$	%
General recidivism	6	75
Violent recidivism	2	25
Total	8	100

Table X15

Recidivists on Follow-up Variables for Females n = 8

	Females	
	M	SD
Risk time (days)	994.25	74.06
Time served	124.31	187.27
In-to-risk % [1]	11.80	17.17
Time to first reconviction	251.63	217.17

Note. [1] In-to-risk % refers to the percentage of incarceration time as a function of risk time.

Table X16

Recidivists on Outcome Variables Related to First Reconviction n = 8

	Females	
	M	SD
Sentence length	34.88	59.46
Convictions	2.00	1.20
Types	1.38	.52
Offence severity	11.13	4.45

Table X17

Recidivists on Variables Related to All Recidivism Events n = 8

	Females	
	M	SD
Sentence length	180.00	272.37
Convictions	6.00	4.78
Sets	2.88	1.46
Offence severity	9.25	2.55
Types	3.16	1.55
Remands	1.38	1.69
Withdrawn [1]	1.38	2.26
Outstanding [1]	.47	1.03
Outstanding [1] severity	6.50	7.60

Note. [1] refers to Charges.

Table X18

Frequencies of Disposition Variables and Offence Level for First Reconviction for Recidivists n = 8

	Females	
Disposition level	$\underline{n}$	%
Conditional sentence	1	12.5
Fine	2	25.0
Suspended sentence	3	37.5
Probation	3	37.5
Sentenced	4	50.0
Level I	1	12.5
Level II	7	87.5

Table X19

Frequencies of Disposition Variables and Offence Level for All Recidivism Events for Recidivists

n = 8

Disposition level	Females	
	n	%
Conditional sentence	1	12.5
Fine	2	25.0
Suspended sentence	5	62.5
Intermittent sentence	1	12.5
Probation	7	87.5
Sentenced	4	50.0
Level I	1	12.5
Level II	7	87.5

Table X20

Rates of Recidivism for Each Offence Category for Recidivism Sets for Females n = 8

Offence	n	%
Break & enter & related	1	2.3
Fraud & related	1	2.3
Misc. against the person	1	2.3
Theft/possession	4	9.3
Morals & gaming	1	2.3
Total recidivism	8	18.6

Table X21

Pearson Correlation Coefficients Between Disposition Variables for Female Recidivists n = 8

	Fed pen	Intermit	Cond	Sent length	Fine	Probation	Suspended
Federal penitentiary	X						
Intermittent sentence	---	X					
Conditional sentence	---	1.00 ***	X				
Sentence length	---	-.134	-.134	X			
Fine	---	-.218	-.218	-.391	X		
Probation	---	-1.00 ***	-1.00 ***	.134	.218	X	
Suspended sentence	---	.293	.293	-.163	-.149	-.293	X

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$.

Table X22

Violent/Nonviolent & Level I and II Recidivist Comparisons on Time to First Reconviction and In-to-Risk Time Percentage for Females n = 8

	Time to first reconviction	In-to risk time percentage
Violent recidivists		
M	325.50	4.27
SD	109.60	4.53
N	2	2
Nonviolent recidivists		
M	227.00	14.31
SD	246.40	19.45
N	6	6
Level I		
M	403.00	1.07
SD	---	---
N	1	1
Level II		
M	230.00	13.33
SD	225.07	17.94
N	7	7

Note. * 332.98 is significantly greater than 261.23, $p \leq .05$.

Table X23

Violent/Nonviolent Recidivism by Offence Level for Females n = 43

Level	Violent recidivists		Nonviolent recidivists		Total	
	n	%	n	%	n	%
I	1	50	---	---	1	12.5
II	1	50	6	100	7	87.5
Total	2	100	6	100	8	100

Note. x^2 = 3.428, df = 1, p = .064.

Table X24

Pearson Correlations Between Recidivism Variables for Females n = 43

	Recid	Violent recid	Severity	Level	Types	Convictions	Sent length +
Recid	X						
Violent recid	.462 **	X					
Severity +	.924 ***	.562 ***	X				
Level +	.951 ***	.619 ***	.952 ***	X			
Types +	.932 ***	.478 ***	.779 ***	.853 **	X		
Convictions +	.850 ***	.272	.671 ***	.753 **	.880 ***	X	
Sent length +	.492 ***	-.048	.263	.406 **	.527 ***	.733 ***	X
Severity ++	.962 ***	.459 **	.962 ***	.911 **	.855 ***	.777 ***	.330 *
Levels ++	.951 ***	.619 ***	.952 ***	1.00	.853 ***	.753 ***	.406 **
Types ++	.889 ***	.310 *	.842 ***	.804 **	.847 ***	.830 ***	.613 ***
No. of sets ++	.885 ***	.343 *	.830 ***	.847 **	.837 ***	.793 ***	.689 ***
Convictions ++	.771 ***	.137	.625 ***	.683 **	.758 ***	.932 ***	.873 ***
Sent length ++	.536 ***	.032	.322 *	.447 **	.558 ***	.791 ***	.984 ***
Charges +++	.192	-.101	.110	.139	.154	.163	.105
Severity +++	.391 **	-.109	.242	.305 *	.425 **	.603 ***	.447 **
Levels +++	.240 ***	-.116	.115	.176	.265	.361 *	.322 *
Remands	.553 ***	.042	.426 **	.449 **	.554 ***	.666 ***	.831 ***
Withdrawn	.493 ***	.046	.561 ***	.403 **	.340 *	.538 ***	.442 **
Time served	.535 ***	.032	.321 *	.444 **	.554 ***	.789 ***	.981 ***
In-to-risk %	.548 ***	.053	.336 *	.456 **	.567 ***	.797 ***	.977 ***
Total charges	.727 ***	.109	.622 ***	.629 **	.684 ***	.865 ***	.837 ***

(table continues)

Note. + refers to First Recidivism, ++ refers to Recidivism sets, +++ refers to Outstanding charges;
* p ≤.05; ** p ≤.01; *** p ≤.001

Table X24

Pearson Correlations Between Recidivism Variables for Females (n = 43)

	Severity ++	Levels ++	Types ++	No. of sets ++	Convictions ++	Sent length ++
Recid						
Violent recid						
Severity +						
Level +						
Types +						
Convictions +						
Sent length +						
Severity ++	X					
Levels ++	.911 ***	X				
Types ++	.885 ***	.804 ***	X			
No. of sets ++	.828 ***	.847 ***	.963 ***	X		
Convictions ++	.696 ***	.683 ***	.876 ***	.871 ***	X	
Sent length ++	.401 **	.447 **	.653 ***	.697 ***	.908 ***	X
Charges +++	.132	.139	.123	.132	.133	.098
Severity +++	.329 *	.305 *	.390 **	.351 *	.555 ***	.467 **
Levels +++	.167	.176	.231	.231	.343 *	.317 *
Remands	.485 ***	.449 **	.765 ***	.781 ***	.832 ***	.837 ***
Withdrawn	.609 ***	.403 **	.736 ***	.616 ***	.683 ***	.536 ***
Time served	.400 **	.444 **	.652 ***	.693 ***	.907 ***	.999 ***
In-to-risk %	.418 **	.456 **	.668 ***	.704 ***	.912 ***	.998 ***
Total charges	.692 ***	.626 ***	.894 ***	.866 ***	.976 ***	.883 ***

(table continues)

Note. + refers to First Recidivism, ++ refers to Recidivism sets, +++ refers to Outstanding charges;
* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

Table X24

Pearson Correlations Between Recidivism Variables for Females (n = 43)

	Charges +++	Severity +++	Levels +++	Remands	Withdrawn
Recid					
Violent recid					
Severity +					
Level +					
Types +					
Convictions +					
Sent length +					
Severity ++					
Levels ++					
Types ++					
No. of sets ++					
Convictions ++					
Sent length ++					
Charges +++	X				
Severity +++	.612 ***	X			
Levels +++	.791 ***	.761 ***	X		
Remands	.113	.376 **	.285	X	
Withdrawn	-.013	.245	.087	.653 ***	X
Time served	.099	.467 **	.320 *	.848 ***	.539 ***
In-to-risk %	.096	.463 **	.315 *	.855 ***	.557 ***
Total charges	.107	.494 ***	.301 *	.892 ***	.806 ***

(table continues)

Note. + refers to First Recidivism, ++ refers to Recidivism sets, +++ refers to Outstanding charges;
* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

Table X24

Pearson Correlations Between Recidivism Variables for Females (n = 43)

	Time served	In-to-risk %	Charges
Recid			
Violent recid			
Severity +			
Level +			
Types +			
Convictions +			
Sent length +			
Severity ++			
Levels ++			
Types ++			
No. of sets ++			
Convictions ++			
Sent length ++			
Charges +++			
Severity +++			
Levels +++			
Remands			
Withdrawn			
Time served	X		
In-to-risk %	.999 ***	X	
Total charges	.885 ***	.894 ***	X

Note. + refers to First Recidivism, ++ refers to Recidivism sets, +++ refers to Outstanding charges;
* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

Table X25

<u>Recidivist/Nonrecidivist Comparisons on Index Offence and Follow-up Time for Females n = 43</u>

Index offence	Nonrecidivists n = 35		Recidivists n = 8				
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>t</u>	<u>df</u>	<u>p</u>
Severity	11.000	4.137	10.875	4.704	.08	41.00	.940
Sentence length	4.800	16.538	77.375	104.482	-1.96	7.08	.090
Types	1.229	.646	1.250	.707	-.08	41.00	.934
Convictions	1.257	.780	1.375	.744	-.39	41.00	.700
Time served	.033	.183	32.200	72.001	-1.00	41.00	.374
Fines	.200	.406	.125	.354	.48	41.00	.633
Suspended sentences	.314	.471	.125	.354	1.28	13.38	.223
Intermittent sentences	.057	.236	.000	.000	.68	41.00	.500
Follow-up time							
Risk time	995.343	45.533	994.250	74.061	.05	41.00	.957

Table X26

Recidivist/Nonrecidivist Comparisons on LSI-OR scales for Females n = 43

LSI-OR	Nonrecidivists n = 35		Recidivists n = 8				
	M	SD	M	SD	t	df	p
General risk/need factors	11.229	7.655	24.125	8.476	-4.22	41.00	.000
Criminal history	1.743	2.393	4.625	2.774	-2.99	41.00	.005
Education/employment	3.657	2.555	5.750	1.488	-3.07	17.93	.007
Family/marital	1.143	1.167	1.625	1.061	-1.07	41.00	.291
Leisure/recreation	.800	.797	1.375	.916	-1.79	41.00	.080
Companions	1.057	1.259	2.000	.926	-1.99	41.00	.053
Procriminal attitudes	.514	1.173	1.625	1.768	-1.69	8.46	.127
Substance abuse	1.714	2.094	5.375	1.847	-4.55	41.00	.000
Antisocial patterns	.600	.976	1.750	1.282	-2.84	41.00	.007
Total specific risk/need	1.371	1.516	1.875	1.246	-.87	41.00	.388
Specific risk/need +	.943	1.187	1.125	.991	-.40	41.00	.690
History ++	.429	.698	.750	1.035	-1.07	41.00	.291
Total strengths	2.057	2.127	.375	.744	3.78	33.51	.001
Other client issues	2.143	1.630	3.00	2.507	-1.21	41.00	.234
Special responsivity	.800	1.389	1.125	1.356	-.60	41.00	.552

Note. + refers to Specific risk/need factors with criminogenic potential. ++ refers to Specific risk/need factor subscale, History of.

Table X27

Recidivist/Nonrecidivist Comparisons on Risk Time for Females n = 43

	Females
Recidivists	
$\underline{M}$	994.25
$\underline{SD}$	74.06
Nonrecidivists	
$\underline{M}$	995.34
$\underline{SD}$	45.53

Note. $\underline{t}$ = .05, $\underline{df}$ = 41, $\underline{p}$ = .957.

Table X28

Recidivism by Final Risk Level for Females n = 43

	Recidivists		Nonrecidivists	
Level	n	%	n	%
1 (0 – 4)	---	---	7	100.0
2 (5 – 10)	---	---	12	100.0
3 (11 – 19)	4	23.5	13	76.5
4 (20 – 29)	2	66.7	1	33.3
5 (30 +)	2	50.0	2	50.0
Total	8	18.6	35	81.4

Note. Gamma = .8246, $p \leq .001$.

Table X29

Violent Recidivism by Final Risk Level for Females n = 43

	Violent recidivists		Nonviolent offenders	
Level	n	%	n	%
1 (0 – 4)	---	---	7	100.0
2 (5 – 10)	---	---	12	100.0
3 (11 – 19)	1	5.9	16	94.1
4 (20 – 29)	1	33.3	2	66.7
5 (30 +)	---	---	4	100.0
Total	2	4.7	41	95.3

Note. Gamma = .6875, p = .1765.

Table X30

Pearson Correlations Between LSI-OR Subscales, Sections and Recidivism for Females n = 43

	Recid	Violent recid	Charges	Convictions	Types	No. of sets +
General risk/need (A)	.550 ***	.239	.562 ***	.539 ***	.617 ***	.620 ***
Criminal history	.423 **	.143	.528 ***	.476 ***	.519 ***	.469 **
Education/employment	.328 *	.174	.262	.249	.368 *	.355 **
Family/marital	.165	-.045	.180	.161	.212	.253
Leisure/recreation	.270	.291	.272	.273	.232	.269
Companions	.297 *	.137	.296 *	.328 *	.305 *	.352 *
Procriminal attitudes	.324 *	-.034	.598 ***	.520 ***	.496 ***	.474 ***
Substance abuse	.579 ***	.369 *	.439 **	.471 ***	.561 ***	.598 ***
Antisocial patterns	.405 **	.137	.363 *	.326 *	.441 **	.438 ***
Specific risk/need (B)	.135	.157	.220	.205	.168	.181
Personal problems (B¹)	.063	-.093	.190	.164	.114	.139
History (B²)	.165	.440 **	.138	.147	.152	.140
Total strengths	-.323 *	-.190	-.294	-.302 *	-.333 *	-.328 *
Initial risk level	.461 **	.165	.494 ***	.484 ***	.533 ***	.534 ***
Final risk level	.470 ***	.168	.508 ***	.493 ***	.543 ***	.543 ***
Risk change	.000	.000	.023	.000	.000	.000
Institutional factors (D)	---	---	---	---	---	---
Other mental health (F)	.186	-.099	.304 *	.280	.269	.328 **
Special responsivity (G)	.093	-.140	.268	.202	.182	.152

Note. + refers to Number of sets; * p ≤.05; ** p ≤.01; *** p ≤.001.

Table X30 (continued)

Pearson Correlations Between LSI-OR Subscales, Sections and Recidivism for Females n = 43

	Sent length +	Time served	In-to risk %	Offence severity	Level
General risk/need (A)	.471 ***	.472 ***	.483 ***	.524 ***	.489 ***
Criminal history	.416 **	.420 ***	.433 **	.436 **	.333 *
Education/employment	.136	.136	.145	.349 **	.317 *
Family/marital	.179	.170	.170	.135	.129
Leisure/recreation	.316 *	.326 *	.333 *	.239	.294
Companions	.343 *	.335 *	.336 *	.235	.282
Procriminal attitudes	.502 ***	.512 ***	.519 ***	.319 *	.246
Substance abuse	.388 **	.378 *	.388 **	.517 ***	.563 ***
Antisocial patterns	.308 *	.320 *	.331 *	.375 **	.305 *
Specific risk/need (B)	.257	.258	.263	.118	.133
Personal problems (B¹)	.202	.205	.203	.059	.054
History (B²)	.191	.189	.201	.138	.173
Total strengths	-.221	-.219	-.225	-.310 *	-.317 *
Initial risk level	.418 **	.417 **	.425 **	.435 **	.405 **
Final risk level	.425 **	.431 **	.440 **	.443 ***	.413 **
Risk change	.000	.035	.039	.000	.000
Institutional factors (D)	---	---	---	---	---
Other mental health (F)	.292	.289	.286	.168	.176
Special responsivity (G)	.197	.224	.229	.134	.047

Note. + refers to Sentence length; * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$.

Table X31

Pearson Correlations between LSI-OR Subscales, Sections and First Recidivism for Females n=43

	Convictions	Sent length +	Types	Offence severity	Level
General risk/need (A)	.484 ***	.450 **	.524 ***	.495 ***	.489 ***
Criminal history	.446 **	.376 **	.426 **	.365 **	.333 *
Education/employment	.227	.119	.285	.361 **	.317 *
Family/marital	.073	.207	.123	.137	.129
Leisure/recreation	.260	.289	.245	.241	.294
Companions	.294	.352 *	.309 *	.226	.282
Procriminal attitudes	.389 **	.480 ***	.275	.282	.246
Substance abuse	.472 **	.376 **	.570 ***	.522 ***	.563 ***
Antisocial patterns	.298 *	.302 *	.405 **	.317 *	.305 *
Specific risk/need (B)	.167	.236	.136	.108	.133
Personal problems (B¹)	.076	.212	.009	.057	.054
History (B²)	.207	.135	.247	.121	.173
Total strengths	-.313 *	-.203	-.324 *	-.307 *	-.317 *
Initial risk level	.437 **	.406 **	.456 **	.405 **	.405 **
Final risk level	.445 **	.413 **	.465 **	.413 **	.413 **
Risk change	.000	.000	.000	.000	.000
Institutional factors (D)	---	---	---	---	---
Other mental health (F)	.144	.333 *	.128	.180	.176
Special responsivity (G)	.117	.182	.016	.104	.047

Note. + refers to Sentence length; * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$.

Table X32

Pearson Correlations Between LSI-OR Subscales, Sections and Other Recidivism Variables for

Females n = 43

	Charges +	Severity +	Level +	Remands ++	Withdrawn +++
General risk/need (A)	.224	.193	.346 *	.568 ***	.425 **
Criminal history	.270	.287	.449 **	.571 ***	.450 **
Education/employment	-.073	-.085	-.048	.220	.241
Family/marital	.208	.171	.229	.219	.139
Leisure/recreation	-.251	-.159	-.056	.256	.187
Companions	.136	.044	.249	.264	.128
Procriminal attitudes	.300 *	.331 *	.396 **	.689 ***	.530 ***
Substance abuse	.251	.226	.246	.369 *	.251
Antisocial patterns	.263	.087	.391 **	.454 **	.262
Specific risk/need (B)	.027	.065	.325 **	.220	.187
Personal problems (B^1)	.050	.023	.264	.211	.179
History (B^2)	-.023	.091	.229	.107	.091
Total strengths	-.123	-.084	-.170	-.246	-.205
Initial risk level	.220	.196	.371 **	.492 ***	.349 *
Final risk level	.224	.199	.378 **	.524 ***	.356 *
Risk change	.000	.000	.000	.119	.000
Institutional factors (D)	---	---	---	---	---
Other mental health (F)	-.102	.162	.098	.353 *	.223
Special responsivity (G)	.030	.064	.230	.320 *	.317 *

Note. + refers to Outstanding charges; ++ refers to Total number of remands; +++ refers to Total withdrawn charges; * $\underline{p}$ ≤.05; ** $\underline{p}$ ≤.01; *** $\underline{p}$ ≤.001.

Table X33

Summary of Stepwise Regression Analysis for LSI-OR Subscale Predictors of Recidivism for Females

n = 43

Variable	B	SE B	Beta
Step 1			
Substance abuse	.0916	.0201	.5790 ***

Note. R = .5790 for Step 1. *** p ≤ .001.

Table X34

Summary of Stepwise Regression Analysis for LSI-OR Subscale Predictors of Charges for Females n =

43

Variable	B	SE B	Beta
Step 1			
Procriminal attitudes	1.7686	.4351	.5109 ***
Substance abuse	.5278	.2361	.2810 *

Note. R = .6548 for Step 1. * $p \leq$ .05. *** $p \leq$ .001.

Table X35

Summary of Stepwise Regression Analysis for LSI-OR Subscale Predictors of Time Served for

Females n = 43

Variable	B	SE B	Beta
Step 1			
Procriminal attitudes	34.3608	9.0007	.5121 ***

Note. R = .5121 for Step 1. *** p ≤ .001.

Table X36

Summary of Stepwise Regression Analysis for LSI-OR Subscale Predictors of In-to-Risk Time

Percentage for Females n = 43

Variable	B	SE B	Beta
Step 1			
Procriminal attitudes	3.2254	.8297	.5190 ***

Note. R = .5190 for Step 1. *** p ≤ .001.

Table X37

Summary of Stepwise Regression Analysis for LSI-OR Subscale Predictors of Violent Recidivism for

Females n = 43

Variable	B	SE B	Beta
Step 1			
History (B²)	.1222	.0389	.4401 **

Note. R = .4401 for Step 1. ** p ≤ .01.

Appendix Y: LSI-OR and Young Offenders

The LSI-OR and Young Offenders

The young offender sample was not considered part of the current study because of the small sample size. However, separate analyses were performed since the data were accessible. As a result, any findings are very tentative. In general, the mean General Risk/Need Factor total score for the young offender sample (13.87) was comparable to that of the adult community based offenders (13.04). Furthermore, the recidivism base rate for the young offender sample (51.6%) was comparable to the overall base rate for the adult male offender sample (54.4%) in the current study. In comparison to the adult violent recidivism base rate (24.1%), the young offenders also recidivated violently at a similar rate (22.6%) over a 3 year follow-up period. These findings suggest that young offenders recidivated at an overall rate comparable to that of adult offenders.

The general findings suggest that the LSI-OR is useful with the young offender population. The LSI-OR General Risk/Need Factor total score and Criminal History subscale were able to differentiate between recidivists and nonrecidivists in spite of the very small sample size and few recidivists. The mean total strengths approached the significance level (.06) for differentiating recidivists and nonrecidivists. In spite of the limitations imposed by the small sample size, the risk levels differentiated between recidivists and nonrecidivists for general recidivism but not for violent recidivism. The only significant correlations were achieved between initial and final risk level and Any Recidivism (r = .40, .46, respectively), criminal history and Any Recidivism(r = .45), and the General Risk/Need total score and Any Recidivism (r = .37), as well as total strengths with Any Recidivism (r = -.35). In general these findings are similar to those of the adult male offenders. The strengths and the criminal history variables actually produced greater correlations with recidivism than those with the adult sample. The larger associations, however, are a result of the small sample size. The predictors of criminal behavior found by Gendreau, Andrews, Goggin and Chanteloupe (1992) were Antisocial Attitudes, Temperament/Misconduct/Personality, Parental/Family, Education/Achievement.

Table Y1

Base Rates of Index Offence by Offence Category

Index Offence	Youth	
	N	%
Serious violent	1	3.2
Break & enter & related	9	29.0
Traffic import drug	2	6.5
Theft/possession	12	38.7
Assault & related	3	9.7
Arson & property damage	1	3.2
Drug possession	1	3.2
Breach of court order	2	6.5
Total	31	100

Table Y2

Mean LSI-OR Subscale and Total Section Scores for Youth n = 31

LSI-OR	M	SD
General risk/need factor	13.87	8.43
Criminal history	2.61	2.92
Education/employment	4.29	2.67
Family/marital	.90	0.75
Leisure/recreation	.90	0.83
Companions	1.68	1.11
Procriminal attitudes	.68	1.17
Substance abuse	1.65	2.04
Antisocial patterns	1.16	1.42
Total specific risk/need factor	1.81	2.70
Specific risk/need +	1.29	1.65
History ++	.55	1.23
Total strengths	1.10	1.81
Institutional factors	2.50	0.71
Other client issues	1.68	1.80
Responsivity factors	.61	1.12

Note. + refers to Specific risk/need factors with criminogenic potential. ++ refers to Specific risk/need

factor subscale, History of.

Table Y3

Initial & Final Risk Levels for Youth n = 31

	Initial		Final	
Risk Level	<u>N</u>	%	<u>n</u>	%
Very low (0 – 4)	5	16.1	5	16.1
Low (5 – 10)	6	19.4	5	16.1
Medium (11 – 19)	14	45.2	16	51.6
High (20 – 29)	2	6.5	1	3.2
Very high (30+)	4	12.9	4	12.9

Table Y4

Initial and Final Risk Level and General Risk/Need Factor Correlations for Youth n = 31

LSI-OR Subscales	Initial risk level	Final risk level
Criminal history	.676	.676
Education/employment	.613	.534 **
Family/marital	.389 *	.322
Leisure/recreation	.585	.530 **
Companions	.632	.671
Procriminal attitudes/orientation	.719	.651
Substance abuse	.545	.505 **
Antisocial patterns	.787	.669
Total general risk/need factors	.971	.913

Note. Initial by final risk level r = .962 ***. * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$.

Table Y5

Internal Consistency Estimates of LSI-OR Subscales & Section Totals for Youth n = 31

LSI-OR Subscales/Sections (items)	Alpha [1]
General risk/need factors (43)	.907
Criminal history (8)	.913
Education/employment (9)	.798
Family/marital (4)	.072
Leisure/recreation (21)	.542
Companions (4)	.620
Procriminal attitudes/orientation (4)	.770
Substance abuse (8)	.821
Antisocial patterns - subitems (19)	.881
total items (4)	.754
Specific risk/needs factors (21)	.813
Specific risk/need factors + (14)	.636
History ++ (8)	.757
Other client issues (18)	.579
Responsivity (8)	.655

Note. [1] refers to Cronbach's alphas. + refers to Specific risk/need factors with criminogenic potential.

++ refers to Specific risk/need factor subscale, History of.

Table Y6

LSI-OR General Risk/Need Factors Intercorrelations and Internal Reliability Estimates for Youth n = 31

LSI-OR (items)	History 1	Ed/empl 2	Fam/mar 3	Leis/rec 4	Comp 5	Procrim 6	Subst 7	Anti 8
History 1 (8)	X							
Ed/empl 2 (9)	.075	X						
Fam/mar 3 (4)	.074	.132	X					
Leis/rec 4 (2)	.617***	.103	.253	X				
Comp 5 (4)	.476***	.123	.445*	.472***	X			
Procrim 6 (4)	.560***	.320	.269	.689***	.511**	X		
Subst 7 (8)	.206	.233	.261	.176	.198	.230	X	
Anti 8 (4)	.734***	.278	.236	.694***	.481**	.840***	.389*	X
Total section A	.751***	.529**	.380*	.684***	.621***	.790***	.551***	.873***

Note. 1 refers to Criminal history subscale. 2 refers to Education/employment subscale. 3 refers to Family/marital subscale. 4 refers to Leisure/recreation subscale. 5 refers to Companions subscale. 6 refers to Procriminal attitudes subscale. 7 refers to Substance abuse subscale. 8 refers to Antisocial patterns subscale. * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$.

Table Y7

Specific Risk/Need Factors Correlations with General Risk/Need Subscales and Total Scores for Youth

n = 31

Strengths	Specific risk/need +	History ++	Total specific risk/need [1]
General risk/need	.711 ***	.478 ***	.654 ***
Criminal history	.699 ***	.422 *	.621 ***
Education/employment	.322	.193	.285
Family/marital	-.033	-.013	-.026
Leisure/recreation	.383 *	.119	.289
Companions	.320	.109	.246
Procriminal attitudes	.408 *	.336	.403 **
Substance abuse	.482 **	.490 **	.519 **
Antisocial patterns	.694 ***	.482 **	.645 ***
Specific risk/need +	1.00	.746 ***	.953 ***
History ++		1.00	.913 ***
Total specific risk/need [1]			1.00

Note. + refers to Specific risk/need factors with criminogenic potential. ++ refers to Specific risk/need factor subscale, History of. [1] refers to the Total specific risk/need factor score. * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

Table Y8

LSI-OR Section Intercorrelations for Youth n = 31

LSI-OR sections	General risk/need 1	Specific risk/need 2	Institutional 3	Client issues 4	Responsivity 5
General risk/need 1	1.00				
Specific risk/need 2	.654 ***	1.00			
Institutional 3	-	-	-		
Client issues 4	.354 *	.447 *	-	1.00	
Responsivity 5	.810 ***	.660 ***	-	.418 *	1.00

Note. 1 refers to General risk/need factors, (Section A). 2 refers to Specific risk/need factors, (Section B). 3 refers to Institutional factors, (Section D). 4 refers to Other client issues, (Section F). 5 refers to Responsivity factors, (Section G). * p ≤ .05; ** p ≤ .01; *** p ≤ .001.

Table Y9

Strength Correlations with Total General Risk/Need Factor and Subscales and Total Specific

Risk/Need Factor and Subscales for Youth n = 31

LSI-OR	Pearson r
General risk/need factors	-.495 **
Criminal history	-.502 **
Education/employment	-.145
Family/marital	-.242
Leisure/recreation	-.507 **
Companions	-.319
Procriminal attitudes/orientation	-.319
Substance abuse	-.236
Antisocial patterns	-.360 *
Total specific risk/need factors score	-.305
Specific risk/need factors +	-.357 *
History ++	-.190

Note. + refers to Specific risk/need factors with criminogenic potential. ++ refers to Specific risk/need

factor subscale, History of. * $p \le .05$, ** $p \le .01$.

Table Y10

Strength Correlations with LSI-OR Section Scores for Youth n = 31

LSI-OR sections	Pearson r
General risk/need factors (Section A)	-.495 **
Specific risk/need factors (Section B)	-.305
Institutional factors (Section D)	-
Other client issues (Section F)	-.404 *
Responsivity factors (Section G)	-.313

* $p \le .05$; ** $p \le .01$.

Table Y11

Use of Override for Youth n = 31

Change	n	%
Up	1	3.2
No change	29	93.5
Down	1	3.2

Table Y12

Recidivism Rates for Youth n = 31

Recidivism status	n	%
Nonrecidivists	15	48.4
Any recidivism	16	51.6
Violent recidivism	7	22.6
Nonviolent recidivism	9	29
Level I	3	9.7
Level II	13	41.9

Table Y13

Outcome Variables for Youth n = 31

Outcome variable	M	SD
Risk time (days)	1013.71	54.31
Total time served	77.94	162.55
In-to-risk %	7.51	15.45
Total remands	.84	1.51
Total withdrawn charges	.84	2.27
Outstanding charges	.74	2.39

Note. * In-to-risk % refers to the perception of total incarceration time as a function of risk time.

Table Y14

General & Violent Recidivism Rates for Youth n = 16

	Recidivists only	
	$\underline{n}$	%
General recidivism	9	56.3
Violent recidivism	7	43.8
Total	16	100

Table Y15

Recidivists on Follow-up Variables for Youth n = 16

	Youth	
	<u>M</u>	<u>SD</u>
Risk time (days)	1034.00	41.90
Time served	150.70	202.91
In-to-risk % [1]	14.52	19.21
Time to first reconviction	346.38	281.62

Note. [1] In-to-risk % refers to the percentage of incarceration time as a function of risk time.

Table Y16

Recidivists on Outcome Variables Related to First Reconviction n = 16

	Youth	
	M	SD
Sentence length	29.13	44.54
Convictions	1.75	1.00
Types	1.75	1.00
Offence severity	9.75	4.66

Table Y17

Recidivists on Variables Related to All Recidivism Events n = 16

	Youth	
	M	SD
Sentence length	246.75	504.34
Convictions	5.00	6.06
Sets	2.56	2.58
Offence severity	7.94	4.81
Types	3.25	2.38
Remands	1.56	1.83
Withdrawn [1]	1.63	2.99
Outstanding [1]	1.13	3.26
Outstanding [1] severity	.63	2.03

Note. [1] refers to Charges.

Table Y18

Frequencies of Disposition Variables and Offence Level for First Reconviction for Recidivists n = 16

	Youth	
Disposition level	$\underline{N}$	%
Conditional sentence	3	18.8
Fine	2	12.5
Suspended sentence	1	6.3
Intermittent sentence	1	6.3
Probation	8	50.0
Open custody	2	12.5
Sentenced	10	62.50
Level I	3	18.8
Level II	13	81.3

Table Y19

Frequencies of Disposition Variables and Offence Level for All Recidivism Events for Recidivists

n = 16

| | Youth | |
Disposition level	N	%
Conditional sentence	3	18.8
Fine	2	12.5
Suspended sentence	1	6.3
Intermittent sentence	1	6.3
Probation	7	43.8
Open custody	1	6.3
Sentenced	10	50.0
Level I	3	18.8
Level II	13	81.3

Table Y20

Rates of Recidivism for Each Offence Category for Recidivism Sets for Youth n = 16

Offence	N	%
Serious violent	2	6.5
Break & enter & related	4	12.9
Weapon	2	6.5
Fraud & related	2	6.5
Theft/possession	3	9.7
Arson & property damage	1	3.2
Breach of court order	1	3.2
Drinking driving	1	3.2
Total recidivism rate	16	51.6

Table Y21

Pearson Correlation Coefficients Between Disposition Variables for Youth Recidivists n = 16

	Fed pen	Intermit	Cond	Sent length	Fine	Probation	Suspended
Federal penitentiary	X						
Intermittent sentence	-.098	X					
Conditional sentence	-.182	-.124	X				
Sentence length	.933 ***	-.035	-.133	X			
Fine	-.143	-.098	.303	-.191	X		
Probation	-.048	-.226	-.101	.038	-.333	X	
Suspended sentence	-.098	-.067	-.124	-.131	-.098	-.228	X
Open custody	-.098	-.067	-.124	-.131	-.098	-.228	-.067

* $p \le .05$, ** $p \le .01$, *** $p \le .001$.

Table Y22

Violent/Nonviolent & Level I and II Recidivist Comparisons on Time to First Reconviction and In-to-Risk Time
Percentage for Youth n = 16

	Time to first reconviction	In-to risk time percentage
Violent recidivists		
M	256.57	25.27
SD	219.62	24.49
Nonviolent recidivists		
M	416.22	6.16
SD	316.20	7.89
Level I		
M	345.33	28.75
SD	105.22	24.35
Level II		
M	346.61	11.24
SD	311.91	17.32

Table Y23

Violent/Nonviolent Recidivism by Offence Level for Youth n = 31

Level	Violent recidivists		Nonviolent recidivists		Total	
	$\underline{N}$	%	$\underline{n}$	%	$\underline{n}$	%
I	3	42.9	---	---	3	18.8
II	4	57.1	9	100	13	81.3
Total	7	100	9	100	16	100

Note. x^2 = 4.747, $\underline{df}$ = 1, $\underline{p}$ = .029.

Table Y24

Pearson Correlations Between Recidivism Variables for Youth n = 31

	Recid	Violent recid	Severity	Level	Types	Convictions	Sent length +
Recid	X						
Violent recid	.523 **	X					
Severity +	.833 ***	.300	X				
Level +	.904 ***	.671 ***	.684 ***	X			
Types +	.784 ***	.599 ***	.627 ***	.829 **	X		
Convictions +	.783 ***	.599 ***	.627 ***	.829 **	1.00 ***	X	
Sent length +	.425 *	.444 **	.216	.430 **	.424 **	.424 **	X
Severity ++	.764 ***	.139	.905 ***	.541 **	.452 **	.452 **	.123
Levels ++	.904 ***	.671 ***	.684 ***	1.00 ***	.827 **	.829 ***	.430 *
Types ++	.700 ***	.541 **	.628 ***	.744 **	.809 **	.809 ***	.343
No. of sets ++	.581 ***	.516 **	.507 **	.577 **	.510 **	.510 **	.221
Convictions ++	.510 **	.550 ***	.473 **	.612 **	.670 **	.670 ***	.292
Sent length ++	.332	.557 ***	.295	.500 **	.553 **	.553 ***	.327
Charges +++	.168	-.170	.122	.082	.113	.113	-.138
Severity +++	-.135	-.188	-.115	-.154	-.141	-.141	-.153
Levels +++	-.013	-.225	-.038	-.072	.036	.036	-.183
Remands	.504 **	.319	.361 *	.566 **	.672 **	.672 ***	.287
Withdrawn	.364 *	.108	.238	.354 *	.317	.317	.133
Time served	.470 **	.630 ***	.359 *	.551 **	.582 **	.582 ***	.474 **
In-to-risk %	.476 **	.631 ***	.365 *	.569 **	.605 **	.605 ***	.481 **
Total charges	.530 **	.445 **	.442 *	.604 **	.651 **	.651 ***	.281

(table continues)

Note. + refers to First Recidivism, ++ refers to Recidivism sets, +++ refers to Outstanding charges;
* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$.

Table Y24

Pearson Correlations Between Recidivism Variables for Youth (n = 31)

	Severity ++	Levels ++	Types ++	No. of sets ++	Convictions ++	Sent length ++
Recid						
Violent recid						
Severity +						
Level +						
Types +						
Convictions +						
Sent length +						
Severity ++	X					
Levels ++	.541 **	X				
Types ++	.338	.744 ***	X			
No. of sets ++	.254	.577 ***	.828 ***	X		
Convictions ++	.139	.612 ***	.860 ***	.891 ***	X	
Sent length ++	-.032	.500 **	.662 ***	.749 ***	.937 ***	X
Charges +++	.195	.082	-.015	-.040	-.065	-.108
Severity +++	-.067	-.154	-.174	-.148	-.147	-.119
Levels +++	.032	-.072	-.077	-.108	-.113	-.142
Remands	.220	.566 ***	.754 ***	.677 ***	.710 ***	.594 **
Withdrawn	.163	.354 *	.570 ***	.647 ***	.590 ***	.438 **
Time served	.053	.551 ***	.765 ***	.858 ***	.881 ***	.863 **
In-to-risk %	.052	.569 ***	.779 ***	.852 ***	.892 ***	.875 **
Total charges	.179	.604 ***	.861 ***	.889 ***	.949 ***	.841 ***

(table continues)

Note. + refers to First Recidivism, ++ refers to Recidivism sets, +++ refers to Outstanding charges;
* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

Table Y24

Pearson Correlations Between Recidivism Variables for Youth (n = 31)

	Charges +++	Severity +++	Levels +++	Remands	Withdrawn
Recid					
Violent recid					
Severity +					
Level +					
Types +					
Convictions +					
Sent length +					
Severity ++					
Levels ++					
Types ++					
No. of sets ++					
Convictions ++					
Sent length ++					
Charges +++	X				
Severity +++	.543 **	X			
Levels +++	.818 ***	.615 ***	X		
Remands	.210	-.061	.185	X	
Withdrawn	-.082	-.121	-.110	.655 ***	X
Time served	-.057	-.143	-.080	.679 ***	.354 *
In-to-risk %	-.057	-.145	-.079	.694 ***	.363 *
Total charges	-.025	-.141	-.068	.838 ***	.795 ***

(table continues)

Note. + refers to First Recidivism, ++ refers to Recidivism sets, +++ refers to Outstanding charges;
* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

Table Y24

Pearson Correlations Between Recidivism Variables for Youth (n = 31)

	Time served	In-to-risk %	Charges
Recid			
Violent recid			
Severity +			
Level +			
Types +			
Convictions +			
Sent length +			
Severity ++			
Levels ++			
Types ++			
No. of sets ++			
Convictions ++			
Sent length ++			
Charges +++			
Severity +++			
Levels +++			
Remands			
Withdrawn			
Time served	X		
In-to-risk %	.999 ***	X	
Total charges	.798 ***	.810 ***	X

Note. + refers to First Recidivism, ++ refers to Recidivism sets, +++ refers to Outstanding charges; * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

Table Y25

Recidivist/Nonrecidivist Comparisons on Index Offence and Follow-up Time for Youth n = 31

Index offence	Nonrecidivists n = 15		Recidivists n = 16				
	M	SD	M	SD	t	df	p
Severity	9.067	3.615	8.000	4.397	.73	29.00	.468
Sentence length	2.000	7.746	43.313	78.575	-2.02	29.00	.052
Types	1.333	.816	1.813	.981	-1.47	29.00	.152
Convictions	1.400	1.056	2.250	1.807	-1.58	29.00	.124
Time served	.000	.000	57.714	147.010	-1.47	13.00	.166
Fines	.000	.000	.125	.342	-1.46	15.00	.164
Index open custody	.067	.258	.250	.447	-1.41	24.27	.172
Follow-up time							
Risk time	992.067	58.878	1034.000	41.901	-2.30	29.00	.029

Table Y26

Recidivist/Nonrecidivist Comparisons on LSI-OR scales for Youth n = 31

LSI-OR	Nonrecidivists n = 15		Recidivists n = 16				
	M	SD	M	SD	t	df	p
General risk/need factors	10.733	7.869	16.813	8.068	-2.12	29.00	.043
Criminal history	1.267	2.434	3.875	2.825	-2.75	29.00	.010
Education/employment	3.733	2.789	4.813	2.536	-1.13	29.00	.268
Family/marital	.867	.640	.938	.854	-.26	29.00	.797
Leisure/recreation	.733	.799	1.063	.854	-1.11	29.00	.278
Companions	1.400	1.056	1.938	1.124	-1.37	29.00	.181
Procriminal attitudes	.333	.900	1.00	1.317	-1.65	26.60	.110
Substance abuse	1.533	1.995	1.750	2.145	-.29	29.00	.773
Antisocial patterns	.867	1.246	1.438	1.548	-1.13	29.00	.269
Total specific risk/need	1.200	1.568	2.375	3.403	-1.22	29.00	.232
Specific risk/need +	.867	1.125	1.625	1.996	-1.29	29.00	.207
History ++	.333	.724	.750	1.571	-.94	29.00	.356
Total strengths	1.733	2.187	.500	1.095	1.97	20.31	.063
Other client issues	1.467	1.885	1.875	1.746	-.63	29.00	.536
Special responsivity	.467	1.125	.750	1.125	-.70	29.00	.489

Note. + refers to Specific risk/need factors with criminogenic potential. ++ refers to Specific risk/need factor subscale, History of.

Table Y27

Recidivist/Nonrecidivist Comparisons on Risk Time for Youth n = 31

	Youth
Recidivists	
M	1034.00
SD	41.90
Nonrecidivists	
M	992.07
SD	58.88

Note. t = -2.30, df = 29, p = .029.

Table Y28

<u>Recidivism by Final Risk Level for Youth n = 31</u>

Level	Recidivists		Nonrecidivists	
	<u>n</u>	%	<u>n</u>	%
1 (0 – 4)	---	---	5	100.0
2 (5 – 10)	2	40.0	3	60.0
3 (11 – 19)	10	62.5	6	37.5
4 (20 – 29)	1	100.0	---	---
5 (30 +)	3	75.0	1	25.0
Total	16	51.6	15	48.4

<u>Note</u>. Gamma = .7076, <u>p</u> ≤ .001.

Table Y29

<u>Violent Recidivism by Final Risk Level for Youth n = 31</u>

Level	Violent recidivists		Nonviolent offenders	
	<u>n</u>	%	<u>n</u>	%
1 (0 – 4)	---	---	5	100.0
2 (5 – 10)	1	20.0	4	80.0
3 (11 – 19)	4	25.0	12	75.0
4 (20 – 29)	1	100.0	---	---
5 (30 +)	1	25.0	3	75.0
Total	7	22.6	24	77.4

<u>Note</u>. Gamma = .4690, <u>p</u> = .119.

Table Y30

Pearson Correlations Between LSI-OR Subscales, Sections and Recidivism for Youth n = 31

	Recid	Violent recid	Charges	Convictions	Types	No. of sets +
General risk/need (A)	.367 *	.157	.480 **	.511 **	.526 **	.528 **
Criminal history	.454 **	.010	.587 ***	.530 **	.597 ***	.580 ***
Education/employment	.205	.058	.044	.135	.074	.199
Family/marital	.048	.176	.050	.016	.001	.019
Leisure/recreation	.201	.064	.416 *	.336	.358 *	.304
Companions	.247	.231	.354 *	.331	.393 *	.258
Procriminal attitudes	.291	.219	.516 **	.545 **	.531 **	.449 **
Substance abuse	.054	.057	.037	.172	.218	.201
Antisocial patterns	.205	.048	.534 **	.530 **	.495 **	.539 **
Specific risk/need (B)	.221	.156	.335	.443 **	.461 **	.611 ***
Personal problems (B¹)	.233	.057	.326	.386 *	.441 **	.553 ***
History (B²)	.172	.265	.297	.451 **	.418 *	.597 ***
Total strengths	-.349 *	-.204	-.240	-.204	-.307	-.265
Initial risk level	.398 *	.155	.417 **	.462 **	.474 **	.460 **
Final risk level	.455 **	.226	.464 **	.514 **	.570 ***	.509 **
Risk change	.254	.304	.166	.182	.383 *	.173
Institutional factors (D)	---	---	---	---	---	---
Other mental health (F)	.116	.142	.361 *	.286	.376 *	.449 **
Special responsivity (G)	.130	.190	.418 *	.492 **	.432 **	.465 **

Note. + refers to Number of sets; * p ≤.05; ** p ≤.01; *** p ≤.001.

Table Y30 (continued)

Pearson Correlations Between LSI-OR Subscales, Sections and Recidivism for Youth n = 31

	Sent length +	Time served	In-to-risk %	Offence severity	Level
General risk/need (A)	.378 *	.516 **	.514 **	.225	.258
Criminal history	.380 *	.476 **	.485 **	.200	.417
Education/employment	.109	.201	.187	.343	.065
Family/marital	-.018	.022	.018	-.006	.056
Leisure/recreation	.261	.331	.337	.002	.111
Companions	.245	.295	.302	.188	.186
Procriminal attitudes	.482 **	.578 ***	.583 ***	.092	.263
Substance abuse	.074	.203	.193	.031	-.031
Antisocial patterns	.420 *	.507 **	.505 **	.011	.139
Specific risk/need (B)	.308	.533 **	.516 **	.037	.142
Personal problems (B^1)	.232	.458 **	.445 **	.066	.124
History (B^2)	.364 *	.554 ***	.534 **	-.008	.145
Total strengths	-.116	-.229	-.230	-.265	-.274
Initial risk level	.345	.446 **	.445 **	.299	.279
Final risk level	.379 *	.504 **	.506 **	.328	.372 *
Risk change	.114	.215	.227	.098	.387 *
Institutional factors (D)	---	---	---	---	---
Other mental health (F)	.171	.387 *	.378 *	-.095	.115
Special responsivity (G)	.438 **	.523 **	.519 **	-.033	.105

Note. + refers to Sentence length; * p ≤ .05; ** p ≤ .01; *** p ≤ .001.

Table Y31

Pearson Correlations Between LSI-OR Subscales, Sections and First Recidivism for Youth n = 31

	Convictions	Sent length +	Types	Offence severity	Level
General risk/need (A)	.385 *	.224	.385 *	.410 *	.258
Criminal history	.361 *	.149	.361 *	.387 *	.417 *
Education/employment	.108	.087	.108	.356 *	.065
Family/marital	.185	-.042	.185	-.089	.056
Leisure/recreation	.272	.407 *	.272	.102	.111
Companions	.478 **	.136	.478 **	.255	.186
Procriminal attitudes	.454 **	.436 **	.454 **	.300	.263
Substance abuse	.071	-.021	.071	.199	-.031
Antisocial patterns	.238	.210	.238	.225	.139
Specific risk/need (B)	.081	-.032	.081	.285	.142
Personal problems (B¹)	.067	.016	.067	.287	.124
History (B²)	.087	-.091	.087	.238	.145
Total strengths	-.257	-.182	-.257	-.309	-.274
Initial risk level	.403 *	.185	.403 *	.456 **	.279
Final risk level	.488 **	.199	.488 **	.510 **	.372
Risk change	.341	.000	.341	.195	.387 *
Institutional factors (D)	---	---	---	---	---
Other mental health (F)	.099	.090	.099	-.012	.115
Special responsivity (G)	.206	.295	.206	.203	.105

Note. + refers to Sentence length; *p ≤.05; **p ≤.01; ***p ≤.001.

Table Y32

Pearson Correlations Between LSI-OR Subscales, Sections and Other Recidivism Variables for Youth

n = 31

	Charges +	Severity +	Level +	Remands ++	Withdrawn +++
General risk/need (A)	.187	-.123	.339	.416 *	.250
Criminal history	.162	-.063	.292	.531 **	.499 **
Education/employment	-.030	-.269	-.026	-.021	-.130
Family/marital	.321	.031	.480 **	.193	.010
Leisure/recreation	.171	.082	.304	.413 *	.416 *
Companions	.295	.165	.505 **	.447 *	.191
Procriminal attitudes	.220	-.049	.298	.519 **	.232
Substance abuse	-.053	-.117	.048	-.095	-.186
Antisocial patterns	.229	-.081	.325	.434 **	.382
Specific risk/need (B)	.100	-.038	.167	.156	.076
Personal problems (B¹)	.135	-.014	.222	.191	.145
History (B²)	-.065	-.065	.069	.085	-.027
Total strengths	.197	.197	-.111	-.290	-.184
Initial risk level	-.134	-.134	.334	.352 *	.185
Final risk level	-.137	-.137	.342	.418 *	.189
Risk change	.000	.000	.000	.257	.000
Institutional factors (D)	---	---	---	---	---
Other mental health (F)	-.006	-.006	.105	.399 *	.347
Special responsivity (G)	-.133	-.133	.241	.259	.185

Note. + refers to Outstanding charges; ++ refers to Total number of remands; +++ refers to Total withdrawn charges; *p ≤.05; **p ≤.01; ***p ≤.001.

Table Y33

Summary of Stepwise Regression Analysis for LSI-OR Subscale Predictors of Recidivism for Youth

n = 31

Variable	B	SE B	Beta
Step 1			
Criminal history	.0791	.0288	.4542 **

Note. R = .4542 for Step 1. No statistics were produced when the analyses were repeated for violent

recidivism.

Table Y34

Summary of Stepwise Regression Analysis for LSI-OR Subscale Predictors of Charges for Youth

n = 31

Variable	B	SE B	Beta
Step 1			
Criminal history	1.5668	.4014	.5869 ***

Note. R = .5869 for Step 1. *** $p \leq .001$.

Table Y35

Summary of Stepwise Regression Analysis for LSI-OR Subscale Predictors of Time Served for Youth n

= 31

Variable	B	SE B	Beta
Step 1			
Procriminal attitudes	80.6103	21.1252	.5782 ***
Step 2			
Procriminal attitudes	61.6379	20.1681	.4421 **
History (B²)	53.4100	19.0549	.4055 **

Note. R = .5782 for Step 1. R = .6930 for Step 2. ** p ≤ .01. *** p ≤ .001.

Table Y36

Summary of Stepwise Regression Analysis for LSI-OR Subscale Predictors of In-to-Risk Time

Percentage for Youth n = 31

Variable	B	SE B	Beta
Step 1			
Procriminal attitudes	6.0273	1.9372	.4549 **
History (B²)	4.7746	1.8302	.3814 **

Note. R = .6848 for Step 1. ** $p \leq .01$.