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THE DYNAMIC PREDICTION OF CRIMINAL RECIDIVISM

A three-wave prospective study

1995 - 2002

by

SHELLEY LYNN BROWN

A thesis submitted to the Department of Psychology

in conformity with the requirements for

the degree of Doctor of Philosophy

Queen's University

Kingston, Ontario, Canada

January, 2002

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0-612-65666-7

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Abstract

This study examined the role of dynamic risk assessment in the prediction of adult criminal recidivism. A three-wave, prospective, research design involving 136 male offenders about to be released from federal institutions in the Ontario region was used. A series of static and dynamic measures were selected based on their theoretical concordance with the coping-relapse model of criminal recidivism (Zamble & Quinsey, 1997). Although static measures were assessed only once, prior to release, dynamic measures were assessed on three separate occasions: pre-release, 1 month, and 3 months post-release. The extent to which dynamic variables changed during the assessment phase of the study was measured using a series of within-subject change analyses. Additionally, the ability of static and dynamic measures to predict conditional release failure was measured using Cox regression survival analysis with time-dependent covariates and Receiver Operator Characteristic (ROC) analysis. As predicted, the following dynamic variables evidenced significant change: employment problems, marital instability, financial problems, perceived stress, perceived problem level, negative affect, social support, criminal associates, coping ability, expected negative value of crime and substance abuse. However, contrary to the stated hypotheses, the following dynamic variables either evidenced no significant change or the observed change occurred in the opposite direction to the stated hypotheses: accommodation problems, leisure problems, health problems, positive affect, criminal self-efficacy, expected positive consequences of crime and supervision compliance. As predicted, the study found that the strongest time-dependent dynamic model outperformed the strongest static model in terms of predicting conditional release failure. However, the greatest predictive accuracy was achieved when both static and time-dependent dynamic measures were included. Implications for dynamic risk assessment and management are discussed.

Acknowledgements

I would like to express my sincere appreciation to Dr. Ed Zamble for his expertise, steadfast support and encouragement throughout the duration of this project. I consider myself privileged and fortunate to have had the opportunity to work with one of the foremost experts in field. I am also thankful to my committee members Dr. Vern Quinsey and Dr. Ron Holden, as well as my examiners Dr. Don Andrews, and Dr. Fiona Kay for their constructive and thoughtful feedback. Additionally, this project would not have materialized if not for the continuous support provided by Dr. Larry Motiuk and Dr. Ralph Serin from the Research Branch of Correctional Service of Canada. The Research Branch's commitment to the education and training of future correctional researchers in an applied setting is no doubt, unparalleled. Additionally, I would like to thank the Social Sciences and Humanities Research Council for providing financial assistance during the first four years of my doctoral training.

I would also like to extend a heartfelt thanks to my research assistants: Tanya Rugge, Joy Irving, Louise Noce, Dianne Necovski, Michelle St. Amand, Julie Perkins, and Sebastien Gratton. To my good fortune, I was blessed with incredibly diligent, independent and level headed researchers who demonstrated a level of personal investment rarely seen in such circumstances. This project also would not have been possible without the operational support provided by the institutions, parole offices and halfway houses in Kingston, Ottawa and Toronto. Your patience, time and support were critical to the success of this project. Lastly, I would like to sincerely thank all of the offenders who volunteered their time to take part in this project.

I am also grateful to my family and friends, particularly my late parents. Lastly and most importantly, I would like to dedicate this study to my husband, Murray, whose unwavering support, devotion and encouragement far exceeded my expectations. With this project behind us we can now look forward to a new project, that has no deadlines, only milestones.....raising a family.

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"Overall, exploration of the predictive validities of assessments of change remains a major issue and is, perhaps, the major issue for the development of theory and practice in the psychology of crime."

(Andrews, 1995; p. 54.)

Chapter 1: Introduction

Assessing an offender's risk to recidivate upon release from prison is one of the most important functions of a correctional organization. To date, risk assessment has emphasized two types of factors: static and dynamic. Although static factors are considered constant and unchanging, thus not amenable to treatment, in theory dynamic risk factors can change, and consequently are amenable to treatment (Andrews & Bonta, 1998). To date, research has demonstrated that some of the most robust static predictors of criminal recidivism include youthfulness, being male, number of previous offences, age at first arrest, criminal versatility, poor parental supervision, and early onset of behavioural problems (e.g., lying, cheating, stealing \leq age 12) (Andrews & Bonta, 1998; Farrington, 1995; Gendreau, Little, & Goggin, 1996; Loeber, 1982; Moffitt, 1993).

A considerable body of research has also accumulated demonstrating the ability of dynamic factors such as criminal attitudes, criminal associates, employment, and substance abuse to predict adult criminal recidivism (Dowden & Brown, in press; Gates, Dowden, & Brown, 1998; Gendreau et al., 1996; Gendreau, Goggin, & Gray, 1998; Goggin, Gendreau, & Gray, 1998; Law, 1998; Robinson, Porporino, & Beal, 1998). However, the vast majority of these studies have relied exclusively on single wave research designs. Briefly, single wave research designs assess dynamic factors only once, for example, prior to release. The results of this assessment are then used to predict whether or not recidivism will occur at a later date.

Dynamic risk prediction studies have rarely been multi-wave in nature. That is, they have rarely examined whether or not recidivism can be successfully predicted from the systematic assessment and re-assessment of dynamic information using prospective research designs (Andrews, 1995; Andrews & Bonta, 1998; Gendreau et al., 1996). Additionally, the research that

does exist has been hampered by various theoretical, methodological and statistical shortcomings including an over-reliance on retrospective research designs, small sample sizes, pre/post designs and single-method assessment tools such as the Level of Service Inventory - Revised (LSI-R; Andrews & Bonta, 1995). Most notable, is the lack of consensus regarding what constitutes the most appropriate method for analyzing change data.

Despite the lack of research in this area, the systematic assessment and re-assessment of dynamic risk has been unconditionally accepted as the desired mechanism for improving the manner in which offenders are supervised in the community (Andrews & Bonta, 1998; Bonta, 1996; Jones, 1996; Monahan, 1996; Motiuk, 1999; Steadman et al., 1994; Zamble & Quinsey, 1997). Similarly, contemporary treatment programs for sex offenders and more recently, violent offenders, are based largely on the theoretical premise that dynamic variables play a significant role in the recidivism process. However, empirical support for this position is weak, based entirely on a scattering of retrospective studies (i.e., Groth & Birnbaum, 1979; Pithers, Kashima, Cumming, Beal, & Buell, 1988; Zamble & Quinsey, 1997).

As a result, the main objective of this study is to advance the theoretical development and practical utility of the assessment and re-assessment of dynamic variables. Specifically, it will examine whether the assessment and re-assessment of prospectively rated dynamic risk can aid parole officers in the day to day management of offenders under community supervision.

Chapter 2: Literature Review

Defining Static and Dynamic Risk Factors

A risk factor is a measurable characteristic of an individual from a specialized population that is correlated with and assessed *prior to* the outcome of interest (Andrews & Bonta, 1998; Kraemer et al., 1997). Thus, a risk factor not only correlates with but also predicts the behaviour in question. Traditionally, risk factors that predict adult criminal behaviour have been classified dichotomously as static or dynamic. Although static risk factors have been viewed as constant and unchanging, and hence not amenable to treatment (e.g., criminal history), in theory dynamic risk factors can change, and consequently are viewed as amenable to treatment (e.g., criminal attitudes) (Andrews & Bonta, 1998).

Recently, correctional researchers (e.g., Grann, Belfrage, & Tengström, 2000; Hanson & Harris, 2000; Quinsey, Coleman, Jones, & Altrous, 1997; Quinsey, Harris, Rice & Cormier, 1998; Wormith, 2000; Zamble & Quinsey, 1997) have begun to reformulate the conventional conceptualization of the risk factor as dichotomous. Instead, the risk factor is now described as a continuous construct that varies along four dimensions, specifically, the rate of change, the origin of change (i.e., within the individual versus the environment), the causal change agent (intentional manipulation versus natural fluctuations in the environment), and the degree of predictability associated with the change.

At one end of the continuum are fixed risk factors. These factors are truly static in that they will never change regardless of treatment or the passage of time. Factors clustering at this end of the continuum for adult offenders include variables such as gender, age onset of criminality, and negative family background characteristics such as poor parental supervision. At the other extreme are risk factors that can change rapidly within days, hours or even minutes. These factors

have been labeled precipitating labile events (Zamble & Quinsey, 1997), acute dynamic risk factors (Hanson & Harris, 2000) and proximal antecedents (Quinsey et al., 1997). Typically, these variables are difficult to predict, originate in the environment (e.g., wife dies in a car accident), and occur in close temporal proximity to the event of interest (e.g., recidivism) (Quinsey et al., 1997).

In the middle of the continuum are two subsets of risk factors. The first category is best described as stable and slow changing. These factors include criminal history and enduring personality traits such as psychopathy (Hanson & Harris, 2000; Zamble & Quinsey, 1997). Although it is easy to demonstrate how criminal history can change merely as a function of the passage of time, it is much more difficult to do so with enduring personality traits (Costa & McCrae, 1992; Olweus, 1984). Nonetheless, unlike fixed risk factors, there is some evidence, albeit far from conclusive, that enduring personality traits may at the very least, manifest themselves in a less destructive manner over the life course (Hare, Forth, & Strachan, 1992). However, whether or not enduring personality traits such as psychopathy can be modified through appropriate intervention remains to be conclusively determined. Moreover, some theorists (e.g., Harris, Skilling, & Rice, in press; Mealey, 1995) remain skeptical because emerging empirical evidence continues to generate discouraging results (e.g., Ogloff, Wong, & Greenwood, 1990; Rice, Harris, & Cormier, 1992; Seto & Barbaree, 1999).

The second class of factors of intermediate variability can be conceptualized as slow changing, albeit, viable treatment targets. In the past, these factors have also been labeled dynamic risk factors or criminogenic needs (e.g., criminal attitudes, chronic substance abuse, coping, socialization with criminal others and employability). It has been hypothesized that these factors will remain unchanged for several months or years in the absence of an active treatment intervention (Hanson & Harris, 2000; Quinsey et al., 1998).

In sum, the hypothesized risk factor continuum is comprised of risk factors characterized by: 1) unmalleability (change is not possible under any circumstances), 2) slow changeability (change can occur albeit it may take years or even a lifetime), 3) intermediate changeability (e.g., change can occur within months or years) and lastly, 4) rapid changeability (e.g., change can occur within days, hours or even minutes). Additionally, risk factors classified as non-malleable and slow changing are generally not perceived as viable treatment targets due to their highly static nature. In contrast, risk factors characterized by intermediate or rapid changeability are viewed as promising treatment and risk management targets (e.g., minimizing high-risk situations).

This model may hold some intuitive appeal for those theorists who have recently expressed dissatisfaction with the traditional view that risk factors are either static or dynamic (e.g., Hanson & Harris, 2000; Quinsey et al., 1998). Additionally, the model may yield dividends in a practical setting (e.g., parole supervision) in terms of developing measures that take into account the differential rate of change among certain dynamic risk factors. Also, by emphasizing that dynamic risk factors can also be situational in nature, originating in the environment, the hypothesized risk factor continuum complements traditional relapse prevention frameworks (e.g., avoid high-risk environmental situations). Given that little is known about the actual rate of change for most dynamic factors, considerable more research is required to test the empirical viability and hence, the practical utility of this model.

When Does a Risk Factor Become Dynamic?

Two prerequisites are required to demonstrate that a risk factor is indeed dynamic. First, from a methodological perspective, the research strategy must employ a prospective, multi-wave longitudinal design that assesses the hypothesized dynamic risk factor on at least two separate occasions. The research design must track changes occurring naturally in real time (i.e., in the absence of an intentional manipulation) and subsequently measure the degree to that changes in

the observed risk factor are associated with changes in the criterion of interest. Second, it must be demonstrated that the predictive accuracy of the hypothesized dynamic risk factor assessed at the initial assessment is improved by incorporating information about how the hypothesized dynamic risk factor changes over time (Andrews, 1995; Andrews & Bonta, 1998; Andrews, Bonta & Hoge, 1990; Kraemer et al., 1997). Once a variable has been elevated from a risk factor to a dynamic risk factor, the next logical question is whether or not the dynamic risk factor is also causally related to the criterion. This level of explanation typically requires classical experimental designs involving control groups and experimental treatment groups (Andrews & Bonta, 1998; Kraemer et al., 1997). Additionally, it should be noted that if a controlled treatment outcome study demonstrates that changes in the targeted treatment variable are related to recidivism, the targeted treatment variable is both a casual and dynamic risk factor given that being dynamic, is a necessary precursor to causality (Kraemer et al., 1997).

Clinical versus Mechanical Prediction

Predictions are made every day about whether or not someone will succeed in graduate school, recover from depression, excel at work, or commit a new crime upon release from prison. To date, the prediction literature has classified decision-making as either clinical or mechanical. Mechanical prediction refers to the process of collecting, combining and/or weighting factors according to a set of objective, pre-defined rules that do not vary as a function of the decision-maker. Thus, strict guidelines are established apriori in terms of what information should be collected, how it should be collected, where it should be collected from, and lastly, how it should be combined. One of the most common forms of mechanical prediction is the actuarial method. In this procedure the pre-defined rules are empirically derived. Specifically, relevant factors are selected and mathematically combined and/or weighted such that their statistical association with the criterion of interest is maximized. It is important to note that the terms statistical, mathematical, and

empirical have often been used interchangeably to describe actuarial prediction (Bonta, 1996; Grove & Meehl, 1996; Grove, Zald, Lebow, Snitz, & Nelson, 2000; Marchese, 1992; Sawyer, 1966).

In contrast, clinical prediction refers to a decision-making process in which predictions are based on the subjective evaluation and summation of factors deemed relevant by the decision-maker. There are no pre-defined rules about what information should be considered, how it should be measured, what information sources should be used, or how the information should be combined and/or weighted. Rather, the clinician's professional judgement is used rather than a mathematical model to determine how best to select, combine and/or weight the information. Thus, the rules vary across decision-makers as well as the individual about whom the decision is being made (Bonta, 1996; Grove & Meehl, 1996; Grove et al., 2000; Marchese, 1992; Sawyer, 1966).

Since the 1920's (e.g., Freyd, 1925; Lundberg, 1926; Viteles, 1925) the comparative accuracy of clinical versus mechanical prediction has received considerable attention in the literature. In 1954, Meehl published the first narrative review in the area. He concluded that actuarial prediction was either better than or equal to clinical prediction in all but one of 20 studies (Meehl, 1954). Since Meehl's seminal review, numerous studies have emerged resulting in a series of narrative reviews (e.g., Dawes, Faust, Grove, & Meehl, 1996; Meehl, 1989; Meehl, 1965; Marchese, 1992; Sawyer, 1966; Sines, 1966) and, more recently, a quantitative meta-analytic review (Grove et al., 2000). In sum, more than 80 years of research conducted across a diverse range of decision-making realms has clearly demonstrated that mechanical prediction is at least equal to or superior to clinical judgement in the majority of cases. Thus, Meehl's original conclusion made in 1954 remains unchallenged almost 50 years later.

Clinical Prediction and Criminal Behaviour

Seminal work conducted in the late seventies (i.e., Coccozza & Steadman, 1976; Kozol, Boucher, & Garofalo, 1972; Steadman, 1977; Steadman & Coccozza, 1974; Thornberry & Jacoby, 1979) collectively illustrated the limitations associated with clinical predictions of criminal behaviour. As Monahan (1981) aptly concluded from these works, "psychiatrists and psychologists are accurate in no more than one out of three predictions of [violent] behaviour...." (p.47). Canadian studies have also substantiated Monahan's conclusion regarding the inability of clinicians to predict violent behaviour (e.g., Quinsey & Ambtman, 1979; Quinsey & Maguire, 1986). Additionally, Quinsey and Maguire (1983) have illustrated that clinicians rarely reach consensus when deciding upon the most appropriate form of non-pharmacological intervention.

Research published after Monahan's monograph demonstrated that the clinician's predictive power was not as poor as previously thought. More recent evidence has demonstrated that clinicians can predict future violent behaviour beyond chance levels (Borum, 1996; Lidz, Mulvey, & Gardner, 1993; Menzies & Webster, 1995; Mossman, 1994; Otto, 1992). Nonetheless, in the realm of criminal recidivism prediction whether it be violent or non-violent, pure clinical methods are still unable to outperform mechanical prediction (Grove et al., 2000; Hall, 1988; Mossman, 1994; Wormith & Goldstone, 1984). This finding has in part, been attributed to the errors clinicians typically make when predicting future criminal conduct such as overlooking the statistical base rate, relying on illusory correlations, and disregarding regression toward the mean (Chapman & Chapman, 1969; Einhorn & Hogarth, 1978; Quinsey et al., 1998; Webster, Harris, Rice, Cormier, & Quinsey, 1994).

Actuarial Prediction and Criminal Behaviour

Although the actuarial prediction of criminal behaviour can be traced back to the 1920s (Burgess, 1928) it was Monahan's monograph that prompted renewed interest, within both the

criminal justice and mental health systems. To date, actuarial scales have typically been comprised of fixed risk factors such as age, gender, and age onset of criminality. As well, actuarial scales have also relied extensively on a range of criminal history variables such as criminal versatility, offence frequency, prior parole failure, security classification, offence severity, sentence length, and offence type.

In Canada, the Statistical Information on Recidivism Scale (SIR; Nuffield, 1982) is an actuarial measure routinely used by the Correctional Service of Canada (CSC) and the National Parole Board (NPB). Similarly, the Violence Risk Appraisal Guide, (VRAG; Harris, Rice, & Quinsey, 1993) developed on offenders being assessed or treated for psychiatric disorders is currently being used in the Ontario mental health system and, to some extent, in the federal correctional system. Analogous scales such as the Salient Factor Score (SFS; Hoffman, 1983; Hoffman & Beck, 1985) have been developed for use in the American federal prison system. Based on the most sophisticated statistical methods for assessing accuracy (i.e., Receiver Operator Characteristic, ROC; Mossman, 1994; Rice & Harris, 1995; Swets, 1986), actuarial scales have demonstrated accuracy rates in the range of 70 to 80% (Bonta, Harman, Hann, & Cormier, 1996; Hanson & Thornton, 2000; Rice & Harris, 1995; Mossman, 1994; Steadman et al., 2000). Also of interest, is that some researchers (e.g., Palmer, 1997; Nugent, 2000) have demonstrated that the predictive accuracy of SIR scale can be enhanced by incorporating information pertaining to recent prison misconducts.

Psychopathy and Criminal Behaviour

Generally, personality measures and psychological tests have not fared well in the prediction of criminal behaviour (Megargee, 1970; Gendreau et al., 1996). A notable exception is Hare's Psychopathy Checklist-Revised (PCL-R; Hare, 1991). The PCL-R is an assessment tool that measures the extent to that an individual resembles the prototypical psychopath. The PCL-R

assesses a constellation of affective, interpersonal and behavioural characteristics commonly associated with criminal psychopathy such as impulsivity, callousness, absence of remorse, manipulateness, and criminal versatility (Hare, 1991; Hare, 1996; Harris et al., in press). It is comprised of ratings on 20 items that are summed to generate a total score ranging from 0 to 40. Higher scores are associated with higher degrees of psychopathy. Thus, the manner in which the PCL-R combines information can be conceptualized as mechanical rather than clinical. Additionally, it is important to note that the PCL-R was developed to enhance the reliability and validity of psychopathy assessments. Individual items were selected using content validity rather than predictive validity criteria (e.g., items were not selected based on their statistical association with recidivism). Thus, although the PCL-R can be considered mechanical in nature it cannot be classified as actuarial.

Since the PCL-R's inception, a considerable amount of research has amassed attesting to its reliability and validity. Most important, is the serendipitous finding that the PCL-R is a robust predictor of general and violent criminal recidivism. Four meta-analytic reviews have clearly demonstrated that the PCL-R is a worthy predictor of criminal behaviour, specifically violence (e.g., Gendreau et al., 1996; Gendreau, Goggin, & Smith, in press; Hemphill, Hare, & Wong, 1998; Salekin, Rogers, & Sewell, 1996). Meta-analytic effect sizes have ranged from an r of .23 (Gendreau et al., in press) to an r of .37 (Salekin et al., 1996). Similarly, statistical assessments of the PCL-R ability to predictive general recidivism based on the Common Language (CL) Effect Size Indicator (McGraw & Wong, 1992) and Receiver Operator Characteristic (ROC) analysis have demonstrated accuracy rates comparable to existing actuarial measures (e.g., Gendreau et al., 1999; Serin & Brown, 2001).

Most researchers and clinicians would agree that the PCL-R is currently the most reliable and valid measure of psychopathy. However, the PCL-R has been criticized for being overly time-

consuming to administer, atheoretical, and for being somewhere esoteric in that specialized training and post secondary education are required for its administration and scoring (Gendreau et al., in press; Harris et al., in press; Salekin et al., 1996; Serin & Brown, 2000). As a result, some researchers have attempted to create a measure of criminal psychopathy that is equally effective in terms of predicting recidivism, yet considerably more efficient. One such measure, is the Childhood Adolescent Taxon Scale-Self Report Version (CATS-SR; Harris, Rice, & Quinsey, 1994; Quinsey et al., 1998). Unlike the PCL-R, the CATS-SR does not require formal training or post secondary education. Further, it can be administered and scored in considerably less time. Quinsey et al. (1998) have also demonstrated that CATS-SR scores can readily replace PCL-R scores within the Violence Risk Appraisal Guide (VRAG) without diminishing predictive accuracy. Nonetheless, the ability of the CATS-SR to serve as an expedient alternative to the PCL-R in the realm of risk assessment still requires further investigation particularly among the general criminal population.

Clinical versus Mechanical Prediction: Dichotomy or Continuum?

To date, the literature has conceptualized prediction methods as clinical or mechanical. However, early (e.g., Sawyer, 1966) and contemporary scholars (e.g., Wormith, 2000) have aptly recognized that prediction methods actually exist along a continuum ranging from pure clinical to pure actuarial. At one extreme is complete unstructured clinical judgement (e.g., "In your opinion, to what degree does person X resemble a psychopath?"). In this case, the clinician has complete decision making authority in terms of deciding what information sources should be used and how the information should be combined. At the other extreme is the actuarial method (e.g., maximize the statistical association between the existing Hare Psychopathy Checklist-Revised (PCL-R) and recidivism by statistically weighting certain PCL-R items more so than others based on their empirical relationship with recidivism). In this situation, all discretionary decision making power is removed from the clinician. Pre-defined rules are established that clearly indicate not only how and

from where the information should be collected but also how it should be combined. In the middle of the continuum are methods that rely on structured clinical judgement such as the Spousal Assault Risk Assessment Guide (SARA; Kropp & Hart, 2000) and the PCL-R. Both the SARA and PCL-R rely on relatively structured guidelines in regards to information sources and the scoring of individual items. However, unlike the PCL-R, the SARA allows the clinician to determine how to combine and/or weight the clinical information that was obtained using structured rating guidelines. Thus, although the PCL-R can be described as mechanical (albeit not actuarial), the SARA cannot. However the SARA does represent a marked improvement over methods that are purely clinical in nature (see Kropp & Hart, 2000).

Limitations of Actuarial Prediction

Traditionally, actuarial tools in corrections have relied almost exclusively on static risk factors such as criminal history, family background, prior employment and more recently, personality (e.g., Violence Risk Appraisal Guide). Although actuarial instruments have surpassed clinical judgement, their reliance on static factors has rendered them incomplete for several reasons. First, they provide little practical direction for correctional workers who require information about predictors they can modify in order to establish effective interventions. Similarly, actuarial instruments make no allowances for the incorporation of treatment gain into the prediction equation, nor can they indicate when an offender will fail or when the supervision level should be changed (Bonta, 1996; Quinsey et al., 1997; Quinsey & Walker, 1992; Zamble & Quinsey, 1997). Actuarial methods have also been criticized for being atheoretical, developed largely from variables selected on the basis of convenience rather than theoretical merit (Krauss, Sales, Becker, & Figueredo, 2000). Additionally, they have been criticized for exhibiting a social class bias and for generating too many false positives (Porporino, Higginbottom, & Zamble, 1990). Furthermore, although it is generally assumed that actuarial and clinical information must both contribute to the

prediction equation, an empirically-derived mechanism for accomplishing this task has yet to be realized (Monahan, 1981; Quinsey & Walker, 1992; Webster et al., 1994; Webster, Eaves, Douglas, & Wintrup, 1995).

Perhaps most important, is the finding that actuarial risk scales are far from perfect. For example, a re-validation study indicated that the SIR was 74% accurate in predicting general recidivism (Bonta et al., 1996a). Additionally the VRAG has been found to be 76% accurate in predicting violent recidivism (Rice & Harris, 1995).

Dynamic Risk Prediction

In response to the limitations associated with actuarial measures, risk assessment methods emphasizing dynamic risk prediction have emerged (Bonta, 1996). In theory, dynamic risk assessment instruments are sensitive to change and are capable of measuring the factors that are changeable and related to criminal behaviour. These measures can be differentiated from their actuarial counterparts in that they are designed to be systematically re-administered to measure change in dynamic risk factors (Bonta, 1996; Bonta, Andrews, & Motiuk, 1993; Jones, 1996; Motiuk, 1999). Examples include the Level of Service Inventory-Revised (LSI-R; Andrews & Bonta, 1995), the Problem Identification Checklist (Rice, Harris, Quinsey, & Cyr, 1990; Quinsey et al., 1997), the Community Intervention Scale (CIS; Correctional Service of Canada, 1999a), the Violence Risk Scale (VRS; Wong & Gordon, 1999), the Wisconsin Risk-Needs Classification System (Baird, 1981; Baird, Heinz, & Bemus, 1979) and its Canadian successor, the Revised-Manitoba Risk-Needs Classification System (Bonta, Pang, Parkinson, & Barkwell, 1994).

Research to Date

Numerous studies (see Andrews & Bonta, 1998; Gendreau et al., 1996) have demonstrated that risk factors traditionally viewed as criminogenic or dynamic within conventional paradigms predict criminal recidivism. However, these conclusions have all been drawn from single

wave predictive outcome studies. This type of study treats 'dynamic factors' as static in that they are only assessed once (e.g., prior to release) before their relationship with some outcome measure is examined. The extent to which changes in such factors are actually associated with variations in the likelihood of recidivism using a prospective research design with repeated measurements has rarely been investigated (Andrews, 1995; Andrews & Bonta, 1998; Gendreau et al., 1996). Nonetheless, the research that has been conducted, although limited, is encouraging.

Andrews and Robinson (1984) examined the dynamic predictive validity of the Level of Supervision Inventory (LSI; Andrews, 1982), the predecessor to the LSI-R (Andrews & Bonta, 1995) in a sample of 57 Ontario probationers. They used a prospective, two-wave research design. LSI scores assessed at admission were compared with LSI re-test scores taken approximately 18 months after the initial intake assessment. A minimum 6-month post-probation follow-up revealed that only the LSI re-test scores were significantly related to recidivism. An analysis of variance (recidivism was defined continuously) demonstrated a significant main effect for LSI re-test scores, but not for intake scores. No interaction between the intake and re-test scores was observed. With the exception of criminal attitudes, this finding was consistent across all of the LSI sub-domains (e.g., criminal history, education/employment, financial, family/marital, accommodation, leisure/recreation, companions, alcohol/drug problem, and emotional/personal).

It is important to note that the original intake sample was comprised of 561 probationers. As the authors aptly note, the re-test scores were only calculated for 57 individuals who actually evidenced visible signs of deterioration. Offenders failing to demonstrate any noticeable signs of worsening behaviour were not re-assessed. Thus, the re-assessment sample was over represented with individuals demonstrating the greatest levels of change. Consequently, this may have inadvertently over-estimated the relative strength of the re-test scores. Further, the authors

do not comment on the number of offenders who recidivated and were subsequently reincarcerated prior to the second assessment.

Andrews and Wormith (1984) examined the dynamic predictive validity of criminal attitudes, in two samples of probationers (combined $N = 271$) using a prospective, two-wave, longitudinal design. In both samples, criminal attitudes were initially assessed at the beginning of the probationary period and six months thereafter. Depending upon the sample, the follow-up period either ended when the probation period terminated or three years post-probation. Criminal attitudes were measured using the Criminal Sentiments Questionnaire, a self-report scale that was originally developed by Reckless (1967; Mylonas & Reckless, 1963) and later revised by Gendreau, Grant, Leipziger, and Collins (1979) and Andrews (1985). The scale is comprised of 41 items, subdivided into three sub-scales: 1) attitudes towards laws, courts, and police; 2) tolerance for law violations; and 3) identification with criminal others.

A hierarchical regression analysis revealed that residualized re-test scores contributed significant incremental variance above and beyond the initial intake scores in predicting self-reported criminal activity (change in $R^2 = .09$) and official criminal convictions (change in $R^2 = .04$). Self-report re-test measures of social support for crime (a proxy for criminal associates), trouble at school or home and personality problems also added significant incremental variance to outcome for both unofficial and official measures of recidivism (e.g., change in R^2 ranged from .02 - .07). Given that attrition rates were not reported, the proportion of the original sample that recidivated prior to re-assessment could not be determined. Thus, pertinent information regarding the ability of the initial assessment to predict who would have failed prior to the second assessment was not assessed.

Another prospective, two-wave design (Motiuk, 1991; Motiuk, Bonta, & Andrews, 1990) assessed the dynamic predictive validity of the LSI for a sample of 54 provincial inmates

(sentenced to two years or less). Initial LSI scores were assessed at intake while re-test scores were assessed shortly after release. One-year, post-release recidivism results demonstrated that the re-test LSI scores improved the explained proportion of variance in recidivism by approximately 10% above the initial intake scores. However, of the nine LSI sub-domains, only employment re-test scores were uniquely related to recidivism after the intake scores had been controlled for. However, once again it is important to note that the researchers only examined the dynamic predictive validity of the LSI for 11% of the original sample ($N = 510$).

More recently, Bonta (1996) and colleagues (Bonta et al., 1993; Bonta et al., 1994) conducted a large scale follow-up of approximately 14,000 probationers in Manitoba examining the predictive validity of the Wisconsin Risk-Needs Classification System (Baird, 1981; Baird et al., 1979) and its successor, the Revised-Manitoba Risk-Needs Classification System (Bonta et al., 1994). Dynamic predictive validity estimates were provided for a sub-sample of 2,347 offenders. Once again, a prospective, two-wave design was employed. Although the initial intake scores were conducted at the beginning of the probation period, the exact timing of the re-test scores was not specified. The authors report that increases in overall needs levels (assessed by parole officers) were accompanied by increases in failure rates (probation revoked), although decreases in needs levels were accompanied by decreases in failure rates (Bonta, 1996; Bonta et al., 1993; Bonta et al., 1994). No further analyses were provided. Further, the number of offenders who were revoked prior to the re-assessment phase was not reported. Lastly, whether or not the observed changes were related to actual criminal reoffending was not examined.

Motiuk (1999) reviewed the dynamic predictive validity of the Community Risk Needs Management Scale (CRNMS; Motiuk & Porporino, 1989) based on 3,112 federal offenders who had just been released on day parole, full parole, or statutory release. The CRNMS is a risk/needs management tool used by federal parole officers in the community. The risk rating, generated from

criminal history variables yields a high or low risk rating while the overall need level rating (i.e., low, moderate, high) is compiled by the parole officer based on information pertaining to 12 need areas (e.g., employment, attitudes, associates, alcohol abuse, etc). CRNMS risk and need ratings generated by parole officers during four different post-release waves (i.e., 0 - 6 months, 7 - 12 months, 13 - 18 months, and 19 - 24 months) were compared. Individuals who evidenced an increase in their overall risk and need levels between the first CRNMS assessment (0 - 6 months) and the second (7 to 12 months) were almost twice as more likely to have their conditional release suspended (15.6% suspension rate) compared to individuals who evidenced no change or only a positive change (i.e., 8.8% - 9.0% suspension rate). Separate comparisons conducted between the second (6 - 12 months) and third (13 - 18 months) and the third (13 - 18 months) and fourth (19 - 24 months) waves revealed similar trends, albeit the findings were not as strong. Whether or not the observed changes were related to actual criminal reoffending was not examined. Moreover, like previous research, the nature of the research design (i.e., pre/post comparison) precluded the inclusion of individuals who failed prior to re-assessment.

In a retrospective design, Quinsey et al., (1997) examined the static and dynamic antecedents of elopement and recidivism among 60 mentally disordered male offenders who had either eloped from an Ontario provincial psychiatric facility or reoffended while under supervision, with 51 matched controls who had done neither. Dynamic factors were coded retrospectively during the 1-month and 6-month period prior to failure for the recidivists. Corresponding control dates were used for the nonrecidivists. Psychotic behaviours, skill deficits, inappropriate/procriminal social behaviours, mood problems and social withdrawal were coded using the Problem Identification Checklist (Rice et al., 1990; Quinsey et al., 1997) for the 6-month pre-offence period. A slightly different measure, the Proximal Risk Indicator Scale was used to code the 1-month pre-offence data. This scale was tailored specifically for the study based on input

from clinicians in terms of what they deemed were relevant proximal indicators of impending failure. The scale was comprised of four sub-scales that assessed dynamic antisociality, psychiatric symptoms, poor compliance, and medication compliance.

In sum, the following seven dynamic variables emerged as significant predictors in both the between subject (recidivists versus controls) and the within subject (comparison of 6 month versus the 1 month data among the recidivists) analyses: inappropriate and procriminal social behaviours, mood problems, social withdrawal, dynamic antisociality, psychiatric symptoms, poor compliance, and poor medication compliance. The authors also indicate that dynamic antecedents coded one month prior to failure produced larger effect sizes than those coded within six months. However, it is difficult to make firm conclusions regarding within-subject change data given that two slightly different measures were used for each assessment period. The authors also note that the results may have been biased given that the coders were not blind in regards to the outcome of each participant's release.

Hanson and Harris (2000) examined the relationship between a series of dynamic risk factors and sexual recidivism in a sample of Canadian sex offenders using a two-wave, retrospective, longitudinal design. Dynamic factors were coded retrospectively from files and from interviews with parole/probation officers. All information was coded twice: 1 month and 6 months prior to sexual recidivism for recidivists ($n = 208$) and 1 month and 6 months prior to a corresponding control date for nonrecidivists ($n = 201$). A series of data reduction techniques resulted in 22 dynamic sub-scales that were used in subsequent analysis.

A series of univariate correlations revealed that changes for the worse in the following dynamic risk factors were relatively strong ($r_s > .15$) predictors of sexual recidivism: substance abuse, negative mood, anger, low remorse/victim blaming, victim access, disengaged from supervision, and poor overall supervision compliance. The original variables were recoded to

indicate change over the measurement period (i.e., -1 = a change for the worse, 0 = no change (continuously bad or never a problem), and +1 = a change for the better). A hierarchical regression analysis revealed that changes for the worst in several measures (i.e., anger, perception of risk, social influences, feelings of sexual entitlement, access to victims, and cooperation with supervision) accounted for unique variance in outcome even after controlling for static risk. Like all retrospective research designs, this study may have been unduly influenced by recall bias. Further, the decision to equate dynamic factors categorized as 'continuously bad' or 'never a problem' may have deflated their predictive potency.

Quinsey, Book, and Skilling (2001) recently examined the dynamic predictive validity of the Problem Identification Checklist (Harris et al., 1990; Quinsey et al., 1997) and the Proximal Risk Factor Scale (Quinsey et al., 1997) in a male sample of 58 developmentally handicapped individuals using a three-wave prospective, design. All participants had previously engaged in some form of serious antisocial or criminal behaviour. For example, approximately 70% of the sample had documented incidents and/or arrests for various sexual offenses, most of which involved physical contact. A unique opportunity to examine how well these individuals would perform in the community ensued when a legislative decision was made to close the institutional facilities that housed these men. This action resulted in their eventual release back into the community.

On average the sample was followed up for 15 months. During this time, evidence for failure was obtained based on staff ratings of overt aggressive and/or antisocial behaviour. The Violent Risk Appraisal Guide (VRAG) was used to assess static risk (prior to release) while the Problem Identification Checklist and the Proximal Risk Indicator Scale were used to assess dynamic risk. Staff completed incident reports, the Problem Identification Checklist and the Proximal Risk Indicator Scale on a monthly basis. However, the data were collapsed into three

waves for comparison purposes: 1) index month (month that incident occurred); 2) month prior to the incident; and 3) previous months (an average rating of up to six months prior to the incident). This study was unique in that once an individual committed an aggressive act he was not removed from the community. Hence, not only were multiple change scores available for all participants but the sample size remained constant throughout the course of the study.

Preliminary within-subject analysis among the failures (i.e., individuals with any reported incident) indicated evidence of continuously deteriorating behaviour prior to the incident in the following areas: psychotic behaviours, inappropriate and antisocial behaviour, mood problems, social withdrawal, dynamic antisociality, and denial. Changes were not observed for psychotic symptoms, poor compliance and poor medical compliance. The authors interpreted these results judiciously given that the observed changes largely occurred between the 'previous months interval' and the 'index month interval'. The authors suggest that the results may have been contaminated by retrospective recall bias given that some of the dynamic information observed during the index month may have been recorded after the incident actually occurred. Interestingly, only psychotic behaviours and inappropriate and/or antisocial behaviour changed for the worst prior to a violent incident. However, the changes were marginal at best.

A series of between-subject analyses comparing individuals with an incident versus those without also revealed that several dynamic risk factors could differentiate potential successes from failures. Specifically, individuals with incidents were more likely to evidence problems in inappropriate and/or antisocial behaviour, dynamic antisociality, poor compliance and poor medication compliance than individuals without incidents. This finding was consistent regardless of the temporal proximity of measurement (i.e., previous months versus prior months) or whether or not static risk was statistically controlled.

Limitations of Past Research

In sum, these studies provide preliminary evidence that risk assessment strategies that actively assess and reassess change can enhance predictive accuracy. However, there are various methodological, statistical and theoretical shortcomings associated with the literature.

Theoretical Limitations.

Apart from a few notable exceptions (Hanson & Harris, 1997; Quinsey et al., 1997; Quinsey et al., 2001) the dynamic risk literature has not examined the role of rapidly changing risk factors such as mood and situational triggers. In part, this can be attributed to the reliance on theoretical perspectives such as the Personal, Interpersonal, Community-Reinforcement Perspective (PIC-R; Andrews & Bonta, 1998) that emphasizes the importance of criminal history, antisocial personality, criminal attitudes and criminal associates at the expense of more proximal antecedents such as mood, situational triggers, and coping behaviour. However, in fairness, the study of factors that change by the day, hour or minute are extremely difficult to measure prospectively, if not impossible.

Methodological Limitations.

With the exception of Motiuk (1999) and Quinsey et al., (2001) all of the studies employed a two-wave design. Research designs that employ three or more waves would increase the probability of detecting change, particularly for dynamic variables that are expected to change rapidly. Second, half of the studies used relatively small sample sizes ranging between 50 and 60. Although these smaller studies typically examined various forms of recidivism including actual reoffending (e.g., reconviction, re-arrest) some of the larger studies (Bonta, 1996; Motiuk, 1999) relied exclusively upon excessively broad definitions of failure (i.e., conditional release violations, suspensions or revocations).

The reliance on existing information readily available in automated databases has also been problematic. Although some operational guidelines require that dynamic risk factors be systematically assessed and re-assessed at specific time intervals (e.g., Correctional Service of Canada, 1999a) others do not. Further, in an operational setting, the reality is that re-assessments are more likely to occur and be officially recorded when visible signs of deterioration are noted (e.g., Andrews & Robinson, 1984) or when a report is required prior to making an operational decision (e.g., transfers, parole hearing, post-suspension report). This practice creates a natural bias that may over estimate the importance of change in risk assessment. Although this problem can be readily overcome by designing dynamic research studies that do not rely on already available data, the practicality of conducting such research can present a formidable challenge.

With one notable exception (i.e., Quinsey et al., 2001), sample censoring was a serious methodological limitations characterizing all of the prospective studies. In fact, several of the studies even failed to indicate how many subjects were actually excluded from the change analysis due to the occurrence of recidivism prior to re-assessment. During the pre-assessment phase, all sample participants are available for testing. However, unlike traditional pre/post designs used in the context of treatment evaluations, we must naturally expect that a percentage of the pre-test sample will recidivate prior to re-assessment and as a result, will be unavailable for re-testing.

This reality is not a methodological limitation in and of itself. Arguably, knowing how dynamic risk factors measured at Time 1 predict recidivism prior to Time 2 is equally as important as knowing how changes between Time 1 and Time 2 are related to recidivism at a later date. The limitation occurs when these individuals are intentionally excluded from further analysis. This commonplace practice has most likely occurred due to the reliance on 2-wave, pre/post designs and the inaccurate assumption that one must use change scores to demonstrate that a risk factor

is dynamic. Although retrospective designs can readily solve the problem of sample censoring they are inherently subject to recall bias.

Statistical Limitations.

The available literature demonstrates that there is no consensus regarding what constitutes an appropriate statistical approach to the study of dynamic risk. Although some experts (e.g., Andrews, Wormith, Zamble) advocate the use of re-test scores, others (e.g., Bonta, Gendreau, Hanson, Motiuk) recommend the creation of an actual change variable derived from the existing data (e.g., -1 = change for the worst; 0 = no change (always good or always bad); or 1 = change for the better). However, other experts such as Quinsey have opted for an entirely different approach relying on traditional research methods such as within-subject repeated measures designs used in conjunction with between-subject designs that control for static risk (e.g., ANCOVA's).

Each approach has advantages and corresponding disadvantages. For example, examining whether or not re-test scores can provide incremental variance in explained outcome over and above pre-test scores holds considerable intuitive appeal in that change is directly examined. Further, this approach is recommended for 2-wave, pre/post designs (Campbell & Kenny, 1999). However, it also has the disadvantage of losing valuable information about those individuals who recidivate prior to re-testing. Further, its application to multi-wave studies (e.g., 3 or more assessment phases) can become considerably complicated given that as the number of waves increase so do the number of required multiple comparisons (e.g., T2 over T1, T2 over T3, T3 over T1.....n). To complicate matters further, some researchers have opted for residualized rather than re-test scores (i.e., Andrews & Wormith, 1984). However, recently Campbell and Kenny (1999) have recommended the use of the raw re-test scores.

Although the creation of a change variable (e.g., Bonta, 1996; Hanson & Harris, 2000; Motiuk, 1999) has merit in that it may hold more intuitive appeal for decision-makers (Gendreau, personal communication, May, 2001) it too, is disadvantaged in that information pertaining to individuals who recidivate prior to re-testing is lost. Further, there are no clear rules on how a continuous variable should be transformed into a categorical variable representing change. One also wonders whether the decision to equate a factor deemed, 'always been a problem' with one that has 'never been a problem' places dynamic factors at an unfair disadvantage.

From a methodological standpoint, the use of standard repeated measures, within-subject designs coupled with between subject designs (recidivists versus nonrecidivists) appear to be the least controversial and most consistent with traditional statistical paradigms. However, in certain circumstances, depending upon the research question, between subject designs can be limiting in that valuable information pertaining to individuals who fail prior any given measurement period is lost. Although a within-subject design can easily demonstrate whether or not change actually occurred, using a between-subject design (e.g., do recidivists and non-recidivists differ on mood problems at T1, T2, T3 etc.) to assess whether or not those changes are actually related to outcome can become considerably complicated. For example, the approach adopted by Quinsey et al. (2001) involves conducting a series of t-tests comparing recidivists and nonrecidivists on a number of dynamic factors. The first set of t-tests compares the two groups on dynamic risk factors taken at one time period (e.g., 1-month period preceding event). Next, a second set of t-tests, conducted independently, compares the two groups on the same information but obtained from a different time interval, for example, the 6- month period preceding the event of interest. Analysis of covariance (ANCOVA) is then used to determine whether observed differences remain even after controlling for static risk. This approach is beneficial in that the incremental benefit of dynamic risk can be assessed after static risk has been controlled. However, by analyzing information obtained

from different time intervals independently, the inherent correlation between the measurement periods is not addressed. Thus, it would be analogous to applying independent rather than pairwise t-tests to correlated data obtained, for example, from a pre/post treatment design. Additionally, the application of ANCOVA procedures to quasi-experimental research designs has been called into question given that more often than not, the primary assumption underlying the ANCOVA procedure, homogeneity of regression coefficients is violated, thus potentially rendering the analysis invalid (Keppel, 1991; Stevens, 1992).

To complicate matters further, it has long been argued that change scores are inherently unreliable. In 1970, Cronbach and Furby published a highly influential article that underscored this issue and questioned whether or not researchers should even attempt to assess change. Until recently, their argument had been accepted as a scientific truism. However, critics (e.g., Campbell & Kenny, 1999; Collins, 1991; 1996) have cogently argued that the unreliability of change scores is irrelevant to the study of intra-individual change. Although these critics concede that change scores are unreliable within the parameters of classical test theory, they argue that the basic theoretical premise underlying the computational formula outlined in classical test theory (see Crocker & Algina, 1986) for assessing the reliability of change scores is fundamentally flawed in that it was developed to address the reliability of static variables, not intra-individual change. They liken this situation to attempting to measure weight in kilometers, a senseless endeavor. The critics also argue that the reliability of a change score has nothing to do with precision of measurement, the original, underlying meaning of reliability (Lord & Novick, 1968). Lastly, given that the reliability of change scores actually decreases as the correlation between pre- and post- tests increases (e.g., Campbell & Kenny, 1999) and that statistical power is inversely related to the reliability of change scores (e.g., Nicewander & Price, 1978; Overall & Woodward, 1975; Zimmerman, Williams, &

Zumbo, 1993) one is further convinced that Cronbach and Furbys' initial concerns were somewhat overstated.

As a result, contemporary scholars have argued that investigators of intra-individual change should worry less about the unreliability of change scores and more about factors that can truly threaten the statistical conclusion validity of intra-individual change research. Determining that observed change is real and not attributable to chance fluctuations (e.g., the use of extreme group designs resulting in regression toward the mean effects) or unreliability of measurement caused by rater drift and poor inter-rater reliability is more troublesome. Researchers must also ensure that pre-mature risk factors (i.e., the factor in question changes for the worse before the scheduled assessment is conducted), attrition, cohort, maturation and history effects do not confound the results (Campbell & Kenny, 1999; Collin & Horn, 1991; Humphreys & Drasgow, 1989; Kropp & Hart, 2000; Lazarus, 1990, Menard, 1991). The obstacles to multi-wave research are complex.

Statistical Solutions.

Ultimately, the preferred strategy would be to use a multi-wave, longitudinal prospective research design (minimum three waves) coupled with appropriate statistical techniques that not only address sample censoring but also readily incorporate information about risk factors that fluctuate over time. Cox regression survival analysis with time dependent covariates is one such approach (Cox, 1982; Kalbfleisch, & Prentice, 1980). Survival analysis in general, is a statistical technique that estimates how long it takes to reach some event (e.g., criminal recidivism) as well as the rate of occurrence of that event. Thus, unlike traditional statistical methods that only address the question of whether or not an individual will commit a new crime during a specified interval, survival analysis also provides valuable information about when a recidivistic event is most likely to occur. Additionally, survival analysis has the unique advantage of being able to control for a variable follow-up period (Chung, Schmidt, & Witte, 1991).

Cox regression survival analysis with time dependent covariates is especially unique in that it was specifically designed to incorporate information about variables that fluctuate over time. For example, a common application might involve predicting when coronary heart failure is most likely to occur using fluctuating blood pressure as a predictor variable (Cox & Oakes, 1984). Such a research design requires that blood pressure be measured at several points in time between the beginning and the end of the study. For individuals who experience a heart attack during the study period, the blood pressure reading taken *in closest temporal proximity* to the event of interest (i.e., the heart attack) is used in the analysis. For individuals who did not have a heart attack, the last blood pressure reading is used. Thus, although only one variable is used in the analysis, the actual value varies as a *function of the timing* of the event of interest. Thus, unlike traditional procedures for the analysis of change, the Cox regression model obviates the use of change scores. This in turn addresses one of the most common limitations of past research in this area, namely, sample censoring. Individuals that fail prior to re-assessment can still be incorporated in the analysis.

Additionally, the analysis can compare the relative predictive efficacy of various prediction models. For example, Cox regression survival analysis can compare the relative superiority of a model that only incorporates static information assessed at one interval with a model that is time dependent (i.e., where dynamic information is collected at several intervals). Thus, the relative predictive efficacy of static models versus time dependent models can be compared. Additionally, the relative predictive efficacy of dynamic variables assessed during an initial assessment with those assessed over multi-waves can be compared. Consequently, the analysis can readily test whether or not a risk factor is truly dynamic, that is whether or not the predictive accuracy of the hypothesized dynamic risk factor assessed at the initial assessment is improved by incorporating information about how the hypothesized dynamic risk factor changes over time (Andrews, 1995; Andrews et al., 1990; Andrews & Bonta, 1998; Kraemer et al., 1997). Lastly, not only does this

form of analysis allow for the analysis of change without artificially tinkering with the original scale of a variable, it takes the correlation between measurement periods into account and can readily accommodate several assessment waves. While Cox regression survival analysis with time-invariant covariates has been used in the correctional literature (e.g., Nugent, 2000; Palmer, 1997) very few studies have employed Cox regression survival analysis with time-dependent covariates. However, time-dependent covariates have been examined by the health sciences (Cox & Oakes, 1984), the employment literature (Morita, Lee, & Mowday, 1993) and the criminological, criminal career literature (e.g., Laub, Nagin, & Sampson, 1998).

Study Rationale

A number of objectives for the present work emerge as a result of the literature review. First, the study will attempt to determine whether or not the re-assessment of prospectively-rated dynamic risk can improve predictive accuracy over and above static risk. In doing so, it is necessary to overcome some of the limitations of past research by using appropriate statistical techniques (i.e., Cox regression survival analysis with time-dependent covariates) and measures that are theoretically-derived and sensitive to change. Third, it will investigate the natural rate of change of dynamic risk factors. Finally, and incidentally, comparison of relative predictive power of some of the most promising static measures, namely, the Statistical Information on Recidivism Scale (SIR-R1, Nuffield, 1982), the Hare Revised Psychopathy Checklist (PCL-R, Hare, 1991), the Childhood Adolescent Taxon Scale (Harris et al., 1994; Quinsey et al., 1998) and recent prison misconducts will occur.

In order to meet these objectives, a three-wave, prospective panel design was conducted using Cox regression survival analysis with time dependent covariates as the central statistical analysis. A sample of male offenders about to be released from federal institutions in the Ontario region was assessed using a multi-method assessment approach that included interviews, official file information and self-report questionnaires. The coping-relapse model of criminal recidivism (Zamble & Quinsey, 1997) guided the research with its emphasis on the proximal antecedents of recidivism in adult offenders.

Theoretical Framework for the Current Study

Ultimately, a comprehensive theoretically-driven risk prediction model should be capable of distinguishing between the correlates, predictors, mediators, and moderators of criminal recidivism (Andrews et al., 1990). It must also identify the complex interrelationships among risk variables in terms of causal mechanisms as well as the cumulative, bi-directional, and sequential ordering

effects. It is proposed that the coping-relapse model (Zamble & Porporino, 1988; Zamble & Quinsey, 1997) coupled with developmental criminology/psychology (Le Blanc & Loeber, 1993; Loeber & Stouthamer-Loeber, 1996) can accomplish this task. It should also be noted however, that a number of additional theoretical perspectives (e.g., Personal-Interpersonal Community (PIC-R) Perspective (Andrews & Bonta, 1998) guided the operational measurement of certain constructs (e.g., criminal attitudes) within the coping-relapse model. Consequently, these theories will be described further within the methods section.

Developmental perspectives are the most promising and dominant theories of juvenile delinquency (Loeber & Stouthamer-Loeber, 1996). This approach emphasizes the importance of examining the temporal, within-individual changes in offending, arguing that it is only through such an approach that a valid causal picture will emerge. Moreover, the developmental approach to juvenile offending has begun identifying the complex interrelationships among risk variables in terms of cumulative, bi-directional, and sequential ordering effects (Farrington, 1995; Loeber & Le Blanc, 1990; Loeber & Stouthamer-Loeber, 1996; Moffitt, 1993; Sampson & Laub, 1993). It is expected that the application of these basic principals will produce major advances in our understanding of the origins of criminal behaviour.

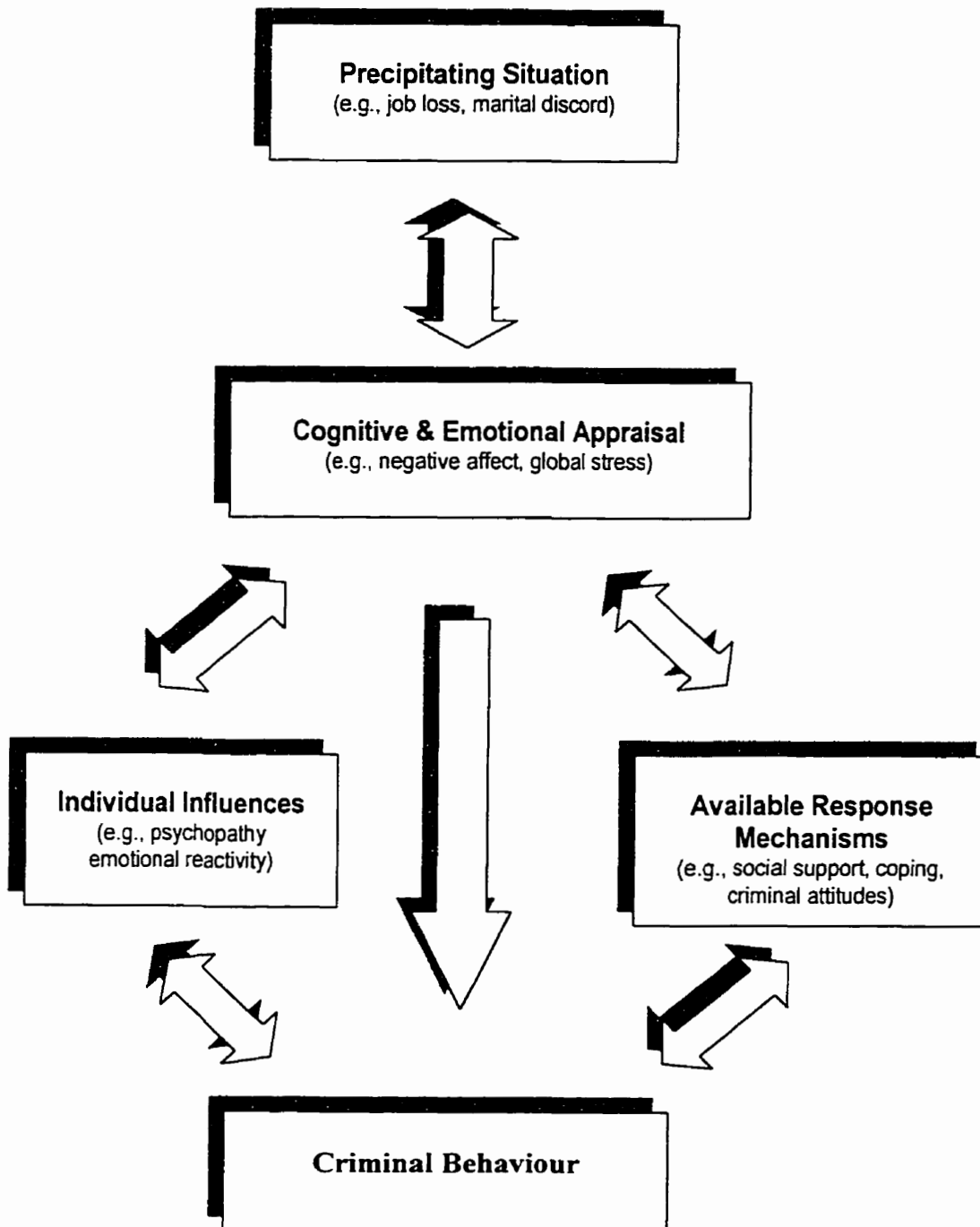
The coping-relapse model of criminal recidivism (Zamble & Quinsey, 1997) seeks to explain the resumption or maintenance of criminal behaviour rather than its origins. The model posits that the recidivism process begins with a precipitating environmental trigger. This event can be highly variable ranging from chronic life stressors such as marital discord, job loss, or financial stress to relatively mundane daily hassles such as having to deal with crowded public transportation systems. Once the environmental trigger has occurred, the individual will invoke both a cognitive and emotional appraisal of the situation. Individuals who perceive the situation as threatening or problematic typically experience negative emotions (e.g., hostility, anger, fear), an

elevated level of perceived global stress (e.g., "I have no control over my life") and, lastly, some awareness regarding the severity of the environmental trigger(s). This in turn results in an attempt to deal with the situation, but because most offenders are very poor at coping with the original situation, it will not be remedied. What follows is a worsening cycle of negative emotions, maladaptive cognitions, and eventually the resumption of criminal conduct. The model further posits that whether or not an individual will initially experience an environmental trigger(s) or perceive a situation as threatening or problematic is mediated through two subsets of factors: individual influences and available response mechanisms.

Individual influences are relatively stable, and include factors such as criminal history and enduring life traits (e.g., temperament, emotional reactivity). These factors determine an individual's propensity to react to and interpret situations in a maladaptive manner. One promising measure in this domain is Hare's Psychopathy Checklist-Revised (PCL-R; Hare, 1991). In contrast, available response mechanisms are more dynamic in nature, albeit not as labile as environmental triggers. They are best conceptualized as slow-changing behaviour patterns that may serve as treatment targets. The available response mechanism subset includes variables such as coping ability, substance abuse, criminal attitudes, criminal associates, social support, and motivation. Lastly, the theory proposes that the process is continuous and iterative so that each response generates a new sequence of events resulting in another precipitating situation, another appraisal, and eventually, another response (see Figure 1).

Although empirical support is emerging for the coping-relapse model (Palmer, 1997; Porporino et al., 1990; Zamble & Quinsey, 1997), it requires further investigation, particularly in the context of a prospective design. Moreover, the assumptions regarding feedback loops and reciprocal influences among the various components of the model, as well as the applicability of the model to various offender types, require further study.

Figure 1: The Coping-Relapse Model of Criminal Recidivism



Predictions

The following predictions were made:

- 1) It is predicted that the strongest prediction model will include the measurement of both static and prospectively rated dynamic risk.
- 2) It is predicted that the re-assessment of prospectively-rated dynamic risk measured while the offender is under community supervision will improve prediction accuracy and explained variance in survival time over and above the strongest static model established pre-release.
- 3) It is predicted that the re-assessment of prospectively-rated dynamic risk measured while the offender is under community supervision will improve prediction accuracy and explained variance in survival time over and above the strongest dynamic model established pre-release.
- 4) It is predicted that all of the dynamic measures will change in the expected direction. That is, individuals who manage to survive and not be returned to custody will evidence a noticeable decline in dynamic problem areas.
- 5) It is predicted that all of the static measures will be significantly related to failure.
- 6) It is predicted that prison misconducts will add significant incremental variance above the Statistical Information on Recidivism Scale (SIR-R1) in terms of predicting time to failure.
- 7) It is predicted that the Hare Revised Psychopathy Checklist (PCL-R) will perform equally well as the SIR-R1 in terms of predicting time to failure.
- 8) It is predicted that the Childhood Adolescent Taxon Scale-Self Report version (CATS-SR) will perform equally well as the PCL-R in terms of predicting time to failure.

Chapter 3: Method

Participants

Selection Criteria

Male offenders about to be released from minimum-, medium- or maximum-security federal institutions in Ontario were approached and asked to participate in the study. Participation was strictly voluntary and confidentiality was assured (see Appendix A). All initial consent interviews occurred between March 1st, 1999 and June 20th, 2000. Potential candidates were asked to participate in the study if all of the following criteria were met: 1) a release date had been officially confirmed by the National Parole Board; 2) the impending release was scheduled to occur within 45 days of the initial pre-release interview; 3) the release destination had been confirmed to be under the supervision of one of seven parole offices in the Ottawa or Toronto area; 4) the offender understood English, was not actively psychotic nor eligible for deportation; and lastly, 5) the offender would not reach warrant expiry for at least six months after the initial release date. This final criterion was necessary to ensure that participants would be relatively easy to contact in the community once released, given that they would be required to report to a parole officer until they reached the end of their sentence.

A list of potential candidates meeting these requirements was generated from an automated computer-based query. The query was executed against the CSC's computerized Offender Management System (OMS) three times per week. The query output was also cross-referenced with information obtained on a weekly basis from the NPB regarding upcoming hearings as well as with information obtained directly from the institutions pertaining to impending releases.

Consent Rates

Three hundred and six potential candidates met the inclusion criteria. Of these, 10 (3.3%) were not asked to participate in the study either because of planned breaks in data collection or

because they had been released within a day or two of the National Parole Board's decision. Consequently, there was insufficient time to schedule and conduct the pre-release interviews.

The remaining 296 were approached and asked to participate in the study. Overall, 56.4% (167/296) consented to take part. However, the consent rate ranged from 44% to 100% from institution to institution. Individuals were more likely to agree to take part in the study if they were housed in maximum- (85.7%) rather than minimum- (53.7%) or medium- security institutions (54.0%), although the difference was not statistically significant, (χ^2 (2, N = 296) = 5.28, p < .10). Individuals housed in minimum- and medium- security institutions have considerably more freedom of movement and actual free time than their maximum- security counterparts. Consequently, it is plausible that they were less likely to volunteer because they had more opportunities to leave their cells outside of the research project.

In total, 43.6% (129/296) of the potential candidate pool declined to participate for a variety of reasons. Sixty-one percent of the decliners (78/129) stated simply that they were not interested because they did not expect to have sufficient time to take part in the study after release. An additional 10.9% of the decliners refused to even discuss the study with the researchers in person, while another 5.4% indicated that they were too stressed about their upcoming release to even think about talking to someone about it. An additional 4.7% initially agreed to participate but withdrew consent before the interviewers had an opportunity to conduct the pre-release interview.

Attrition from the Pre-release Sample

Thirty-one of the original 167 pre-release participants were excluded from the analysis for various reasons. Five participants changed release destinations to somewhere outside of the study jurisdiction. One individual committed suicide, one was unexpectedly deported, and another was detained at the last minute (i.e., subject to the legal provision that allows a person to be held in

prison for the full term of the Warrant Committal). In addition, one participant successfully won an appeal that overturned his existing criminal convictions, and as a result, he was no longer a federal offender once the community phase of the study had commenced. A mistake in the candidate selection process erroneously included one participant who had less than six months until warrant expiry¹; he was dropped because he would not be available throughout the entire community phase of the study. One individual was suspended during the release period and temporarily detained for more than three months before the parole board cancelled his suspension and subsequently approved his re-release. A decision rule established a priori specified that any offender temporarily detained for more than three months who was subsequently re-released would be dropped from the study. This rule was invoked to ensure the study would be completed within a reasonable time period. Lastly, one individual was excluded from the analysis because his 3 month, post-release interview was not scheduled to occur for another month after the recidivism data had been coded.

An additional 19 pre-release participants were excluded from the final sample because the outcome of their release could not be reliably determined when the recidivism data were coded. The Correctional Service of Canada had suspended the conditional release of 17 of these individuals who, as a result, were temporarily detained in either a provincial jail or federal institution. Recidivism was coded on September 27th, 2001 (the recidivism coding manual is provided in Appendix B). At this time, the National Parole Board had not yet rendered a final decision in terms of whether or not to revoke these individuals or cancel their suspension and return them to the community. The other two individuals had gone unlawfully at large (UAL) shortly before the recidivism information was coded. Given that some UAL cases are not necessarily

¹ The study was part of a larger initiative (e.g., a 4th data collection wave was also conducted 6 months post-release) being conducted by the Research Branch of Correctional Service of Canada in collaboration with Queen's University.

revoked, particularly if they are only UAL for a short period of time, it was decided to exclude these cases from the sample. Thus, when all the losses are accounted for, the final pre-release sample was comprised of 136 offenders.

Sample Demographics

As Table 1 illustrates, the pre-release sample was on average 33 years old serving a four-year sentence. Approximately two-thirds of the sample was Caucasian. Moreover, a little over half of the sample had been released on parole (day or full) while the others had been released on statutory release (SR).

Table 1

Demographic Overview of Release Sample

Variable	<u>M</u> (<u>SD</u>)	% (<u>n</u> /136)
Age at release	33.1 (9.9)	
Sentence Length (years)	4.2 (3.2)	
<u>Ethnicity</u>		
White		67.7 (92)
Black		15.4 (21)
Asian		5.2 (7)
Aboriginal		4.4 (6)
Other		7.4 (10)
<u>Marital status at release</u>		
Single		67.7 (92)
Married/common-law		32.4 (44)
<u>Release type</u>		
Day parole		50.0 (68)
Full parole		4.4 (6)
Statutory Release		45.6 (62)

Releasing Institution

As Table 2 demonstrates, 50% of the sample was released from minimum-security institutions while 44.9% of the sample was released from medium-security institutions. The others were released from maximum-security facilities.

Table 2

Releasing Institution by Security Level

<u>Releasing institution</u>	<u>% (n/136)</u>
<u>Minimum Security</u>	50.0 (68)
Bath	6.6 (9)
Beaver Creek	15.4 (21)
Frontenac	10.3 (14)
Pittsburgh	17.7 (24)
<u>Medium Security</u>	44.9 (61)
Collins Bay	6.6 (9)
Fenbrook	3.7 (5)
Joyceville	17.7 (24)
Warkworth	16.9 (23)
<u>Maximum</u>	5.2 (7)
Kingston Penitentiary	2.2 (3)
Millhaven	2.9 (4)

Release Destination

Almost seventy-five percent of the sample was released to the greater Toronto area, while the remaining 25.7% was released to Ottawa. Also noteworthy is that the Downtown Toronto Parole Office, the Toronto East Parole Office, and the Peel Area Parole Office were responsible for supervising the majority of the Toronto releases. Further information is provided in Table 3.

Table 3

Release Destination by Parole Supervision Office

Release destination	% (n/136)
<u>Ottawa</u>	
Ottawa district office	25.7 (35)
<u>Toronto area</u>	74.3 (101)
Downtown Toronto Parole Office	18.4 (25)
Team Supervision Unit	4.4 (6)
Keel Community Correctional Centre	10.3 (14)
Toronto East Area Parole Office ^a	18.4 (25)
Toronto West Area Parole Office	10.0 (13)
Peel Area Parole Office ^b	13.2 (18)

Note. ^aThe Toronto East Area Parole Office also includes individuals supervised out of the Durham/York office in Oshawa. ^bAlso includes individuals supervised by the Brampton Office.

Offence History Characteristics of the Sample

In sum, the offence histories of the men in the sample were quite varied and violent. Almost 65% ($n = 88$) of the sample had been convicted in the past or were currently serving time for at least one violent offence. Offences were categorized as violent if they included murder, manslaughter, assault, robbery (with or without a weapon), kidnapping/forcible confinement, sexual assault (victim > 16), incest, arson, or use of a weapon/firearm. Almost the entire sample (92.7%) had at least one previous or current conviction for a nonviolent offence. Nonviolent offences included possession of a weapon(s), parole and/or probation breaches, property offences, fraud, obstruct justice, drug-related offences, and any minor nonviolent crimes such as vandalism, minor driving offences, and disturbing the peace. A detailed breakdown is provided in Table 4.

Table 4

Offence History of Sample

Past or present conviction(s)	% with (n/136)
Violent	
Murder/manslaughter	2.9 (4)
Assault (minor/serious)	41.2 (56)
Robbery (with/without a weapon)	36.0 (49)
Kidnapping/forcible confinement	2.9 (4)
Sexual assault (victim \geq 16)	9.6 (10)
Incest	2.2 (3)
Arson	1.5 (2)
Weapon use	8.8 (12)
Nonviolent	
Weapon possession	20.6 (28)
Breach of probation/parole violations	55.9 (76)
Fraud-related	34.6 (47)
Obstruct justice	27.9 (38)
Minor nonviolent (e.g., disturb the peace, vandalism)	39.7 (54)
Property-related (e.g., break & enter)	68.4 (93)
Drug-related	47.8 (65)

Materials

Currently, there is no single reliable and valid measure of the coping relapse model. As a result, a number of pre-existing and newly developed measures were used to assess the various components of the model. To meet this objective, both static and dynamic measures were included. Measures were categorized as static if it was clear that they would not change during the first six months of the study. They included: age at time of release; the Statistical Information on Recidivism Scale-Revision 1 (SIR-R1; Nuffield, 1982); the Hare Revised Psychopathy Checklist (PCL-R; Hare, 1991); the Childhood Adolescent Taxon Scale: Self-Report Version (CATS-SR; Harris et al., 1994; Quinsey et al., 1998) and prison misconducts. It is important to emphasize that one could conceptualize prison misconducts as a dynamic variable depending upon the timeframe that was examined. For example, it could be assessed weekly, monthly, or yearly. However, in the current study, prison misconducts was defined statically as the number of misconducts received during the last 12 months of incarceration prior to release. Given that this variable could not change during the first three months of release and hence was not eligible for re-assessment in the context of the present study, it was categorized as static.

Measures were categorized as dynamic if they had the potential to change, at least in theory, during the first six months of the study. They included: 1) the Problem Survey Checklist (PSC; Brown & Zamble, 1998a); 2) the Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983); 3) a modified version of the Positive Affect Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988); 4) the Perceived Problem Index (Zamble, 1998) adapted from Zamble and Quinsey (1997); 5) the Criminal Self-Efficacy Scale-15 (CSES-15; Brown, Zamble, & Nugent, 1998a); 6) the Social Support Scheme-Version 1 (SSS-V1; Brown & Zamble, 1998b); 7) a modified version of the Expected Value of Crime Inventory (EVC; Harris, 1975) revised by Gillis (1998); and lastly two measures of coping efficacy; 8) the Coping Situations Questionnaire

(Zamble, 1989) and 9) the Coping Interview (Zamble & Porporino, 1988). The Balanced Inventory of Desirable Responding-Version 6 (BIDR; Paulhus, 1994; 1998) was also administered as a measure of social desirability effects. Each measure is first described in detail, followed by a tabular summary (see Table 5).

Static Measures

Statistical Information on Recidivism Scale-R1 (SIR-R1).

The SIR scale originally developed by Nuffield in 1982 but later modified by the Correctional Service of Canada (CSC; resultant scale: SIR-R1) in 1996 is the official actuarial risk scale of the CSC and the National Parole Board (NPB). It is systematically administered to all non-Aboriginal male offenders upon admission to the federal correctional system. The original version (SIR; Nuffield, 1982) was formally incorporated into CSC and NPB decision-making policy in 1988.

The SIR-R1 is comprised of 15 static risk factors empirically derived and mathematically weighted based on their statistical association with re-arrests over a three-year follow-up period. Twelve of the items measure the nature and extent of past criminal involvement while the remaining three consider whether or not the offender was married, employed, or had dependents at the time of their most recent criminal offence. Total scores can range from +27 to -30 with smaller values representing a greater likelihood of general recidivism upon release. Thus, a total score of +27 represents the lowest possible risk while a total score of -30 represents the highest possible risk of general recidivism. Nuffield (1982) enhanced the SIR's practical utility by collapsing the raw scores into five-, equally distributed risk categories, ranging from very good risk (4/5 offenders will not commit an indictable offence after release) to very poor risk (1/3 offenders will not commit an indictable offence after release). The SIR-R1 scale is provided in Appendix C. The differences between the SIR and the SIR-R1 are also described in Appendix C.

The SIR scale has proven to be a good predictor of criminal behaviour. A re-analysis of Nuffield's original validation sample ($N = 1,237$) revealed that the SIR was an acceptable predictor of general recidivism (Area under the Curve = .71; Brown & Serin, 2001). Similarly, a more recent validation by Bonta et al. (1996) involving 3,267 male offenders demonstrated once again that the SIR is a valid predictor of general recidivism (Area under the Curve = .74; $r = .42$). To date, the inter-rater reliability of the SIR in research settings has been strong (e.g., $r = .96$; Wormith & Goldstone, 1984). In the current study, the correlation between SIR-R1 scores coded by CSC employees with SIR-R1 scores coded by the researchers was exceptionally high (single intra-class correlation coefficient = .97). It should be noted that the SIR-R1 scores calculated by the researchers rather than those available on file were used in all subsequent analyses.

Hare Psychopathy Checklist - Revised (PCL-R).

The Hare Psychopathy Checklist-Revised (PCL-R; Hare, 1991) was used as a measure of psychopathy. The protocol is comprised of 20 items that measure the affective, interpersonal and behavioural characteristics that are typically associated with the disorder. Factor analysis has yielded two stable factors (Harpur, Hakstian, & Hare, 1988) that represent the personality and behavioural dimensions of the construct.

Factor 1 measures the interpersonal and affective traits considered fundamental to the construct, such as superficiality, manipulativeness, pathological lying, remorselessness, shallow affect, lack of empathy, and grandiose sense of self-worth. Factor 2, the behavioural dimension, describes a chronically unstable, antisocial, and socially deviant lifestyle. Items include: impulsivity, criminal versatility, irresponsibility, parasitic lifestyle, lack of realistic goals, juvenile delinquency, revocation of conditional release, and early behaviour problems (see Appendix D). Hare (1991) has demonstrated that the factors are moderately correlated, $r = .50$.

Each PCL-R item is scored on a 3-point scale: 0 indicates that the symptom definitely does

not apply to the individual; 1 indicates that the item applies only in some circumstances; and 2 indicates that the item definitely applies. Individual item scores are summed to generate a total score that ranges from 0 to 40. Although Hare (1991) recommends that 30 be used as a diagnostic cut-off the PCL-R is often used as a continuous measure that represents the degree to that an individual matches the prototypical psychopath. The protocol is scored on the basis of a semi-structured interview (see Appendix E: Pre-release interview, PARTS B, C, D, G, H, I, L, O) and collateral information obtained from various sources including official records and psychological assessments (Hare, 1991).

Since the PCL-R's inception, a considerable amount of research has been generated in support of its reliability and validity. Pooling across seven independent samples of male prison inmates, Hare (1991) reports excellent inter-rater reliability (single ICC = .83; averaged ICC = .91, $N = 1192$) and strong internal consistency ($\alpha = .86$, $N = 1192$). Three independent meta-analytic reviews have demonstrated that the PCL-R is a worthy predictor of criminal behaviour, specifically violence (e.g., Gendreau et al., 1996; Gendreau et al., in press; Hemphill et al., 1998; Salekin et al., 1996). Meta-analytic effect sizes (r) have ranged from .23 (Gendreau et al., in press) to .37 (Salekin et al., 1996). Similarly, statistical assessments of the PCL-R predictive accuracy based on the Common Language (CL) Effect Size Indicator (McGraw & Wong, 1992) and Receiver Operator Characteristic (ROC) analysis (Rice & Harris, 1995; Swets, 1986) have generated accuracy rates comparable to actuarial measures (e.g., Gendreau et al., in press; Serin & Brown, 2001).

Childhood Adolescent Taxon Scale-Self Report Version (CATS-SR).

The Childhood Adolescent Taxon Scale-Self Report Version (CATS-SR; Harris et al., 1994; Quinsey et al., 1998) was also administered as a secondary measure of psychopathy. The CATS-SR consists of eight, self-report childhood and adolescent indicators of antisocial behaviour

(see Appendix F: Pre-release coding manual, PART E) that are administered in an interview format (see Appendix E: Pre-release interview, PARTS B, D, L). The items were originally selected because they proved to be the best taxon indicators of adult psychopathy in an earlier study by Harris et al., (1994). Individual items can be scored as: 0, no-indicator absent; 1, somewhat present; or 2, indicator present. Total scores are obtained by summing the individual items and can potentially range between 0 and 16. Higher scores are associated with greater degrees of childhood antisocial activity. In the current study, the CATS-SR was supplemented with file information to enhance validity.

To date, the CATS-SR has been used successfully in community samples (e.g., Belmore & Quinsey, 1994; Lalumière, Chalmers, Quinsey, & Seto, 1996; Lalumière & Quinsey, 1996; Seto, Lalumière, & Quinsey, 1995; Seto, Khattar, Lalumière, & Quinsey, 1997). Although very little research has been conducted regarding its applicability to offender populations, Nugent (2000) demonstrated that the scale was predictive of new convictions, $r = .18$, $p < .05$ in a sample of male, federal offenders. Further, the original CATS, scored entirely from file information, has proven to be a strong predictor of violent recidivism among mentally disordered offenders and intellectually challenged individuals. In fact, two studies have clearly shown that the CATS can replace the PCL-R in the Violence Risk Appraisal Guide without degrading predictive accuracy (Quinsey et al., 1998; Quinsey et al., 2001).

Age at Pre-release.

Age at pre-release was the age of the offender (coded in years) at the time of the pre-release assessment. This information was recorded in the pre-release coding manual (see Appendix F: Pre-release coding manual, Part A).

Prison Misconducts.

Prison misconducts represented the total number of convictions that the offender had incurred during the 12 months of incarceration previous to the pre-release interview. The variable included both offences classified as minor (e.g., talking back to a staff member, late for count) or major (e.g., positive urinalysis, contraband, assaulted a staff member) by the Correctional Service of Canada (CSC) (see Appendix F: Pre-release coding manual, Part D).

Dynamic Measures

Problem Survey Checklist (PSC).

The Problem Survey Checklist (PSC; Brown & Zamble, 1998a) is a new instrument that was developed specifically for the study. It is comprised of nine sub-scales (i.e., marital/family, employment, substance abuse, accommodations, finances, leisure activities/time use, interpersonal conflict, supervision compliance and physical/emotional health) and 40 items. Each item is rated on the basis of a semi-structured interview and collateral file review. Individual items are scored as either no problem evident (score 0), problem somewhat evident (score 1) or problem clearly evident (score 2). All sub-scales are intended to measure components of the precipitating situation domain of the coping relapse model, with the exception of the substance abuse and supervision compliance sub-scales. These sub-scales tap elements subsumed under the available response mechanism component of the model.

Although the Problem Survey Checklist was derived largely from previous research involving the coping relapse model (i.e., Zamble & Porporino, 1988; Zamble & Quinsey, 1997), a number of additional theoretical perspectives and empirical findings were also consulted during the development phase. Specifically, the sub-scale items comprising the employment domain were derived not only from employment-related meta-analytic findings (e.g., Gendreau et al., 1998) but

also from intrinsic work motivation theory (Warr, Cooke, & Wall, 1979) and job involvement theory (Kanungo, 1979, 1982). Substance abuse items were based on recent meta-analytic findings (i.e., Dowden & Brown, in press), the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; American Psychiatric Association, 1994) as well as guidelines published by the Addictions Research Foundation (1987; 1990). Items comprising the accommodations, financial and leisure sub-scales were derived primarily from Zamble and Quinsey (1997) but recent meta-analytic findings from Gates et al., (1998) were also incorporated. Lastly, supervision compliance was operationalized based on recent research by Hanson and Harris (1998).

To enhance the Problem Survey Checklist's sensitivity to change, two slightly different versions were created for the pre- and post-release phase of the study. Although the content remained unchanged each item was worded and scored slightly differently for the two situations. For example, the pre-release questions pertaining to employment focused on whether or not the individual enjoyed work in general and whether or not he had already made employment arrangements. Once in the community, the questions shifted to the present, for example, 'Are you currently working' or 'Are you satisfied with your present job'. Similarly, pre-release substance abuse items focused on the last six months of incarceration, while the community questions focused on the recent time interval since the preceding interview. Thus, for the first (one-month) community follow-up interval, information pertaining to substance abuse was concerned only with the month since release, regardless of whether or not the offender had an extensive substance abuse history.

In addition, the Problem Survey Checklist (PSC) items were scored using behavioural anchors wherever possible. For an example, an offender who had been in the community for a month but had yet to send off a resume might be rated 'low' for intrinsic job motivation despite his claims to the contrary (e.g., 'I love working', 'It is really important to me'). However, due to the

artificial constraints of incarceration, certain pre-release PSC items (e.g., leisure activities, accommodations) focused more on future plans rather than actual, current behaviours. For example, to measure satisfaction with current accommodation status, the pre-release question was, 'Do you expect that you will be satisfied with your future living situation?' Once in the community, the question shifted to, 'Currently, how satisfied are you with your living situation?' The pre- and post-release versions of the Problem Survey Checklist (PSC) interview can be found in Appendix E (Pre-release interview, PARTS A, E, F, H, I, J, K, L, M, N), and Appendix H (Post-release interview, PARTS A, B, C, D, F G, H, I, J), respectively. Similarly, the pre- and post-release PSC items are listed in Appendix F (Pre-release coding manual, Part F) and Appendix I (Post-release coding manual, Part C) while the actual scoring guidelines are located in Appendices G (Part A) and J (Part A).

Perceived Problem Index (PPI).

The Perceived Problem Index (PPI; Zamble, 1998) adapted from Zamble and Quinsey (1997) is an interview-based checklist that measures the extent to which an individual reports feeling worried or troubled about 16 potentially criminogenic areas (e.g., employment, parole, money, drugs/alcohol). The scale was derived from past research that examined the antecedents of criminal recidivism using a retrospective design (Zamble & Quinsey, 1997). The PPI asks respondents to rate how much they expect each area to be problematic (pre-release) or is currently problematic (post-release) using a 7-point Likert scale. The 15th and 16th problem areas are open-ended responses that allow the participants to identify any additional problem areas not captured by the existing set. Total scores are obtained by summing together the individual item responses and can range from 16 to 112 with higher scores representing higher levels of perceived problems. Although the PPI has not been used in its current format, past research by Zamble and Quinsey (1997) has demonstrated that the problem areas covered in the PPI were more likely to be present

among recidivists than nonrecidivists. The pre- and post- PPI interviews are located in Appendices E and H, respectively. Information obtained from the PPI interviews was transcribed into the pre- and post coding manuals (see Appendix F, Part J and Appendix G, Part G).

Perceived Stress Scale (PSS).

The Perceived Stress Scale (PSS; Cohen et al., 1983) is a brief, 14 item self-report questionnaire that measures how much situations in one's life are appraised as stressful. Specifically, it examines to what extent individuals find their lives unpredictable, uncontrollable and overloaded. Respondents are asked to indicate how often they have felt a particular way during the last month using a five-point Likert scale that ranges from 'never' (scored 0) to 'fairly often' (scored 4). Sample items include, 'In the last month, how often have you been upset because of something that happened unexpectedly?' and 'In the last month, how often have you felt that you were on top of things?'. Total scores range from 0 to 56 with higher scores reflecting greater levels of perceived stress. The same version of the scale was administered both pre- and post-release (see APPENDIX K).

Although the PSS has not been previously administered to offender samples it has demonstrated acceptable internal consistency (alphas .83 - .86) and convergent and criterion-related validity (Cohen et al., 1983; Hamarat et al., 2001; Lok & Bishop, 1999; Yarcheski & Mahon, 1999) in community samples. Further, the PSS appears to be the most representative measure of contemporary theoretical perspectives regarding stress as a subjective state of mind (e.g., Lazarus, 1990).

Revised Positive Affect Negative Affect Schedule (PANAS).

A revised version of the Positive Affect Negative Affect Schedule (PANAS; Watson et al., 1988) was used to measure emotional appraisal. The original PANAS is comprised of 20 adjectives purported to measure both positive and negative emotions. Participants are asked to

rate how well each adjective describes what they have been feeling during the preceding two weeks, using a five-point Likert scale ranging from 'not at all' to 'extremely'.

Although the PANAS is one of the most psychometrically sound and frequently used measures of perceived emotional state, Nemanick and Munz (1994) have criticized it for not fully tapping all aspects of the theoretical framework it purports to measure, namely, the Circumplex Model of Emotions (Plutchik & Conte, 1997; Russel, 1997). This model posits that emotions are best conceptualized along two bipolar dimensions: 1) high arousal/activation (e.g., excitement, active) vs. low arousal/activation (e.g., drowsy, bored) and 2) pleasure (e.g., happy, content) vs. displeasure (e.g., angry, sad). Nemanick and Munz argue that the PANAS does not measure the low end of the bipolar dimensions (e.g., low arousal/activation and low displeasure).

As a result, the PANAS was revised in order to maximize its potential contribution to the present study. Specifically, new adjectives representing the low end of the bipolar dimensions of the Circumplex Model of Emotions were added. These adjectives were selected from examples provided by Russell (1997) and Kercher (1992) not only because of their apparent face validity but also because they were consistent with a grade 8 reading level. Additional negative emotions found to be retrospectively related to recidivism (e.g., Zamble & Quinsey, 1997) were also added. Finally, some of the original PANAS adjectives were dropped to preserve the brief nature of the scale. The resultant scale was comprised of 30 items and two sub-scales: Negative Affect Schedule and Positive Affect Schedule. The Negative Affect Schedule contained 16 adjectives (8 representing low arousal such as 'bored' and 8 representing stronger displeasure such as anger) while the positive affect schedule contained 14 adjectives (7 representing high arousal such as 'excited' and 7 representing pleasure such as 'happy'). Total scores can range between 14 and 70 for the Positive Affect Schedule, with higher scores reflecting higher levels of reported positive emotions, while scores for the Negative Affect Schedule can range between 16 and 80, with higher

scores reflecting higher levels of reported negative emotions. The same version of the scale was administered both pre- and post-release.

Although the original PANAS has not been validated on offender samples there is considerable empirical evidence attesting to its reliability and construct validity in community samples. Further, the importance of negative emotions in the recidivism process has been established in retrospective research (e.g., Groth & Birnbaum, 1979; Pithers et al., 1988; Zamble & Quinsey, 1997). The revised PANAS is presented in Appendix L.

Criminal Attitudes.

The relationship between criminal attitudes and criminal conduct has received considerable theoretical and empirical attention in the correctional literature particularly from Andrews and his colleagues (Andrews, 1995; Andrews & Bonta, 1998; Andrews, Dowden, & Gendreau, 2001; Gendreau et al., 1996; Law 1998). Consequently, the Personal-Interpersonal-Community Reinforcement (PIC-R; Andrews & Bonta, 1998) perspective regarding the psychology of criminal conduct guided the operational measurement of this construct. Like the coping relapse model, PIC-R posits that the proximal causes of crime can be found in the immediate situation. Specifically, the theory argues that individuals are more likely to commit crime when presented with an opportunity to do so if they believe it is justified, likely to pay off (rewards exceed costs) and they believe that they will be successful (high self-efficacy).

Two measures were used to tap the 'immediate situation' construct. The first measure, the Criminal Self-Efficacy Scale-15 (CSES-15; Brown et al., 1998a) was derived from clinical experience, the PIC-R perspective, and more specifically, Bandura's theory of self-efficacy (1997) and Ajzen's theory of planned behaviour (1985, 1996). Criminal self-efficacy is defined as the extent to that a person perceives him/herself as a resourceful criminal. Criminal resourcefulness is operationalized in terms of one's perceived ability to commit a variety of violent and nonviolent

crimes successfully as well as one's belief in his/her general expertise in the criminal environment. The CSES-15 is a self-report questionnaire comprised of 15 true/false items such as "I do not have much experience breaking into cars" and "If I was shot or stabbed I would know where to get help without going to the hospital". The CSES-15 ranges from 0 to 15 with higher scores being associated with higher degrees of criminal self-efficacy (see Appendix M).

The original Criminal Self-efficacy Scale (CSES; Brown, Zamble, & Nugent, 1996) was comprised of 36 individual items. This version was administered to 289 male offenders who had been consecutively admitted to the federal correctional system in the Ontario region. The original 36-item scale was reduced to 15 items based on a series of psychometric analyses (see Brown et al., 1998a)². The resultant 15-item scale demonstrated good internal consistency (alpha = .92) and was moderately correlated with criminal history, $r (n = 76) = .33, p < .01$, and PCL-R Factor 2 scores, $r (n = 69) = .52, p < .0001$ (Brown et al., 1998a). Interestingly, Lemieux (1999) reported that the CSES-20 (Brown et al., 1998b) was correlated with PCL-R total scores, the number of past violent offences, and the number of past nonviolent offences. Similarly, Nugent (2000) demonstrated that the CSES-20 was predictive of general recidivism, $r = .24, p < .01$, in a sample of 116 male offenders deemed high risk by Correctional Service of Canada. The same version of the questionnaire was used both pre- and post-release.

The Expected Value of Crime inventory (EVC; Harris, 1975) was used as a secondary measure of the 'immediate situation' construct posited by PIC-R. The EVC was originally created by Harris (1975) but was recently revised by Gillis (1998)³. This measure is an open-ended, interview-based tool that assesses the extent to which an individual is aware of both the negative

² It should be noted that a 20-item version of the CSES also exists (CSES-20; Brown et al., 1998b). Given that the CSES-20 demonstrated such high internal consistency (alpha = .93) in the interests of time, it was decided to further reduce the 20 item scale even further, hence the CSES-15 was created. All three scales were highly correlated in the original construction sample (all $r_s > .96, N = 191$) (Brown et al., 1998a).

and positive consequences of crime along with the degree of perceived importance and likelihood of occurrence of both positive and negative consequences. Individuals are first asked to generate as many different negative consequences of crime as they can (e.g., go to jail, lose family). Once the list has been generated, the following two questions are asked about each consequence: "How bad would it be if consequence #1 (e.g., go to jail) actually happened?" and "What are odds that consequence #1 would occur if you did engage in crime?". Participants are asked to answer using a 10-point rating scale where a score of 10 indicates 'very bad' or 'very probable'. A total negative consequence of crime score is obtained by summing across each multiple of the two ratings (i.e., badness X probability) and then dividing this value by the total number of consequences.

A similar procedure is then followed for the positive consequences of crime. In this case, the first question is phrased as "How good would it be if consequence #1 (e.g., score a lot of money) occurred?" rather than "How bad". Thus, in theory, the negative expected value of crime score should be negatively correlated with recidivism while the positive expected value of crime score should be positively correlated with recidivism.

Although the original EVC measure (Harris, 1975), demonstrated some evidence of concurrent validity in that it was correlated with criminal history indices, its reliability remains untested. The pre- and post- EVC interviews are presented in APPENDIX E (Part Q) and Appendix H (Part K), respectively. The information obtained from the EVC interview was transcribed to the pre- and post-release coding manuals (see Appendix E, part H and Appendix I, Part E). It should be noted that the EVC interview format and rating guidelines were identical in form for both the pre- and post-release.

³ It should be noted that the original scoring and wording used by Harris (1975) was modified slightly for the present study. These changes were not adopted by Gillis (1998).

Social Support Scheme-Version 1 (SSS-V1).

The Social Support Scheme-Version 1 (SSS-V1; Brown & Zamble, 1998b) is a semi-structured interview-based measure that assesses the number of perceived, high-quality sources of support (i.e., social, emotional, instrumental, informational) within an individual's environment. The SSS-V1 was developed specifically for this study by integrating theoretical perspectives from the health psychology literature regarding the role of social support in physical and emotional well-being (i.e., Barrera, Sandler, & Ramsey, 1981; Kasl & Cooper, 1987; Procidano, 1992), the criminological literature (e.g., Personal-Interpersonal-Community Reinforcement Perspective; Andrews & Bonta, 1998), the theory of planned behaviour (Ajzen, 1985, 1996) and self-efficacy theory (Bandura, 1997).

During a semi-structured interview participants are asked to identify how many different individuals (up to a maximum of ten) provide them with some form of social, instrumental, emotional or informational support. The SSS-V1 includes anyone that the offender identifies as a form of support. Thus, professionals, friends, family and acquaintances can potentially be included. Social support focuses on whom the offender is currently spending his free time with, while instrumental support seeks to identify those individuals who provide the offender with concrete, tangible assistance (e.g., money, lodging, transportation to work). Emotional support identifies intangible forms of help (e.g., provides encouragement, listens to problems in a non-judgmental manner). Lastly, informational support captures all additional forms of assistance that emphasize day-to-day functioning such as how to apply for a new social insurance number or how to prepare a resume.

Using a 7-point Likert scale, the participant is then asked to rate each identified supporter along five dimensions: frequency of contact, degree of respect, motivation to comply, normative belief strength and level of satisfaction. Motivation to comply and normative belief strength are

constructs from Ajzen's theory of planned behaviour (1985, 1996). While motivation to comply measures the extent to which an individual wishes to act in accordance with another individuals' ideals, normative belief strength measures the extent to that the participant believes an individual in his referent group either approves or disapproves of his performing a particular behaviour (e.g., crime).

A total SSS-V1 score is produced by multiplying the total number of identified supporters (range 0 - 10) by a value representing the average quality of support. The quality rating is obtained by summing across the average score obtained for each of the five dimensions. Total scores can range from 0 to 350, with higher scores representing superior support. Thus, an individual who identifies 10 different supporters and assigns a score of 7 to each supporter along each dimension would receive a score of 350. Conversely, an individual who identifies no supporters would receive a score of 0. The pre- and post-interviews for the SSS are presented in Appendix E (Part R) and Appendix H (Part E), respectively. Information obtained from the SSS was recorded in the coding manual (see Appendix F, part I for the pre-release version and Appendix I, Part F for the post-release version).

Criminal Associates.

After the SSS had been administered, participants were asked whether or not anyone previously identified in the SSS was criminally active or had a criminal record (see Appendix E, Part R for the pre-release version and Appendix H (Part E) for the post-release version). File information was also used to augment this variable. The criminal associates variable was scored continuously (0-10) and was examined as an independent predictor as well as a potential moderator of the SSS. Information about criminal associates was recorded in the coding manual (Appendix F, P I for the pre-release version and Appendix I, Part F for the post-release version).

Coping Efficacy.

For the pre-release assessment, coping efficacy was measured using the Coping Situations Questionnaire (CSQ; Zamble, 1989) while the Coping Interview (CI; Zamble & Porporino, 1988) was used for the community-based assessments. Both measures assess how well an offender copes with potentially criminogenic situations along two dimensions: benefits and costs. Benefits refer to the positive dividends that are generated from an individual's response to a given problem situation. They may include responses that ameliorate the emotional discomfort caused by the problem as well as responses that address the situation directly. In contrast, the cost or risk dimension assesses the likely negative impact, if any, of the response. For example, this element considers whether or not the response strategy actually makes the original situation worse either by magnifying the original problem or increasing dysphoria.

The two measures of coping efficacy are similar in that they are administered orally and employ the same rating scheme. However, they differ in that the Coping Situations Questionnaire asks the participant to describe how he would react to four hypothetical problem scenarios, while the Coping Interview asks the participant to describe how he is currently coping with two real life problem situations (as identified by the interviewer). Each response is rated by the interviewer using a benefit scale that ranges from 5 to 1 where 5 represents an optimal response and 1 represents either no response or an inappropriate response. This is followed by a corresponding cost rating that ranges from 4 to 1 (4 = no cost, 1 = severe costs). Each benefit and corresponding cost score is then multiplied and averaged across all responses. This results in a final coping efficacy score that ranges from 1 to 20. Higher scores are reflective of superior coping ability (e.g., generates multiple solutions, considers long-term consequences, responses do not make the problem worse).

Both measures have demonstrated strong inter-rater reliability (.80 to .95) in previous studies (e.g., Brown, 1994; Porporino, 1983; Zamble & Porporino, 1988). Research has provided evidence in support of the construct-related validity of coping efficacy. For example, the Coping Situations Questionnaire has successfully differentiated psychopathic from nonpsychopathic rapists (e.g., Brown, 1994) while Nugent (2000) and Palmer (1997) have demonstrated that coping efficacy is a risk factor of future criminal conduct. All information pertaining to the pre-release coping measure is located in Appendix E (Part P), Appendix F (Part G) and Appendix G (Part B). Similarly, all information pertaining to the post-release coping measures is located in Appendix H (Part M), Appendix I (Part D) and Appendix J (Part B).

Balanced Inventory of Desirable Responding (BIDR).

Social desirability was measured using the Balanced Inventory of Desirable Responding-Version 6 (BIDR; Paulhus, 1994; 1998). The BIDR is a self-report questionnaire comprised of 40 items that are measured on a seven-point Likert scale (see APPENDIX N). The scale is scored such that higher scores are reflective of higher degrees of desirable responding. The scale is comprised of two dimensions: self-deception and impression management. The BIDR has undergone extensive empirical validation and has shown to be internally consistent among both non-criminal ($\alpha = .83$) and criminal samples ($\alpha = .86$) (Paulhus, 1998). Further, both the self-deception and impression management subscales demonstrated acceptable test re-test reliability over a 5-week period in a sample of 83 students, $r = .69$ and $r = .77$, respectively (Paulhus, 1994). Additionally, there is extensive evidence attesting to its construct validity within the general population (Paulhus, 1994; Paulhus, 1998). Lastly, there is some evidence in support of the BIDR's construct validity within an offender sample (e.g., Kroner & Weekes, 1996).

Table 5

List of Measures Used in Study

Measure	Brief Description
<u>Static Measures (Individual Influences)</u>	
Age	<ul style="list-style-type: none"> • Age at time of release in years
Statistical Information on Recidivism Scale (SIR-R1; Nuffield, 1982)	<ul style="list-style-type: none"> • Actuarial risk tool used by the CSC to assess the probability of general recidivism upon release
Hare Revised Psychopathy Checklist (PCL-R; Hare, 1991)	<ul style="list-style-type: none"> • Interview-based protocol that measures the extent to that an individual exemplifies the prototypical psychopath
# of prison misconducts (coded from files)	<ul style="list-style-type: none"> • Number of institutional convictions received during the last 12 months of incarceration prior to release
Childhood Adolescent Taxon Scale-Self Report Version (CATS-SR; Harris et al.,1994; Quinsey et al., 1998)	<ul style="list-style-type: none"> • Interview-based measure that assesses the extent of childhood and adolescent antisocial behaviour
<u>Dynamic Measures: Environmental Triggers</u>	
Employment sub-scale from the Problem Survey Checklist (PSC; Brown & Zamble, 1998a)	<ul style="list-style-type: none"> • Interview-based measure (5 items) that assesses an individual's job involvement (e.g., pride in a job well done, willing to work for minimum wage), employment status and employment barriers
Marital/family sub-scale from the Problem Survey Checklist (PSC; Brown & Zamble, 1998a)	Interview-based measure (7 items) that assess the quality of marital and family support

Table continued

<p>Accommodation sub-scale from the Problem Survey Checklist (PSC; Brown & Zamble, 1998a)</p> <p>Finance sub-scale from the Problem Survey Checklist (PSC; Brown & Zamble, 1998a)</p>	<ul style="list-style-type: none"> ● Interview-based measure (4 items) that examines quality of housing ● Interview-based measure (3 items) that taps financial stress and financial management skills
<p>Leisure sub-scale from the Problem Survey Checklist (PSC; Brown & Zamble, 1998a)</p>	<ul style="list-style-type: none"> ● Interview-based measure (4 items) that considers how an offender plans and spends his leisure free (e.g., with family, unstructured, no hobbies)
<p>Health sub-scale from the Problem Survey Checklist (PSC; Brown & Zamble, 1998a)</p>	<ul style="list-style-type: none"> ● Interview-based measure (2 items) that considers whether or not the offender has physical or mental health problems
<p>Interpersonal conflict sub-scale from the Problem Survey Checklist (PSC; Brown & Zamble, 1998a)</p>	<ul style="list-style-type: none"> ● Interview-based measure (4 items) that examines whether or not the offender has problems getting along with friends, family, or work associates
<p><u>Dynamic Measures: Cognitive/Emotional Appraisal</u></p>	
<p>Perceived Stress Scale (PSS; Cohen et al., 1983)</p>	<ul style="list-style-type: none"> ● 14 item self-report questionnaire that measures the extent to that an individual feels out of control or stressed about current situation
<p>Perceived Problem Index (Zamble, 1998)</p>	<ul style="list-style-type: none"> ● interview-based measure that examines the extent to that an individual reports experiencing problems or discomfort in 15 potentially criminogenic areas (e.g., family, employment, supervision)
<p>Negative Affect Schedule (revised sub-scale from the Positive and Negative Affect Schedule (PANAS); Watson et al., 1988)</p>	<ul style="list-style-type: none"> ● 16 item self-report questionnaire that measures the extent to that an individual feels hopeless, angry, ashamed, irritable, sad etc.

Table continued

Positive Affect Schedule (revised sub-scale from the PANAS (Watson et al., 1988)

- 14 item self-report questionnaire that measures the extent to that an individual feels happy, relaxed, active, enthusiastic, proud etc.

Dynamic Measures: Available Response Mechanisms

Social Support Scheme-Version 1 (SSS-V1; Brown & Zamble, 1998b)

- Interview-based measure that identifies the number of high-quality people that the offender relies upon for help (e.g., money, food, emotional support, socialization).

Criminal Associates
(coded from files and interview)

- Interview-based dichotomous measure that assesses whether or not the offenders currently has any criminal contacts

Expected negative value of crime (Harris, 1975
Adapted by Gillis, 1998)

- Interview-based measure that assesses the degree to that an offender anticipates the negative consequences of crime

Expected positive value of crime (Harris, 1975
Adapted by Gillis, 1998)

- Interview-based measure that assesses the degree to that an offender anticipates the positive consequences of crime

Criminal self-efficacy scale-15 (CSES-15; Brown et al., 1998a)

- 15 item self-report questionnaire that measures the extent to that an offender views himself as an experienced and resourceful criminal

Substance abuse sub-scale from the Problem Survey Checklist (PSC; Brown & Zamble, 1998a)

- Interview-based measure (6 items) that assesses the degree to that an individual has problems with alcohol and drug use

Table continued

Coping Situations Questionnaire (CSQ; Zamble, 1989)	<ul style="list-style-type: none"> • A vignette-based self-report questionnaire that assesses the extent to that an offender copes effectively with 3 different hypothetical problem situations
Coping Situations Interview (CSI; Zamble & Porporino, 1988)	<ul style="list-style-type: none"> • An interview-based measure that examines how well an offender copes with real life problem situations
Supervision compliance sub-scale from the Problem Survey Checklist (PSC; Brown & Zamble, 1998a)	<ul style="list-style-type: none"> • Extent to that an offender appears genuinely motivated to comply with supervision requirements
Balanced Inventory of Desirable Responding (BIDR; Paulhaus, 1994; 1998)	<ul style="list-style-type: none"> • A 40 item self-report questionnaire that assessed social desirability

Procedure

Data Collection

Data were collected using a three-wave prospective-, panel design. The first wave of data collection (Time 1) occurred in the institution within 45 days of release, while the second (Time 2) and third (Time 3) waves occurred in the community at one- and three-month post-release intervals. A two-week interviewing window was established to ease scheduling difficulties. For example, if the one-month post release interview was scheduled for September 20th, the researchers were instructed to conduct the actual interview and file review (computer-based: Offender Management System) between September 13th and September 27th (i.e., within ± 7 days of the actual one-month release date).

If the National Parole Board officially revoked an individual's conditional release, his participation in the study was immediately terminated. However, individuals were retained in the

study if they were suspended (the precursor to revocation) and temporarily detained in custody but were subsequently re-released rather than revoked. The amount of time that an offender spent in temporary custody was recorded and added to his follow-up time in the community. This adjustment was made to ensure that each offender would be assessed after being 'at risk in the community' for one and three months, respectively. Thus, if an individual's first community interview (Time 2) was scheduled for September 20th, but he was suspended on the 10th for 5 days, his Time 2 interview was pushed forward exactly 5 days to September 25th, the amount of time corresponding to his time spent in custody.

Each pre-release assessment took anywhere between 5 and 8 hours to complete. This included the actual interview (2 - 3 hours), file review (1 - 2 hours), scoring (2 - 2 ½ hours) and completion of the self-report questionnaires (½ hour). However, the community assessments were considerably shorter, ranging from 2 to 3 hours. Participants were debriefed after each phase of data collection (see Appendix 0).

Data Gatherers

Seven student researchers (including the principal investigator) collected and coded the data for this study. One student was centrally located in Ottawa and was responsible for identifying potential candidates, tracking consent rates, tracking suspensions/revocations, and adjusting assessment dates when necessary. Three of the students conducted all of the pre-release assessments and subsequent scoring, while two conducted and scored the community-based assessments in the Toronto area⁴. The principal investigator conducted all of the Ottawa-based community assessments and also coded information pertaining to recidivism on a case by case basis using the CSC's automated Offender Management System (OMS). The principal investigator also entered the data using SPSS for Windows Version 10.1. All of the field researchers were

graduate students (Masters or Doctoral level) in the field of psychology, education, criminology and legal studies. All but one had previous experience working in a forensic setting.

Quality Assurance and Training

The principal investigator was responsible for training all of the field researchers and for ensuring that all information was collected accurately and consistently across sites, assessment waves and interviewers. Five to ten days of training was allocated to each researcher. Training included both hands-on (e.g., interviewing participants in the presence of the principal investigator) as well as classroom style training (e.g., review of scoring procedures & interview techniques). Although one of the pre-release interviewers had been formally trained in the use of the PCL-R, two had not. These two individuals were trained by the principal investigator to administer and score the PCL-R using audiotaped PCL-R interviews. The audiotaped interviews (identifiers were removed from the tapes prior to use) were obtained from the principal investigator's Master's research conducted under the supervision of Dr. Adelle Forth, one of the original developers of the PCL-R. Dr. Forth had previously listened to these audiotaped interviews and had assigned a PCL-R score for each tape that was used in the training. Consequently, it was assumed that once the researchers had obtained comparable scores to that of one of the original crafters of the PCL-R they had been sufficiently trained.

Approximately 10% the pre-release interviews ($n = 16$) and 10% of the post-release interviews ($n = 15$ from T2 and $n = 15$ from T3) were scored by the principal investigator to obtain inter-rater reliability estimates. Coding discrepancies that arose throughout the course of the study were resolved through case conferencing, email, and telephone calls. The principal investigator confirmed the accuracy and consistency of all data recorded in the coding manual prior to data entry. Coding errors were noted and corrected prior to data entry.

⁴ The principal investigator conducted the first five assessments conducted at Time 1 and Time 2.

Minimizing Attrition

In order to minimize attrition, attempts were made to have the same community interviewer follow-up each participant throughout the duration of the study. Further, interviewers were as accommodating as possible in terms of working around the schedules of offenders. Thus, interviews were conducted at various times and locations (e.g., parole offices, halfway houses, coffee shops, job sites, restaurants, or even by phone, if necessary). However, as a general rule, interviews were not conducted in the personal residences of the participants.

Data Analysis

Organization.

The data analysis was conducted in four parts. Part 1 reports information about attrition rates, sample representativeness, missing data, variable reduction methods, and data screening techniques. Part 2 shows descriptive information and reliability indices for both static and dynamic measures. Part 3 examines intra-individual change. Specifically, this section focuses on determining whether or not the dynamic measures actually changed for individuals who were not revoked during the study period. This was accomplished using a series of doubly-multivariate repeated measures analyses⁵, single-group univariate repeated measures analyses, and pairwise comparisons.

Part 4 examines how well static and dynamic measures assessed at Time 1, as well as how changes in dynamic measures predicted recidivism. A variety of statistical procedures including correlational analysis, survival analysis (Chung et al., 1991; Cox, 1972; Kalbfleisch & Prentice, 1980; Singer & Willett, 1991) and receiver operator characteristic analysis (ROC; Rice &

⁵ This analysis is recommended when each participant is assessed on two or more variables, on two or more occasions (Keppel, 1991). The terms "doubly multivariate" is appropriate given that the analysis is applied to research

Harris, 1995; Swets, 1986; Swets, Dawes, & Monahan, 2000; Swets & Pickett, 1982) were used to meet this objective.

Survival Analysis.

Survival analysis is a statistical technique that estimates how long it takes (i.e., survival time) to reach some event (e.g., revocation). Although traditional procedures such as multiple regression examine the relationship between a variable(s) and a binary outcome measure (e.g. revoked or not revoked), survival analysis examines the relationship between a variable(s) and a continuous outcome measure, survival time. For recidivists (i.e., uncensored cases), survival time is recorded as the length of the time between the release date and the recidivism date. This value can be coded in days, months or years. For nonrecidivists (i.e., censored cases), survival time is coded as the length of time between the release date and the study termination date (i.e., when the researchers terminated the follow-up period). Survival analysis is well suited to correctional outcome studies because it naturally controls for variable follow-up intervals.

Until recently, non-parametric methods of survival analysis (e.g., Kaplan-Meier method, life table method) dominated the correctional literature. Although these techniques provide useful information, they are restrictive in that they can only examine categorical variables on an individual basis. They can not incorporate information regarding continuous predictors, nor can they compare the relative contributions of such predictors simultaneously. Although parametric, regression-based methods derived from maximum likelihood estimation procedures do exist, they can not accommodate time-dependent covariates (i.e., when the same variable is assessed more than once). Further, the shape of the baseline survivor function must be known apriori in order to apply the appropriate survival model (Chung et al., 1991). Briefly, the baseline survivor function is

designs that not only use two or more dependent variables but also assess each dependent variable on more than one occasion.

equivalent to the constant term in multiple regression. It is the baseline value that is increased or decreased based on the values of the independent variables and their relationship with the dependent variable (Norušis, 1994). It can also be viewed as the time to failure base rate.

Cox regression survival analysis is a semi-parametric survival technique that generates regression parameters using partial likelihood estimation procedures (Allison, 2000; Cox, 1972; Kalbfleisch, & Prentice, 1980; Norušis, 1994). It is unique in that regression parameters are estimated without having to make any assumptions about the shape of the baseline survivor function. Additionally, like multiple regression, it allows the researcher to compare the relative contribution of multiple variables simultaneously, regardless of whether or not they are dichotomous or continuous in nature. Most important, however, is that Cox regression survival analysis is the only procedure that can deal with time-dependent covariates.

Statistical power in survival analysis is dependent upon the number of subjects, the length of the follow-up period and the base rate for the event of interest. Longer follow-up periods are associated with a greater number of failures, which in turn is associated with greater power. Although Singer and Willet (1991) recommend that the follow-up should be sufficiently long enough such that at least $\frac{1}{2}$ of the participants will fail, methods for determining statistical power for survival analysis are available for research designs involving two or more group comparisons (e.g., treatment versus control group). In the current study however, two naturally occurring groups are not available for comparison. Consequently, a statistical power analysis could not be conducted given that the formula for calculating statistical power requires two different median survival times (e.g., one that corresponds to a control group and another that corresponds to a treatment group).

Receiver Operator Characteristic (ROC).

ROC is an unbiased statistical technique that assesses the ability of a prediction method or person to accurately forecast a particular outcome. Unlike previous indices of predictive accuracy,

ROC analysis is not unduly influenced by the selection ratio or the base rate (Mossman, 1994; Swets, 1986; Swets & Pickett, 1982; Rice & Harris, 1995). For this reason, it has recently become the statistic of choice within the correctional literature (Swets et al., 2000) rendering earlier predictive accuracy indices such as Relative Improvement Over Chance (RIOC, Loeber & Dishion, 1983) obsolete.

The primary statistic of interest generated from ROC analysis is the area under the curve (AUC). AUC values can range from .50 to 1.00, with higher values representing higher degrees of predictive accuracy. A value of .50 for example, is equivalent to the predictive accuracy that would be associated with tossing a coin: 50% of the time you would be right and 50% of the time you would be wrong. Conversely, an AUC of 1.00 is associated with 100% predictive accuracy. In the present case, AUC values can be interpreted as the probability of correctly selecting a recidivist when asked to do so from a pair of individuals; a recidivist and a non-recidivist (Ben Herman, personal communication, April, 2001; Swets et al., 2000). For this study, the predictive accuracy of the various models was compared using the test of correlated ROC areas outlined by Hanley and McNeil (1983): $Z = (A_1 - A_2) / \sqrt{SE_1^2 + SE_2^2 - 2rSE_1SE_2}$ ^{1/2} using ROCKIT Version 0.9.B (Metz, 1998).

Chapter 4: Results

Attrition from the Post-release Sample

Twenty-two individuals (16.2%) from the pre-release sample who were still at risk to recidivate as of Time 2 (1 month post-release) did not wish to take part in the study any further. Most participants simply stated that they could not find time due to programming and employment-related commitments. Similarly, at Time 3 (3 months post-release), 24 individuals (17.7%) did not agree to be interviewed, citing similar reasons. As Table 6 demonstrates, the study completers did not differ significantly from the study dropouts in terms age, marital status, sentence length, release type, or risk to recidivate as measured by the Statistical Information on Recidivism Scale-Revised (SIR-R1; Nuffield, 1982) at either Time 2 or Time 3. Although the groups did not differ on psychopathy scores as measured by the PCL-R (Hare, 1991) or on ethnicity at T2, significant differences did emerge at T3. Specifically, T3 study dropouts scored lower on the PCL-R ($M = 16.5$) than T3 study completers ($M = 20.3$). Similarly, Black and Asian participants were more likely to drop out of the study at T3 than Caucasians, Aboriginals or individuals classified as 'Other'.

Table 6

Study Completers vs. Study Dropouts: Demographics, Risk Level, and Psychopathy

Variable	Time 2			Time 3		
	Completers	Dropouts	χ^2	Completers	Dropouts	χ^2
% (n/n)	% (n/n)	% (n/n)		% (n/n)	% (n/n)	
<u>Ethnicity</u>						
Caucasian	81.5 (75/92)	18.5 (17/92)	3.59	88.0 (81/92)	12.0 (11/92)	17.29**
Black	81.0 (17/21)	19.1 (4/21)		52.4 (11/21)	47.6 (10/21)	
Asian	85.7 (6/7)	14.3 (1/7)		71.4 (5/7)	28.6 (2/7)	
Aboriginal	100.0 (6/6)	0.0 (0/6)		100.0 (6/6)	0.0 (0/6)	
Other	100.0 (10/10)	0.0 (0/10)		90.0 (9/10)	10.0 (1/10)	
<u>Marital Status</u>						
Single	83.7 (77/92)	16.3 (15/92)	0.00	84.8 (78/92)	15.2 (14/92)	1.16
Married	84.1 (37/44)	15.9 (7/44)		77.3 (34/44)	22.7 (10/44)	
<u>Release Type</u>						
Day parole	83.8 (57/68)	16.2 (11/68)	0.00	80.1 (55/68)	19.1 (13/68)	1.39
Full parole	83.3 (5/6)	16.7 (1/6)		100.0 (6/6)	0.0 (0/6)	
Statutory	83.9 (52/62)	16.1 (10/62)		82.3 (51/62)	17.7 (11/62)	
Release						
	<u>M</u> <u>SD</u>	<u>M</u> <u>SD</u>	<u>t</u>	<u>M</u> <u>SD</u>	<u>M</u> <u>SD</u>	<u>t</u>
Age	33.6 (8.9)	30.7 (6.8)	1.24	33.5 (8.1)	31.4 (7.2)	0.93
Sentence length	4.3 (3.0)	3.7 (1.6)	1.10	4.2 (3.4)	4.2 (2.5)	-0.04
SIR-R1 ^a	-0.9 (11.1)	0.1 (11.4)	-0.38	-1.3 (11.2)	1.8 (10.9)	-1.25
PCL-R ^b	21.2 (7.8)	22.3 (6.8)	0.26	20.3 (7.4)	16.5 (7.2)	2.31*

Note. All χ^2 values and t values without an ** are non-significant at the p .05 level.

^aSIR-R1 = Statistical Information on Recidivism Scale Revised

^bPCL-R = Hare Psychopathy Checklist Revised. * p < .05. ** p < .01.

Sample Representativeness

Comparisons across key variables were conducted between the sample and a recent CSC release population cohort (Correctional Service Canada, 2001). The population cohort was comprised of all federal offenders ($N = 8,986$) released across Canada between April 1st, 2000 and March 31st, 2001. As Table 7 demonstrates, the sample was representative of CSC's released offender population in terms of age, sentence length, marital status, and risk to reoffend (as measured by the SIR-R1). However, the sample's SIR-R1 scores were marginally higher than the population's.

Although the sample contained approximately the same ratio of Caucasian offenders as the population, the sample contained considerably more Blacks. Similarly, the proportion of Aboriginals in the sample was considerably less than in the population. However, this finding was not surprising given that the majority of Aboriginal offenders are released in the Prairie region. In regards to release type, approximately the same percentage was released on full parole and statutory release. Although, the sample contained substantially more day parole releases than the population. Once again, this finding was to be expected given that individuals released at warrant expiry were intentionally excluded from the study, thereby increasing the relative proportion of parole releases.

Lastly, in terms of security level, the sample was comprised of a greater proportion of offenders released from minimum-security institutions as well as a lower proportion of offenders released from medium- and maximum-security institutions when compared with the population cohort. This finding also follows from the study selection process (i.e., paroled offenders are more likely to be released from minimum-security institutions while offenders released at warrant expiry are more likely to be released from medium- or maximum-security institutions). In sum, although the sample may have been marginally lower risk than the general population, it represents a typical set of non-Aboriginal, federal male offenders conditionally released on parole or statutory release.

Table 7

Sample Representativeness: Study Sample vs. Population Release Cohort

Variable	Sample	Population
	% (n/136)	% (n/8986) ^a
<u>Ethnicity</u>		
Caucasian	67.7 (92)	69.3 (6005)
Black	15.4 (21)	5.5 (472)
Asian	5.2 (7)	2.4 (207)
Aboriginal	4.4 (16)	20.4 (1766)
Other	7.4 (10)	2.4 (165)
<u>Marital Status</u>		
Single	67.7 (92)	60.0 (5365)
Married	32.4 (44)	39.5 (3533)
<u>Release Type^b</u>		
Day parole	50.0 (68)	29.82 (2680)
Full parole	4.4 (6)	5.22 (469)
Statutory Release	45.6 (62)	52.29 (4699)
<u>Security Level</u>		
Minimum	50.0 (68)	28.97 (2189)
Medium	44.9 (61)	53.32 (4028)
Maximum	5.2 (7)	13.59 (1027)
	<u>M</u> (<u>SD</u>)	<u>M</u> (<u>SD</u>)
Age	33.1 (9.9)	33.8 (10.1)
Sentence length	4.2 (3.2)	4.5 (3.8)
SIR-R1 ^c	-0.7 (11.1)	-2.8 (10.3)

Note. ^aNot all percentages sum to 100% due to missing data. ^bthe remaining proportion of releases (12.67%) were either deported, released at warrant expiry, granted court-ordered freedom, or died prior to release ^cSIR-R1 = Statistical Information on Recidivism Scale Revised.

Variable Reduction and Data Screening

Preliminary Data Screening: New Measures

All variables were first examined for data entry accuracy and the presence of missing values using SAS Version 8.01. Next, preliminary analyses involving the new and unstandardized measures were conducted before proceeding with traditional data screening and variable reduction techniques. Specifically, frequency distributions, inter-correlations, reliability indices and predictive validity estimates were examined for each individual item comprising the following measures: the Problem Survey Checklist (PSC; Brown & Zamble, 1998a), the Social Support Scheme-Version 1 (SSS-V1; Brown & Zamble, 1998b), the Expected Value of Crime measure adapted from Harris (1975) and the Perceived Problem Index (PPI) Zamble (1998). The purpose of this phase of the analysis was to eliminate sub-scale items that may have had an adverse effect on a measure's overall predictive value because of poor reliability (inter-rater & internal consistency) or extreme skewness. However, the original structure of a measure was retained if it was clear that the change(s) would have no impact on the measure's overall predictive potency or reliability. Details of these preliminary analyses are presented in the following sections.

Problem Survey Checklist (PSC).

Ten of the original 40 Problem Survey Checklist items (i.e., unsupportive partner, no fixed address, problems with friends, problems with partner, problems with family, problems with co-workers/boss, not a social drinker, binge drinker, chronic alcohol problem, binge-drug user) were poorly distributed (e.g., < 3 observations in any one category at any one wave). As a result, all ten items were dichotomized at each wave of data collection⁶. The Problem Survey Checklist items were further examined and subsequently dropped if any one of the following criteria were met: 1)

⁶ All dichotomized variables within the PSS were scored: 0-no problem, 2-problem to ensure comparability across other PSS items rated on the original 3-point scale: 0-no problem, 1-some problem, 2-problem.

dichotomous items were heavily skewed (less than 3 hits in any one category at any one wave); 2) the item demonstrated poor inter-rater reliability (intra-class correlation coefficient or kappa < .40)⁷; 3) if, by including the item, the relationship between the overall sub-scale and recidivism actually declined and lastly, 4) if an item's inclusion substantially reduced the alpha level of the sub-scale and the item was not related to conditional release failure (i.e., revocation for any reason). Also, if two sub-scale items were highly correlated with one another (i.e., $r \geq .80$) across all three waves of data collection the variable demonstrating the weaker relationship with outcome was dropped. Reliability and predictive validity indices for each original Problem Survey Checklist item are presented in Appendices P and Q.

As a result of these procedures the Problem Survey Checklist was reduced from 40 to 30 items with the following items being dropped: 'single', 'criminal partner', 'dissatisfied with relationship', 'not close to family', 'criminal family of origin', 'unsupportive family', 'dissatisfied with job/school', 'no fixed address', 'manipulative', and 'unrealistic release plans'. A description of the final subset of Problem Survey Checklist items used in all subsequent analysis is provided in Table 8. Additionally, a description of the items that were dropped along with the corresponding rationale is provided in Appendix R.

⁷The inter-rater estimate was set lower than convention given that at this stage the purpose was to decide whether or not to drop certain sub-scale items that may have unduly influenced the scale's overall reliability. This practice is not unprecedented as illustrated in the Hare Revised Psychopathy Checklist manual (PCL-R Hare, 1991). Inter-rater estimates for individual PCL-R items range from .42 to .86. Although the overall inter-rater reliability of the PCL-R total score is .83.

Table 8

Reduced Subset of Problem Survey Checklist (PSC) Items Used in Final Analysis

Item

Marital/family

1. Single/unsupportive partner

Employment

2. Legitimate barriers
3. Currently unemployed
4. Unmotivated to work
5. No personal investment in work

Substance Abuse

6. Not a social drinker/does not completely abstain
7. Binge-drinker
8. Chronic alcohol problem
9. Recreational drug use/does not completely abstain
10. Binge-drug user
11. Chronic drug problem

Accommodation

12. Physically unhealthy environment
13. High crime neighborhood
14. Dissatisfied with living arrangements

Finances

15. On social assistance
16. Under financial stress
17. Poor financial management

Leisure

18. No structured activity
19. No structured socializing
20. No time at home with family
21. Does not plan time

Interpersonal Conflict

22. Problem with friends
23. Problem with partner

Table continued

-
24. Problem with family
 25. Problem with co-workers/boss
 27. Problems with parole officer
 28. Fails to attend scheduled appointments

Health

29. Physical health problems
 30. Mental health problems
-

Social Support Scheme-Version 1 (SSS-V1).

Recall that the Social Support Scheme (SSS-V1) final score is calculated by multiplying the total number of identified supporters by the sum of the averaged quality ratings (e.g., frequency of contact, motivation to comply). Thus, the SSS-V1 does not readily lend itself to standard psychometric testing. Consequently, the following four components of the SSS-V1 were examined independently in terms of reliability and predictive validity: 1) the number of total supporters; 2) the type of supporters (e.g., wife, counselor, children); 3) whether or not the supporters were criminal or prosocial; and lastly, 4) the ratings obtained for each of the five dimensions (e.g., frequency of contact, motivation to comply, satisfaction with support).

Prior to release, each participant identified on average 4.6 different sources of support (SD = 1.8, range 0 - 10). Once in the community the number of supporters steadily increased with each successive wave (e.g., Time 2: M = 5.0, SD = 1.9; Time 3: M = 5.4, SD = 1.7). Further, inter-rater reliability indices⁸ for this variable were acceptable across all three waves of data collection (i.e., Time 1: ICC = .75; Time 2: ICC = .71; Time 3: ICC = .68). In terms of predictive validity, as the number of identified supporters at Time 1 increased, the probability of revocation (for any reason)

⁸Single intraclass correlation coefficients (ICC; Shrout & Fleis, 1979) using a one-way random effects model were also calculated to ascertain inter-rater reliability estimates based on a sub-sample of 46 cases (16 pre-release cases (T1) and 30 post-release cases (15 from T2 and 15 from T3)).

decreased, $r(N = 136) = -.16, p < .10$. Interestingly, the importance of this variable increased substantially once re-assessed in the community, as illustrated by Cox regression survival analysis with number of supporters as the time dependent covariate, $\chi^2 = (1, N = 107) 21.57, p < .0001$. Thus, no evidence emerged at this stage for dropping or modifying this particular component of the Social Support Scheme.

In total, the participants identified 10 different categories of people who provided some form of support (see Appendix S). Each individual category was assessed reliably (all kappa's $> .40$) as per previous guidelines followed by the developers of the Hare Revised Psychopathy Checklist. Interestingly, individuals who identified a child(s) over the age of 18, a partner (wife or girlfriend), or a non-CSC related organization (e.g., church, AA, medical doctor, community centre) prior to release as potential sources of support were less likely to be revoked (see Appendix T). However, this trend could not be reliably assessed in the community due to low frequencies. Given that the types of supporters were generally assessed reliably and the predictive value of each support category could not be reliably assessed in the community, it was decided to retain all originally identified supporters in the final measure.

Not surprisingly, most participants claimed that the majority of identified individuals in their social support network were prosocial. In fact, the correlation between the number of total supporters and the number of prosocial supporters was exceedingly high at Time 1, $r = .81 (N = 136), p < .0001$. Although still significant, the magnitude of this relationship was less pronounced at Time 2, $r = .41 (n = 89), p < .0001$, and Time 3, $r = .36 (n = 70), p < .002$. Interestingly, there were participants who did admit to relying on criminal others for support. However, at each wave the average number of identified criminal supporters was less than 1 (i.e., Time 1: $M = 0.61, SD = 1.00$

($N = 136$); Time 2: $M = 0.44$, $SD = 0.74$ ($N = 89$); Time 3: $M = 0.36$, $SD = 0.76$ ($N = 70$)). Thus, the Social Support Scheme (SSS-V1) was primarily composed of prosocial forms of support.

At this stage, supplementary analyses were conducted to determine whether or not the predictive potency of the Social Support Scheme (SSS-V1) might be improved by excluding criminal supporters. This turned out not to be true. In fact, the predictive potency of the SSS-V1 was reduced when individuals identified as 'criminal' were excluded. Consequently, all identified supporters, regardless of criminal status were incorporated into the final measure. However, due to the theoretical importance of criminal associates, it will be retained as a predictor variable and examined individually later on as part of the primary analysis.

Recall that the SSS-V1 also requires each participant to rate each individual supporter along 5 dimensions (i.e., frequency of contact, degree of respect, motivation to comply, normative belief strength, satisfaction level) using a 7-point Likert scale. Given that the number of ratings varied as a function of the number of identified supports, reliability and predictive validity indices were based on averaged ratings. Although the averaged ratings demonstrated good internal consistency across all three waves of data collection (i.e. Wave 1: $\alpha = .77$ ($N = 135$); Wave 2: $\alpha = .81$; $N = 85$); Wave 3: $\alpha = .74$, $N = 66$)), none of the correlations between the individual ratings exceeded .80. In terms of predictive validity, none of individual average ratings were either particularly strong predictors of recidivism either pre- or post-release. However, a Cox regression survival analysis with time dependent covariates revealed that the average normative belief strength rating did approach statistical significance in the predicted direction, $\chi^2 = (1, N = 102) 3.02$, $p < .10$. However, given that the ratings were reliable, and that collectively they were able to enhance the overall predictive power of the SSS-V1, they were retained.

In sum, the preliminary examination of the SSS-V1 did not provide a compelling argument in favour of modifying the original structure or scoring of the SSS-V1. Although, a supplementary analysis restricted solely to the quality of support provided by partners, children or non-CSC organizations did yield significant results, this modified measure was unable to outperform the original SSS-V1 measure in terms of predictive ability. Thus, the original SSS-V1 was retained.

Expected Value of Crime Survey.

In total, the participants generated 21 different types of negative consequences associated with doing crime (see Appendix U). The most frequently generated consequences were losing one's freedom or being returned to prison, disappointing or hurting one's family, being separated from one's family, and causing harm to one's self or others. Similarly, the participants generated 13 different types of positive consequences associated with crime that included making money, improving one's material lifestyle, gaining respect and experiencing a thrill or rush (see Appendix V).

Inter-rater reliability estimates were also calculated for each individual consequence (See Appendix W and Appendix X)⁹. Each T1 consequence was correlated individually with recidivism (revoked with or without an offence) to ascertain whether or not certain consequences were more strongly related to failure and whether or not it would be advantageous to drop certain consequences from the final variable. Similarly, a series of individual Cox regression survival analyses with each consequence serving as a time-dependent covariate were also conducted to determine whether or not certain consequences were more important when re-assessed in the community (See Appendix Y & Appendix Z).

⁹Internal consistency estimates (e.g., alpha) could not be calculated for this variable given that a substantial number of the consequences (e.g., over ½ for the negative and positive consequences) had low frequencies (less than 5 cases).

Although none of the negative consequences assessed at T1 were strongly related to recidivism, 'harm to others', 'reduced self-worth', 'global life problems' and 'loss of respect and trust of others' were mildly related to recidivism (e.g., r 's > .10 but not significant). Similarly, none of the positive consequences evidenced a strong relationship with failure. However, surprisingly, 'friendship/comradery' demonstrated a slight negative relationship with recidivism, $r = -.16$ ($N = 136$), $p < .10$. Thus, individuals who reported 'friendship' as a potential positive outcome of crime were less likely to recidivate. While an attempt was made to examine the importance of each consequence once re-assessed in the community the majority of consequences could not be reliably examined due to low frequencies. In light of these analyses it was decided to include all of the original consequences in the final analysis as there appeared to be no inherent benefit in dropping certain consequences while retaining others.

Once a participant had generated as many different consequences as possible, he was then asked the following two questions in reference to each consequence: 1) "How bad (for negative consequences) or good (for positive consequences) would it be if consequence X occurred?"; and 2) "What are the chances of consequence X occurring?". Participants were asked to respond using a 10-point scale ranging from 1-not bad/good at all to 10-extremely bad/good and 1-no chance to 10-absolutely. A preliminary examination of the individual ratings revealed that they were negatively kurtotic (i.e., most individuals answered with 1's and 2's or 9's and 10's). Consequently, the original 10-point rating scale was recoded to a 3-point rating scale ((1,2,3) = 1; (4,5,6,7) = 2; and (8,9,10) = 3).¹⁰

¹⁰ A series of alternative transformations (e.g., reflect and square root, reflect and logarithm) were also conducted. However, no differences emerged in the final analysis. Consequently, the less complex approach was adopted.

Perceived Problem Index.

An examination of the individual items comprising the Perceived Problem Index (Zamble, 1998) demonstrated that the majority of the original items were related to recidivism (revocation with or without an offence). However, there were a few notable exceptions (see Appendix AA). In addition, none of the correlations between the individual items exceeded .80 at any one wave. Interestingly, an analysis of the original scale's internal consistency revealed that one of the items (i.e., 'other problem area') was actually negatively correlated with the total score in two of the three data collection waves. This finding, coupled with the observation that very few offenders actually generated 'other problem areas'¹¹ resulted in the decision to drop this item entirely from the final scale. Thus, the final Perceived Problem Index was comprised of 14 items with total scores ranging from 14 to 105.

Final Data Screening

Once the pre-screening procedures had been completed all variables were examined for univariate outliers, normality (i.e., skewness, kurtosis), linearity and homoscedasticity. For dynamic variables, distributions were examined separately at each wave of data collection. Although no violations of linearity or homoscedasticity were noted, 16 of the 24 predictor variables either contained outliers or were skewed and/or kurtotic for at least one of the data collection waves (see Appendix BB). Given that the outliers represented actual values within the targeted population, they were not deleted but rather were truncated within ± 3 standard deviations of the mean of the variable (Tabachnick & Fidell, 1989).

¹¹The original scale was comprised of 16 items, two of which were open-ended ("Are you having problems in any other areas that were not specified in the current list?"). Interestingly, very few offenders identified other problem areas (e.g., 8% in wave 1, 25% in wave 2, and 17% in wave 3). Further, of those who did, not one individual generated a second problem area.

Similarly, skewness and kurtosis were addressed by truncating the distribution of each affected variable¹². For example, 'number of prison misconducts' originally ranged from 0 to 17. Given that almost 70% of the sample either received none or only one prison misconduct, this variable was characterized by positive skewness and positive kurtosis. Unfortunately, truncation proved inadequate for criminal associates and substance abuse due to severe skewness and kurtosis. Consequently, it was necessary to dichotomize both variables¹³. A detailed description of the univariate violations and corresponding adjustments is provided in Appendix BB.

Next, variables were examined for inter-rater reliability, multicollinearity (see Appendix CC for a inter-correlation matrix involving all predictor variables), and, in the case of dichotomous variables, the adequacy of the distribution. Variables were dropped if they evidenced poor inter-rater reliability (kappa or intra-class correlation coefficient < .65) at any one of the T1, T2 or T3 data collection phases¹⁴. Further, if two variables demonstrated multicollinearity (correlations in excess of .80) across all three waves of data collection the variable demonstrating the weaker relationship with outcome (revocation with or without an offence) was dropped. Dichotomous variables that demonstrated extreme uneven splits (i.e., 90% to 10% or worse) at any of the data collection phases were also dropped. It should be noted that the only one variable, interpersonal conflict was dropped as a result of these procedures. The interpersonal conflict measure was highly unreliable at all three waves of data collection.

The last series of screening techniques were multivariate in nature and involved testing for the presence of multivariate outliers and whether or not the proportional hazard assumption (a

¹² It should be noted that dynamic variables were truncated in the same manner at each wave to ensure an 'apples to apples' comparison across data collection waves.

¹³Supplementary analyses involving standard data transformation techniques (e.g., square root, logarithm) were also conducted and compared with the approach adopted above. No significant differences were observed in the overall trends produced in the final analysis between the two methods. Consequently, the more straightforward approach was adopted in order to retain interpretability.

requirement of Cox regression survival analysis) had been violated. Two multivariate within-cell outliers (one at Time 1 and one at Time 3) were identified via Mahalanobis distances ($\alpha = .001$). The outliers were retained in the final analysis, given that their removal did not alter the overall statistical significance of the results. In survival analysis, the DfBeta statistic can be used to estimate the degree to that the regression coefficient changes as a function of the removal of an individual case. Interestingly, no multivariate outliers were identified by the DfBeta statistic.

Cox regression survival analysis requires that for any two cases, the ratio of the estimated hazard across time remains constant. Examining the log minus log plots of the hazard functions for each of the median-split predictor variables readily tests this assumption. The assumption is said to be violated if the lines are not parallel or cross each other. Only one variable, financial management, violated this assumption. Consequently, as recommended by Norušis (1994) and Allison (2000), the interaction between financial management and time was used as the predictor variable rather than financial management for all Time 1 Cox regression survival analysis procedures.

Missing Data

Overall, the percentage of missing data for each variable ranged from 0% to 18.3% at Time 1, 19.8% to 34.2% at Time 2, and 25% to 41.6% at Time 3 (see Appendix BB). It should be emphasized that approximately 80% of the variables had no more than 25% of their values missing at any one wave. Further, the highest percentage of missing data (34% - 42%) arose from the four self-reports administered in the community. Missing data were replaced with the overall sample mean for continuous variables (Time 1 missing data were replaced with the mean value corresponding to Time 1; Time 2 missing data were replaced with the mean value corresponding to

¹⁴ It was important to examine reliability at each wave individually to demonstrate that observed changes were valid and not the function of unreliability in measurement due to rater drift over the course of the study.

Time 2, and Time 3 missing data were replaced with the mean value corresponding to Time 3). However, the sample mode was used for dichotomous variables. A comparison of the results conducted with and without mean substitution revealed that although mean substitution tended to reduce the magnitude of the univariate effects, the overall trends in the results remained unchanged. Additionally, a comparison of the multivariate analyses conducted with and without mean substitution also produced similar findings. Once the means had been substituted for missing values, each variable was examined again for potential violations. Only one new violation emerged. The Perceived Stress Scale distribution was now platykurtic at Wave 3. Consequently, the variable was transformed (logarithmic). However, the results using the original and the transformed variable remained unchanged. Consequently the original variable was retained in order to facilitate interpretability and to avoid the unnecessary transformation of the variable at T1 and T2.

Examination of Theory-driven Variable Categories

All predictor variables were correlated with one another to examine the relationships among the variables derived from each theoretical variable subset of the coping-relapse model (i.e., trigger, appraisal, response mechanism, static). As can be seen in Appendix CC, variables contained within the static subset were highly correlated with one another, as were variables within the appraisal subset. However, there appeared to be less distinction between variables contained in the two remaining subsets. For example, although the response mechanism variables correlated well with one another they also correlated equally well with variables from within the trigger domain subset.

A preliminary set of principal component analyses also confirmed the general pattern of results observed in the correlation matrix. Specifically, a series of principal component analyses using Time 1 data were conducted within each of the theoretically determined variable subsets. In sum, the findings revealed that the static subset and the appraisal subset were comprised of one

factor that accounted for 55% and 56% of the variance, respectively. Based on the pattern of individual correlations, it was decided to conduct a principal component analysis on the factors comprising the environmental triggers and response mechanism domains collectively (variable to case ratio: 1 to 10 for Time 1). This analysis did not result in the identification of two clear underlying factors but rather one predominant factor (27% of variance accounted for) in which all of the dynamic variables with the exception of supportive partner, accommodations, social support, and substance abuse clearly loaded on this factor. Consequently, given that no strong empirical argument emerged for retaining the original theoretical distinction between dynamic triggers and dynamic response mechanisms, all subsequent multivariate analyses involving these two subsets were merged. However, given that the empirical findings support the predicted theoretical uniqueness of the individual influences and the appraisal subsets, all multivariate analyses involving these two subsets were conducted independently, as originally planned.

Recidivism: Descriptive Information

The follow-up period ranged from 3 months to 19.2 months ($M = 10.2$, $SD = 3.9$). During this time, 36.8% of the sample (50/136) was either revoked ($n = 45$) or unlawfully at large ($n = 5$) when recidivism was coded on September 27th, 2001. It should be noted that the five UAL cases had not been formally revoked as of September 27th, 2001. However, it was decided to count these cases as failures in order to be consistent with past research (see Quinsey et al., 1997).

Interestingly, 25 of the failures occurred prior to Time 2, 15 occurred after Time 2 but before Time 3, and the remaining 10 failures occurred after Time 3. Although 48.9% of the revocations (22/45) were due to technical reasons (e.g., substance abuse violation, curfew violation, unlawfully at large), 51.1% (23/45) were for new criminal charge(s) and/or conviction(s) that ranged from murder to minor driving offences. Only 7 individuals (5.2% of the sample) had been charged with violent offences. The reasons for revocation are detailed in Table 9.

Table 9

Reasons for Revocation

Reason	% (n/45)
Charged or convicted (substance abuse not implicated)	40.0 (18)
Substance abuse/criminal association/curfew violation/poor attitude	20.0 (9)
Substance abuse & criminal involvement	15.6 (7) ^a
Substance abuse violations (only)	11.1 (5)
Unmanageable/dangerous	4.4 (2)
Manipulates staff/curfew and perimeter violations	4.4 (2)
Suspicion of drug use and criminal involvement	2.2 (1)
Unlawfully at large/failure to report	2.2 (1)

Note. ^aAlthough 5 of these individuals had been formally charged or convicted of a criminal offence, 2 had not. However, it was evident from the file review that both individuals had been involved in criminal activity but had simply managed to avoid prosecution. For example, one individual was caught on tape during an undercover operation attempting to smuggle drugs back into the institution from which he released.

Impression Management

The Balanced Inventory of Desirable Responding (BIDR) was administered at Time 1 to determine to what extent measures derived solely from self-report information were potentially contaminated by social desirability. As Table 10 demonstrates, the impression management sub-scale of the BIDR was significantly correlated, $p < .05$ with each self-report predictor variable at Time 1. The trends however, were not as pronounced at Times 2 and 3. The impression management sub-scale was also significantly correlated with general revocation, $r (N = 136) = -.29, p < .001$, and revocation with a new offence, $r (N = 136) = -.20, p < .05$. As a result, it was decided to treat impression management as an individual predictor variable rather than as a control

variable because of the strength of these correlations. Unfortunately, due to time constraints the BIDR was only administered at Time 1. Consequently, its dynamic potential could not be assessed.

Impression management was typically correlated with all of the predictor variables to the same degree (see Appendix CC). However, noteworthy was the particularly high correlation between impression management and perceived problem level, $r(N = 136) = -.44, p < .001$, and the Criminal Self-efficacy Scale (CSES-15), $r(N = 136) = -.43, p < .001$. Additionally, while impression management was correlated with most of the static variables, not one of these correlations exceeded .39. Further, the inter-correlations among the static variables (e.g., Psychopathy Checklist, Statistical Information on Recidivism Scale, Childhood Adolescent Taxon Scale) were substantially higher ranging from .57 to .59. As a result, empirically one could argue that the BIDR should be analyzed as a dynamic rather than static variable within either the 'appraisal' or the 'response mechanism' subset of dynamic factors. However, given that the BIDR could only be placed in one predictor category a decision was made to analyze it within the response mechanism subset. This decision was made given that arguably, impression management shares a closer conceptual link to other variables contained within the 'response mechanisms' component of the coping-relapse model (e.g., attitudes) than the 'appraisal' component. Consequently, the BIDR will be included in all subsequent Time 1 analyses involving the response mechanism subset of dynamic factors.

Table 10

Pearson (r) Correlations Between Impression Management and Self-report Measures

Self-report measure	Time 1 (N = 136) r	Time 2 (N = 111) r	Time 3 (N = 96) r
<u>Appraisal</u>			
Perceived global stress	-.33***	-.04	-.19
Perceived problem level	-.44***	-.21*	-.27**
Negative affect	-.27**	-.12	-.15
Positive affect	.33***	.19*	.21*
<u>Response mechanism</u>			
Strong social support	.26**	.10	.08
Criminal associates	-.17*	.02	-.04
Criminal self-efficacy	-.43***	-.40***	-.28**
Expected negative value of crime	.22**	.18	.28**
Expected positive value of crime	-.28***	-.17	-.05

Note. ***p < .001. **p < .01. *p < .05.

Reliability

The reliability of each measure was assessed in terms of inter-rater reliability and internal consistency. Cronbach's alpha was calculated to assess the internal consistency of each predictor variable. Similarly, single intraclass correlation coefficients (Shrout & Fleis, 1979) using a one-way random effects model were also calculated to ascertain inter-rater reliability estimates. Inter-rater reliability estimates were calculated using a sub-sample of 46 cases. Sixteen pre-release cases (T1) and 30 post-release cases (15 each from T2 and T3) were selected at random. The reliability results are presented separately for each wave of data collection to determine whether or not rater drift occurred. The reliability results for the static and dynamic variables are displayed in Tables 11 and 12, respectively. With the exception of interpersonal conflict, all of the variables demonstrated acceptable inter-rater reliability. As a result, this variable was dropped from further statistical analysis. Although all of the static measures demonstrated strong internal consistency, four of the dynamic variables (i.e., accommodations, finances, leisure, health) did not. This finding is to be expected given that each of these variables had less than 4 items per scale.

Table 11

Static Measure Reliability Estimates

Static measure	Alpha ^a (<u>N</u> = 136)	ICC ^b (<u>N</u> = 16)
Pre-release age		.99
CAT-SR total score ^c	.78	.84
PCL-R total score ^d	.84	.82
SIR-R1 total score ^e	.76	.98
Prison misconducts		.96

Note. ^aAlpha = Cronbach's alpha coefficient

^bICC = intra class correlation coefficient

^cCAT = Childhood Adolescent Taxon-Self Report Version.

^dPCL-R = Hare Psychopathy Checklist Revised.

^eSIR-R1 = Statistical Information on Recidivism Scale - Revised.

Table 12

Dynamic Measure Reliability Estimates

Dynamic Measure	Time 1		Time 2		Time 3	
	Alpha ^a (n)	ICC ^b (n)	Alpha (n)	ICC (n)	Alpha (n)	ICC (n)
<u>Environmental</u>						
Single/unsupportive partner ^c		.71 (16)		1.00 (15)		1.00 (15)
Employment problems	.77 (134)	.87 (16)	.84 (87)	.94 (15)	.80 (68)	.96 (15)
Accommodation problems	.54 (124)	.87 (14)	.66 (87)	.83 (14)	.60 (70)	.77 (15)
Financial problems	.51 (136)	.88 (12)	.36 (85)	.90 (12)	.23 (70)	.75 (13)
Leisure problems	.75 (135)	.89 (15)	.24 (88)	.91 (15)	.20 (69)	.78 (15)
Interpersonal conflict	.10 (136)	.40 (16)	.18 (86)	.64 (14)	.25 (70)	.39 (15)
Health problems	.54 (136)	.71 (16)	.35 (88)	.79 (15)	.53 (71)	.66 (15)
<u>Appraisal</u>						
Perceived problem index		.95 (16)		.93 (14)		.93 (15)
Perceived global stress	.81 (127)		.81 (80)		.82 (56)	
Negative emotion	.89 (123)		.90 (76)		.89 (57)	
Positive emotion	.83 (119)		.83 (73)		.84 (58)	
<u>Response Mechanisms</u>						
Substance abuse ^d		.81 (16)		.87 (15)		.93 (15)
Positive coping efficacy		.85 (16)		.94 (12)		.78 (15)
Positive social support		.74 (15)		.67 (14)		.69 (13)
Criminal associates ^d		.88 (16)		.87 (15)		.93 (15)
Criminal self-efficacy	.86 (116)		.90 (76)		.89 (56)	
Expected positive crime value		.77 (16)		.96 (13)		.96 (15)
Expected negative crime value		.87 (16)		.92 (13)		.96 (15)
Supervision compliance		.70 (16)		.80 (15)		.80 (15)
Impression Management ^e	.83 (116)		---		---	

Note . ^aAlpha = Cronbach's alpha coefficient.

^bICC = intra class correlation coefficient.

^cKappa was used as the inter-rater reliability estimate given that this variable was dichotomous.

^dPercent agreement was used as the inter-rater reliability estimate given that these variables were scored dichotomously and each variable had more than one cell with less than 5 cases.

^eImpression management data were not collected at Time 2 or Time 3.

Static and Dynamic Measures: Descriptive Information

Mean and standard deviation values for each static and dynamic measure are presented in Tables 13 and 14, respectively. In regards to the dynamic variables, four different patterns emerged. First, some variables (i.e., accommodation problems, health problems, positive affect, criminal self-efficacy, supervision compliance) remained relatively constant across each wave of data collection. Conversely, a second group of variables: perceived global stress, negative affect, strong social support, criminal associates, positive coping ability, substance abuse and expected negative value of crime showed a consistent decline in severity with each successive wave of data collection. The third group of variables appeared to change, but the change did not follow a consistent linear pattern across each successive wave. For example, problems in the area of employment, marital relationships, finances and perceived problem level actually increased between Waves 1 and 2 but decreased by Wave 3. Lastly, leisure problems actually increased when re-assessed in the community, as did scores on the Expected Positive Value of Crime measure.

Table 13

Static Measures: Means (M) and Standard Deviations (SD)

Static Measure	Mean (SD) (N = 136)	Range
Age at pre-release	33.1 (9.9)	19.0 - 65.0
CAT total score ^a	4.6 (3.2)	0.0 - 16.0
PCL-R total score ^b	19.7 (7.5)	3.2 - 36.0
SIR-R1 total score ^c	-0.7 (11.1)	-21.0 - 25.0
Number of prison misconducts	1.2 (1.5)	0.0 - 4.0

Note. ^aCAT = Childhood Adolescent Taxon;

^bPCL-R = Psychopathy Checklist Revised;

^cSIR-R1 = Statistical Information on Recidivism Scale - Revised.

Table 14

Dynamic Measures: Means (M) and Standard Deviations (SD) for Each Wave

Dynamic Measure	Time 1 (N = 136)	Time 2 (N = 111)	Time 3 (N = 96)
<u>Trigger (continuous)</u>	<u>M (SD)</u>	<u>M (SD)</u>	<u>M (SD)</u>
Employment problems	2.6 (2.1)	2.7 (2.1)	1.5 (1.7)
Accommodation problems	2.1 (1.4)	1.7 (1.5)	2.0 (1.4)
Financial problems	1.4 (1.3)	1.8 (1.3)	1.4 (1.1)
Leisure problems	3.4 (2.3)	4.8 (1.6)	4.7 (1.5)
Interpersonal conflict	0.7 (0.8)	0.4 (0.6)	0.4 (0.7)
Health problems	0.5 (0.8)	0.4 (0.8)	0.4 (0.7)
<u>Trigger (dichotomous)</u>	<u>% (n)</u>	<u>% (n)</u>	<u>% (n)</u>
Single/unsupportive partner	55.2 (75)	64.9 (72)	50.0 (48)
<u>Appraisal</u>	<u>M (SD)</u>	<u>M (SD)</u>	<u>M (SD)</u>
Perceived global stress	22.0 (6.8)	18.3 (6.0)	17.3 (4.7)
Poor problem recognition	26.7 (10.8)	28.4 (8.6)	24.6 (6.8)
Negative affect	32.8 (10.4)	28.3 (7.7)	25.1 (5.2)
Positive affect	46.8 (8.3)	46.8 (6.6)	48.8 (5.0)
<u>Response mechanism (continuous)</u>	<u>M (SD)</u>	<u>M (SD)</u>	<u>M (SD)</u>
Strong social support	130.1 (52.4)	144.6 (50.7)	161.1 (39.3)
Positive coping ability	9.8 (2.5)	10.5 (3.9)	11.9 (3.7)
Criminal self-efficacy	5.3 (3.6)	5.3 (3.8)	4.7 (3.2)
Expected negative value of crime	3.4 (1.6)	3.5 (1.4)	3.8 (1.4)
Expected positive value of crime	1.5 (0.6)	2.0 (0.8)	2.0 (0.8)
Poor supervision compliance	1.0 (1.2)	0.8 (1.0)	0.9 (1.0)
Impression Management ^a	6.6 (4.0)	---	---
<u>Response mechanism (dichotomous)</u>	<u>% (n)</u>	<u>% (n)</u>	<u>% (n)</u>
Substance abuse problems	50.7 (69)	16.2 (18)	14.6 (14)
Criminal associates	36.8 (50)	27.0 (30)	17.7 (17)

Note. Time 1 refers to information gathered prior to release, Time 2 and Time 3 refer to information gathered 1 month and 3 months after release, respectively. ^aData were not collected for this variable at Times 2 and 3.

Assessing Change in Dynamic Measures: Within-subject Change Among Nonrecidivists

Although the previous analysis illustrated that certain dynamic factors appeared to change over time, it was merely descriptive. Both recidivists and nonrecidivists were included, consequently, it was difficult to determine how much the apparent changes reflect changing proportions of recidivists and nonrecidivists, rather than real changes across time. Therefore, a series of within-subject change analyses were conducted based solely on the successful cases (i.e., those 86 individuals who had not been revoked by the end of the study period).¹⁵

Two doubly multivariate repeated measure analyses were conducted for each subset of dynamic measures (i.e., triggers & response mechanisms combined & appraisals).¹⁶ Wilk's Lambda criterion indicated that the combined 'trigger' and response mechanism subset was significantly affected by time, $F(14, 86) = 11.14, p < .0001$ as was the appraisal subset, $F(4, 86) = 8.72, p < .0001$.

These analyses were followed by 18 single-group univariate repeated-measures analyses as well as a series of pairwise comparisons (Bonferonni correction procedure was applied to control for Type 1 errors). Sphericity violations were examined using Mauchly's Test of Sphericity and were addressed using the Greenhouse-Geisser method. As Table 15 demonstrates significant ($p < .05$) within-subject changes were present for the majority of the variables. Lastly, 9 of the 13 variables with evidence for overall within-subject change also yielded significant pairwise comparisons (see Table 16).

¹⁵ Revoked cases included individuals who were revoked for new offences (charged or convicted) as well as for technical violations such as substance abuse. Ideally, one would replicate the analysis defining successful cases as those individuals who were not charged or convicted with a new offence. However, once an individual is revoked he is reincarcerated and hence no longer at risk to commit a new offence or available for testing in the community. Thus, any further analysis with an additional outcome measure such as revocation with a new offence is rendered impossible.

¹⁶ A multivariate procedure was adopted given that the DV's were significantly correlated with one another as demonstrated by Bartlett's test of sphericity. Static risk was not controlled for because the current emphasis was on within-subject change.

Table 15

Within Subject-change Among Successes: Repeated Measures Results

Dynamic Measure	Time 1 (N = 86)	Time 2 (N = 86)	Time 3 (N = 86)	F
<u>Trigger</u>	<u>M (SD)</u>	<u>M (SD)</u>	<u>M (SD)</u>	
Single/unsupportive partner	0.5 (0.5)	0.6 (0.5)	0.5 (0.5)	3.01*
Employment problems	2.1 (2.1)	2.6 (2.1)	1.6 (1.8)	10.51***
Accommodation problems	2.1 (1.3)	1.8 (1.6)	2.0 (1.5)	1.05
Financial problems	1.3 (1.3)	1.8 (1.3)	1.4 (1.1)	3.34*
Leisure problems	3.1 (2.3)	4.6 (1.6)	4.7 (1.6)	33.16***
Health problems	0.5 (0.8)	0.5 (0.8)	0.4 (0.7)	0.09
<u>Appraisal</u>	<u>M (SD)</u>	<u>M (SD)</u>	<u>M (SD)</u>	<u>F</u>
Perceived global stress	20.5 (6.5)	18.0 (6.1)	17.5 (4.6)	10.02***
Perceived problem index	24.1 (9.4)	27.9 (8.6)	24.8 (7.1)	7.60***
Negative affect	31.0 (8.8)	27.6 (7.6)	25.2 (5.3)	17.94***
Positive affect	47.8 (8.0)	47.0 (6.5)	48.9 (5.0)	1.58
<u>Response mechanism</u>	<u>M (SD)</u>	<u>M (SD)</u>	<u>M (SD)</u>	<u>F</u>
Strong social support	136.9 (50.6)	146.2 (52.3)	161.8 (40.3)	12.75***
Criminal associates	0.4 (0.5)	0.3 (0.5)	0.2 (0.4)	3.74*
Positive coping ability	10.1 (2.4)	10.9 (3.9)	12.0 (3.8)	9.13***
Criminal self-efficacy	4.9 (3.5)	4.9 (3.7)	4.6 (3.3)	0.31
Expected negative value of crime	3.4 (1.6)	3.6 (1.4)	3.9 (1.3)	3.74*
Expected positive value of crime	1.5 (0.7)	2.0 (0.8)	1.9 (0.8)	12.87***
Poor supervision compliance	0.8 (1.1)	0.7 (0.9)	0.9 (1.0)	0.83
Substance abuse problems	0.3 (0.4)	0.1 (0.3)	0.1 (0.3)	10.25***
Impression Management ^a	---	---	---	---

Note. Time 1 refers to information gathered prior to release, Time 2 and Time 3 refer to information gathered 1 month and 3 months after release, respectively.

^awithin-subject change could not be assessed given that data were not collected at Time 2 and 3.

* $p < .05$. ** $p < .01$. *** $p < .001$

Table 16

Within Subject-change Among Successes: Pairwise Comparisons

Dynamic measure	Time 1 vs. Time 2 (N = 86)	Time 2 vs. Time 3 (N = 86)	Time 1vs. Time 3 (N = 86)
<u>Trigger</u>	<u>D</u> ^a	<u>D</u>	<u>D</u>
Single/unsupportive partner	-0.1	0.1	0.0
Employment problems	-0.5	1.1*	0.6
Accommodation problems	0.2	-0.2	0.1
Financial problems	-0.4	0.3	-0.1
Leisure problems	-1.5*	-0.1	-1.6*
Health problems	0.0	0.0	0.0
<u>Appraisal</u>	<u>D</u>	<u>D</u>	<u>D</u>
Perceived global stress	2.4*	0.5	3.0*
Perceived problem level	-3.8*	3.2*	-0.6
Negative affect	3.4*	5.8*	2.4*
Positive affect	0.7	-1.5	-0.8
<u>Response mechanism</u>	<u>D</u>	<u>D</u>	<u>D</u>
Strong social support	-9.3	-15.6	-24.9*
Criminal associates	0.1	0.2	0.1
Positive coping ability	-0.8	-1.1	-1.9*
Criminal self-efficacy	-0.1	0.3	0.2
Expected negative value of crime	-0.2	-0.3	-0.5
Expected positive value of crime	-0.5*	0.6	-0.4*
Poor supervision compliance	0.0	-0.1	-0.1
Substance abuse problems	0.2*	0.0	0.2*

Note. Time 1 refers to information gathered prior to release, Time 2 and Time 3 refer to information gathered 1 month and 3 months after release, respectively.

^aD = difference score

*p < .05 (Bonferonni adjustment applied)

Recidivism Prediction: Binary Outcome (Failed-Yes or No)

Univariate Correlational Analyses

Static Measures.

The first set of predictive analyses simply examined how well each static measure could predict recidivism using two different binary outcome measures: 1) revocation for any reason (e.g., technical violations and new offences) and 2) revocation with a new offence(s) (charge or conviction). As Table 17 demonstrates, all of the measures (except age) were strongly correlated with general revocation. However, only the SIR-R1 maintained its predictive power for revocation with new offence(s).

Table 17

Univariate Correlations Between Static Measures and Recidivism

Static Measure	Revocation-any reason	Revocation-new offence
	r	r
Pre-release age	-.16	-.08
CATS-SR total score ^c	.26**	.11
PCL-R total score ^d	.42***	.14
SIR-R1 total score ^e	-.45***	-.35***
Prison misconducts	.36***	.12

Note. N = 136. Time at risk was partialled out of the dependent variable (recidivism).

^cCATS-SR = Childhood Adolescent Taxon Scale-Self Report version.

^dPCL-R = Hare Psychopathy Checklist Revised.

^eSIR-R1 = Statistical Information on Recidivism Scale - Revised.

*p < .05. **p < .01. ***p < .001

Dynamic Measures: Pre-release (Time 1).

Next, the ability of the dynamic measures assessed at Time 1 to predict outcome was examined (see Table 18). The correlational analyses were conducted while controlling for time at risk and while controlling for static risk (as measured by the SIR-R1) and time at risk simultaneously. The first set of analyses (only time at risk controlled for) demonstrated that within the 'trigger' subset only employment and single/unsupportive partner were significant predictors of general revocation. Although the same trends emerged for the prediction of new offences, the magnitude of the results was not as strong. Interestingly, all of the variables within the 'appraisal subset' predicted general revocation, but only perceived global stress and perceived problem index maintained their predictive strength for the prediction of new offences. Lastly, within the 'response mechanism subset' only four variables emerged as significant predictors of general revocation: substance abuse and impression management and, to a lesser extent, coping ability and supervision compliance. Only substance abuse and impression management retained their predictive power across both outcome measures. Noteworthy was the observation that impression management was actually negatively correlated with outcome. Thus, individuals who were more likely to manage their impressions were less likely to recidivate.

After controlling for time at risk and static risk, only substance abuse retained its predictive relationship with general revocation. In regards to the second outcome measure, revocation with new offence(s), both substance abuse and impression management lost their predictive power once static risk was controlled. Unexpectedly, positive consequences of crime emerged as a significant predictor of new offence(s), only after static risk had been controlled. Additionally, the direction of the correlation was counterintuitive in that individuals who were able to generate more positive consequences of crime were significantly less likely to commit new offences.

Table 18

Univariate Correlations Between Time 1 Dynamic Measures and Recidivism

Time 1 Dynamic Measure	Revocation-any reason		Revocation-new offence	
	r^a	r^b	r^a	r^b
<u>Trigger</u>				
Single/unsupportive partner	.21**	.07	.18*	-.01
Employment problems	.26**	.12	.15	.04
Accommodation problems	.00	.01	-.01	-.01
Financial problems	-.06	-.11	-.04	-.08
Leisure problems	.11	.02	.07	-.01
Health problems	.09	.11	.12	.11
<u>Appraisal</u>				
Perceived global stress	.29***	.13	.27***	.14
Perceived problem index	.31***	.15	.28***	.16
Negative affect	.22**	.15	.16	.09
Positive affect	-.20*	-.10	-.07	.03
<u>Response mechanism</u>				
Strong social support	-.09	.02	-.06	.02
Criminal associates	.11	.00	-.05	-.15
Positive coping ability	-.19*	.10	-.03	.02
Criminal self-efficacy	.12	.02	-.07	-.16
Expected negative value of crime	.03	.05	.03	.05
Expected positive value of crime	-.04	-.09	-.16	-.21*
Poor supervision compliance	.18*	.10	.05	-.03
Substance abuse problems	.41***	.27***	.20*	.06
Impression Management	-.28***	-.13	-.18*	-.06

Note. N = 136.

^aTime at risk was partialled out of the dependent variable (recidivism).

^bTime at risk and SIR-R1 total scores were partialled out of the dependent variable (recidivism).

* $p < .05$. ** $p < .01$. *** $p < .001$.

Dynamic Measures: Time-dependent.

The final analyses in this section attempted to examine how well the re-assessment of the dynamic measures could enhance predictive accuracy. Essentially, the correlational analyses were conducted following the same logic that Cox regression survival analysis with time-dependent covariates utilizes¹⁷. The value for each dynamic variable is determined as follows: If an individual fails before Time 2, then information obtained from Time 1 is used. If an individual fails after Time 2 but before Time 3 then Time 2 information is used. Lastly, Time 3 information is used for individuals who fail after Time 3 or who do not fail at all.¹⁸ Thus, by adopting this strategy one ensures that the dynamic measure assessed in the closest temporal proximity to the event of interest (revocation) is utilized.

As Table 19 illustrates, the results generally parallel those obtained previously in the context of the Time 1 dynamic analysis, except in terms of magnitude and the ability of dynamic risk factors to predict outcome while controlling for static risk. First, by incorporating information obtained from the re-assessment phase the strength of the predictors was greatly enhanced. Second, unlike the Time 1 dynamic analysis, the time-dependent analysis revealed that even after partialing out the effects of static risk, dynamic risk factors were still significantly related to outcome, albeit the magnitude of the correlations was still deflated.

¹⁷ It should be noted that the following analysis is unconventional and also limited in that it does not account for the inter-correlation between measures across time intervals. Nonetheless, it was included as a form of preliminary analysis to examine whether or not dynamic measures that change over time are related to recidivism. Although one could have used change scores, the analyses would have been extremely limited in that half of the failures occurred before Time 2 and hence would have been unavailable for analysis.

¹⁸ An alternative approach for the nonrecidivists would have been to take the average score across all three time intervals. Although feasible, it was decided not to adopt this approach in order to maintain consistency with the Cox regression approach.

Table 19

Univariate Correlations Between Multi-wave Dynamic Measures and Recidivism

Multi-wave Dynamic Measure	Revocation-any reason		Revocation-new offence	
	r^a	r^b	r^a	r^b
<u>Trigger</u>				
Single/unsupportive partner	.54***	.46***	.42***	.34***
Employment problems	.38***	.34***	.33***	.24**
Accommodation problems	.04	.06	.03	.06
Financial problems	.04	-.09	-.04	-.09
Leisure problems	-.01	.04	.04	.04
Health problems	.09	.01	.09	.01
<u>Appraisal</u>				
Perceived global stress	.29***	.21*	.13	.05
Perceived problem level	.32***	.20*	.23***	.13
Negative affect	.38***	.30***	.24**	.17*
Positive affect	-.19*	-.16	-.05	-.01
<u>Response mechanism</u>				
Strong social support	-.36***	-.26**	-.30***	-.21**
Criminal associates	.06	-.03	-.12	-.20*
Positive coping ability	-.31***	-.23**	-.09	-.01
Criminal self-efficacy	.14	.10	.03	-.02
Expected negative value of crime	-.15	-.09	.03	.09
Expected positive value of crime	-.12	-.03	-.25**	-.19*
Poor supervision compliance	.17*	.03	-.05	-.19
Substance abuse problems	.49***	.36***	.15	-.01
Impression Management ^c	---	---	---	---

Note. N = 136.

^aTime at risk was partialled out of the dependent variable (recidivism).

^bTime at risk and SIR-R1 total scores partialled out of the dependent variable (recidivism).

^cData were not collected for impression management in the community

* $p < .05$. ** $p < .01$. *** $p < .001$.

Recidivism Prediction: Continuous Outcome (Time to Failure)

Static Measures

Cox Regression Survival Analysis: Univariate Results.

Cox regression survival analyses were conducted on each of the five static measures to determine whether they were independently related to survival time. As Table 20 illustrates, all of the static measures, with the exception of age, significantly predicted time to general revocation (parallel analyses with a second outcome measure—revocation with new offences are available in Appendix DD). Although all of the significant predictors improved the fit between the survival model and the observed data, the SIR-R1 scale generated the best fit, followed by the PCL-R¹⁹. It is important to note that variables with positive Beta weights are associated with decreased survival times while variables with negative Beta weights are associated with increased survival times. Thus, in the case of the SIR-R1 individuals with lower scores or more negative scores fail faster than individuals with higher scores. Conversely, given that the Beta weight for prison misconducts is positive, individuals who had more prison misconducts fail at a faster rate than individuals with fewer prison misconducts.

Another useful method for determining to what extent a variable influences survival time is to examine its impact on the hazard rate. The hazard rate reflects the probability that an individual will fail during the next time interval (in this case, the next month) given that he has survived thus far (Allison, 2000; Norušis, 1994). The percent change in the unstandardized hazard rate illustrates how the hazard rate is influenced by a one-unit change in a predictor variable. For example, every unit increase in SIR-R1 scores is associated with a decrease in the overall (unstandardized) hazard rate by 8.6%. Conversely, every unit increase in PCL-R scores is associated with an

¹⁹ How well a statistically generated survival model approximates the observed data is evaluated using the log likelihood statistic. This value represents the degree to which the generated survival model approximates the observed

increase in the overall hazard rate by 10.0%. In order to make meaningful comparisons across variables one can examine the percent change in the standardized hazard rate. For example, a one-standard deviation unit increase in SIR-R1 scores is associated with a decrease in the standardized hazard rate by 172%. In contrast, a one-standard deviation unit increase in age only decreases the standardized hazard rate by 22%. The standardized hazard rate must be manually calculated by determining the standardized B value (i.e., $(b \cdot \text{SD of variable } X)$) that is then inserted in the following equation: $[100(\exp(B) - 1)]$ (P. Allison, personal communication, April 26, 2001).

Receiver Operator Characteristic (ROC) Analysis: Univariate Results.

Cox regression survival analysis can also generate a standardized score that represents the predicted survival function for each subject, or, alternatively, the standardized score that represents one predictor variable or alternatively, the best linear combination of two or more predictor variables. It is analogous to the standardized predicted value obtained in regular linear regression that represents the best linear combination of predictor variables. This value, $X^1\text{Beta}$ can also be defined as the mean-corrected covariates weighted by their regression coefficients (Norušis, 1994): $X^1\text{Beta} = (X_1 - X_m)\beta_1 + (X_2 - X_m)\beta_2 + \dots (X_n - X_m)\beta_n$

The $X^1\text{Beta}$ value can also be saved and treated as a predictor variable. Thus, it can be used in standard multiple regression to generate proportions of explained variance and also in Receiver Operator Characteristic (ROC) analysis to generate Area Under the Curve values. For example, AUC's (generated from $X^1\text{Beta}$ values) corresponding to each predictor variable are presented in Table 20. The SIR-R1 yielded the highest AUC followed by the PCL-R and prison misconducts. However, as predicted, the observed differences between the SIR-R1 and the PCL-R

data or how well the model actually fits the observed data. Better models are associated with smaller log likelihood estimates.

did not reach statistical significance, $z = 1.11$, n.s. Additionally, contrary to the prediction, the PCL-R demonstrated greater predictive accuracy than the CATS-SR, $z = -1.66$, $p < .05$.

Table 20

Static Measures: Cox Regression and Receiver Operator Characteristic Results

Static measure	Survival Statistics (N = 136)							ROC statistics
	<i>-2 Log L^a</i> (with variable)	χ^{2b}	<u>b</u> ^c	<u>SE b</u>	% change in hazard rate ^d (unstandardized)	<u>B</u> ^e	% change in hazard rate (standardized) ^f	AUC (CI) ^g
Pre-release age	451.55	2.35	-.02	.02	-2.3	-.20	-21.90	.56 (.46-.65)
SIR-R1 ^h	418.64	30.03***	-.09	.02	-8.6	-.99	-171.56	.78 (.70-.85)
PCL-R ⁱ	431.10	21.66***	.10	.02	10.0	.75	111.70	.73 (.64-.81)
CATS-SR ^j	442.62	11.55***	.11	.03	12.0	.35	42.19	.66 (.56-.74)
Prison misconducts	436.27	19.20***	.36	.08	44.0	.54	71.60	.74 (.63-.83)

Note. df = 1 per analysis. ^a-2 Log L (without variable) = 454.10; -2 Log L = -2 multiplied by the log likelihood value. ^b χ^2 = Wald Statistic.

^cunstandardized b, represents the degree to that the baseline survival function increases or decreases as a function of a unit change in the variable.

^dthis value represents the percentage change in the hazard rate for each one-unit increase in the variable.

^estandardized B. ^fthis value represents the percentage change in the hazard rate for each increase of one standard deviation in the variable.

^gAUC = Area under the curve; CI = 95% confidence intervals

^hSIR-R1 = Statistical Information on Recidivism Scale - Revised. ⁱPCL-R = Hare Psychopathy Checklist Revised.

^jCATS-SR = Childhood Adolescent Taxon Scale - Self-Report Version.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Cox Regression [stepwise] Survival Analysis: Multivariate Results.

The next phase of the analysis focused on constructing the strongest static prediction model. This was determined by allowing each static measure that was previously found to be individually related to survival time ($p < .05$) to compete for unique variance in a stepwise Cox regression survival analysis. It should be noted that the entry and exit p values were conservatively set at .10 due to the inter-correlations among the variables. However, the majority of variables were generally significant at .05 or less. As Table 21 demonstrates, only the SIR-R1 and prison misconducts entered the equation. The PCL-R and the CATS-SR did not significantly add to the predictive power of the set. Once again, parallel analyses based on a second outcome measure: revocation with new offence(s) are presented in Appendix DD.

Regression and Receiver Operator Characteristic (ROC) Analysis: Multivariate Results.

X¹Beta scores were then used to assess the magnitude of the strength between the strongest static subset (SIR-R1 & prison misconducts) and revocation. As previously stated, X¹Beta scores can be saved and treated as individual predictor variables. Thus, like any other variable it can be used as an independent predictor in standard regression techniques or in Receiver Operator Characteristic (ROC) analysis. In the current example, when X¹Beta values representing the SIR-R1 and prison misconducts were used to predict failure (revocation - any reason) within a standard stepwise multiple regression framework, 28% of the variance in outcome (revocation -any reason) was accounted for (see Table 21).

The predictive accuracy of the best static prediction model was also assessed by generating an Area Under the Curve (AUC) value based on the X¹Beta score representing the best static subset (i.e., SIR-R1 and prison misconducts). As Table 21 illustrates, the predictive accuracy of the best static prediction model exceeded 80%.

Table 21

Best Static Subset: Cox [stepwise] Regression and ROC Results

Static Measure	$-2 \text{ Log } L^a$ (with variable(s))	\underline{B}^b	$\underline{SE} \ b$	χ^{2c}	% change in hazard rate (unstandardized) ^d	\underline{B}^e	% change in hazard rate (standardized) ^f	Incremental \underline{r}^2 (X'Beta ^g)	AUC (CI) ^h
<u>Step 1</u> SIR-R1 ⁱ	418.64	-0.09	0.02	34.40****	-8.6	- .99	-171.56	.23****	.78 (.70-.85)
<u>Step 2</u> SIR-R1	407.75	-0.09	0.02	34.40****	-8.3	- .99	-171.56		.81 (.73-.87)
Prison misconducts		0.26	0.08	9.75***	29.5	.39	53.68	.05***	

Note. N = 136. Final $R^2 = .28$. Adjusted $R^2 = .28$. No other variables met the .10 significance level for entry into the model.

^a-2 Log L (without variable) = 454.10; -2 Log L = -2 multiplied by the log likelihood value.

^bunstandardized \underline{b} . It represents the degree to that the baseline survival function increases or decreases as a function of a unit change in the variable. ^c χ^2 = Score Statistic.

^dthis value represents the percentage change in the hazard rate for each one-unit increase in the variable while holding all other variables in the model constant. ^estandardized \underline{B} .

^fthis value represents the percentage change in the hazard rate for each increase of one standard deviation in the variable while holding all other variables in the model constant.

^gX'Beta is a standardized score that represents the predicted survival function for each subject or alternatively, the best linear combination of predictor variables. It is analogous to the standardized predicted value obtained in regular linear regression representing the best linear combination of predictor variables. ^hAUC = Area under the Curve; CI = 95% confidence intervals.

ⁱSIR-R1 = Statistical Information on Recidivism Scale - Revised. *p < .10. **p < .05. ***p < .01. ****p < .001.

Dynamic Measures: Pre-release (Time 1)

Cox Regression Survival Analysis: Univariate Results.

The next phase of the analysis focused on identifying which dynamic variables assessed pre-release were significantly related to survival time, $p < .05$. To meet this objective, nineteen Cox regression survival analyses were conducted on each of the Time 1 dynamic variables individually to identify which variables were independently related to survival time. Thus, although all of the 19 dynamic measures were re-assessed in the community (excluding impression management), this phase of the analysis focused exclusively on dynamic information obtained at Time 1. As Table 22 illustrates, eleven of the Time 1 dynamic measures were significantly related to survival time, $p < .05$. Although several of the measures generated significant results, noteworthy is the degree to which substance abuse increased the overall fit between the survival model and the observed data (e.g., -2 log likelihood value decreased from 454.10 to 426.85). See Appendix DD for similar results based on the second outcome measure: revocation with new offence(s).

Receiver Operator Characteristic (ROC) Analysis: Univariate Results.

A series of independent ROC analyses (generated from X¹beta scores) were also conducted for each dynamic measure assessed prior to release. In sum, the ROC findings are consistent with the survival analysis results. Noteworthy is that none of the dynamic factors assessed pre-release generated an AUC that exceeded .70. However, employment, perceived global stress, perceived problem level and substance abuse produced AUC values ranging from .67 to .68. Additionally, one of the strongest pre-release dynamic measures (i.e., substance abuse) could not be assessed using ROC analysis because it was coded dichotomously²⁰.

²⁰ ROCKIT VERSION 0.9B requires a minimum of three operating points to generate AUC values. Thus, AUC values can not be generated for dichotomous variables.

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Table 22

Time 1 Dynamic Measures: Cox Regression and ROC Results

Time 1 Dynamic Measure	-2 Log L ^a (with variable)	χ^{2b}	b ^c	SE b	% change in hazard rate ^d (unstandardized)	B ^e	% change in hazard rate ^f (standardized)	AUC (CI) ^g
<u>Trigger</u>								
Single/unsupportive partner ^h	445.80	7.60**	.85	.31	2.4	.43	53.7	---
Employment problems	444.45	9.45**	.21	.07	23.4	.44	55.3	.67 (.57-.75)
Accommodation problems	454.04	0.06	.03	.11	2.6	.04	4.1	.50 (.39-.60)
Financial problems ⁱ	453.32	0.82	.00	.00	0.0	.00	0.0	.50 (.40-.61)
Leisure problems	450.53	3.59	.12	.06	12.3	.28	32.3	.59 (.49-.69)
Health problems	451.37	2.91	.29	.17	33.0	.23	25.9	.53 (.36-.70)
<u>Appraisal</u>								
Perceived global stress	440.73	14.06***	.08	.02	7.9	.52	68.2	.67 (.57-.76)
Perceived problem index	437.51	17.81***	.05	.01	5.4	.47	60.0	.68 (.59-.77)
Negative affect	446.73	8.06**	.04	.01	3.7	.35	41.9	.62 (.52-.72)
Positive affect	450.07	4.07*	-.04	.02	-3.5	.32	37.7	.60 (.50-.69)

Table continued

Response Mechanisms

Strong social support	448.43	5.69*	-0.01	.00	-1.0	.51	-66.5	.61 (.51-.70)
Criminal associates ^h	453.75	0.35	.17	.29	1.2	.09	9.4	---
Positive coping ability	450.15	4.18*	-.11	.06	-10.8	.26	-29.7	.60 (.50-.69)
Criminal self-efficacy	453.60	0.51	.00	.00	0.0	.00	0.0	.58 (.48-.68)
Expected negative value of crime	454.09	0.01	-.00	.00	0.0	.00	0.0	.43 (.31-.55)
Expected positive value of crime	454.05	0.06	-.05	.22	-5.0	.04	-4.1	.55 (.43-.66)
Poor supervision compliance	447.18	7.34**	.31	.12	0.4	.34	40.5	.64 (.52-.74)
Substance abuse ^h	426.85	21.24***	1.63	.35	5.1	.65	91.8	---
Impression management	440.24	11.47***	-.16	.05	-0.2	.64	-89.7	.68 (.58-.76)

Note. N = 136. df = 1 per analysis.

^a-2 Log L (without variable) = 454.10; -2 Log L = -2 multiplied by the log likelihood value.

^b χ^2 = Wald Statistic.

^cunstandardized b. It represents the degree to that the baseline survival function increases or decreases as a function of a unit change in the variable.

^dthis value represents the percentage change in the hazard rate for each one-unit increase in the variable.

^estandardized B.

^fthis value represents the percentage change in the hazard rate for each increase of one standard deviation in the variable.

^gAUC = Area under the curve; CI = 95% confidence intervals

^hGiven that these variables were dichotomous AUC values could not be calculated as well, the hazard rate values represents relative risk rather than % change in hazard rate (i.e. single individuals are 2.4 times more likely to be revoked than individuals with a supportive partner).

ⁱThis variable violated the proportional hazard assumption. Thus, the interaction between time and financial problems (time*finance) was used instead as a predictor variable.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Cox Regression [stepwise] Survival Analysis: Multivariate Results.

Next, the strongest subset of pre-release dynamic variables from the combined trigger and response mechanism domain were selected using Cox [stepwise] Regression survival analysis. However, only those variables that previously demonstrated a significant univariate relationship with survival time were included. As Table 23 illustrates, only substance abuse and impression management entered the equation. Although univariately related to survival time, social support, employment, unsupportive partner/single, supervision compliance, and coping ability did not add significantly to the predictive power of the set.

The analysis was then repeated for the appraisal subset. As Table 23 demonstrates, only perceived problem index and perceived global stress entered the equation. Although positive affect and negative affect were previously shown to be related to survival time (in an univariate sense), they could not add significantly to the predictive strength of the set. Once again, a parallel series of analysis involving the second outcome measure (revocation with new offence(s)) is presented in Appendix DD.

Regression and Receiver Operator Characteristic (ROC) Analysis: Multivariate Results.

X¹Beta scores were then used to assess 1) the magnitude of the strength of the relationship between the strongest appraisal subset and revocation and 2) the magnitude of the strongest combined trigger and response mechanism subset and revocation. Additionally, the predictive accuracy of each model (i.e., Model 1: Time 1 appraisal & Model 2: combined trigger & response mechanism) was assessed using ROC analysis (derived from X¹Beta scores). See Table 23 for a summary of the results.

Table 23

Time 1 Dynamic subset: Cox [stepwise] Regression and ROC Results

Dynamic Measure	-2 Log L ^a (with variable(s))	b ^b	SE b	χ^2c	% change in hazard rate (unstandardized) ^d	B ^e	% change in hazard rate (standardized) ^f	Incremental r^2 (X'Beta ^g)	AUC (CI) ^h
<u>Triggers & Responses</u>									
Step 1 Substance abuse	426.85	1.63	.35	21.24****	5.1 ⁱ	.65	91.8	.20****	-. -
Step 2 Substance abuse Impression management	420.97	1.43 -.11	.36 .05	26.31**** 30.81****	4.2 ⁱ -10.2	.72 .44	105.4 55.3	.03**	.77 (.69-.85)
<u>Appraisal</u>									
Step 1 Perceived problem index	437.51	0.05	0.01	17.81****	5.4	.47	60.0	.11****	.68 (.59-.77)

Table continued

Step 2	432.64								.70 (.61-.78)
Perceived problem index		0.04	0.01	19.02****	4.1	.38	46.2		
Perceived global stress		0.05	0.02	4.93**	5.3	.33		.02**	

Note. $N = 136$. Trigger & Response subset: Final $R^2 = .23$. Adjusted $R^2 = .22$. Appraisal subset: Final $R^2 = .13$. Adjusted $R^2 = .11$. No other variables met the .10 significance level for entry into the model.

^a-2 Log L (without variable) = 454.10; -2 Log L = -2 multiplied by the log likelihood value.

^bunstandardized b . It represents the degree to that the baseline survival function increases or decreases as a function of a unit change in the variable.

^c χ^2 = Score Statistic.

^dthis value represents the percentage change in the hazard rate for each one-unit increase in the variable while holding all other variables in the model constant.

^estandardized B .

^fthis value represents the percentage change in the hazard rate for each increase of one standard deviation in the variable while holding all other variables in the model constant.

^gX'Beta is a standardized score that represents the predicted survival function for each subject or alternatively, the best linear combination of predictor variables. It is analogous to the standardized predicted value obtained in regular linear regression representing the best linear combination of predictor variables.

^hAUC = Area under the Curve; CI = 95% confidence intervals

ⁱGiven that this variable is dichotomous this value represents relative risk rather than % change in hazard rate (i.e. individuals with substance abuse problems are 5 times more likely to be revoked than individuals with no substance abuse problems).

^jGiven that this variable was dichotomous AUC values could not be calculated.

* $p < .10$. ** $p < .05$. *** $p < .01$. **** $p < .001$.

Dynamic Measures: Time Dependent

Cox Regression Survival Analysis with Time Dependent Covariates: Univariate Results.

The final set of analyses in this section focused on identifying the best time-dependent dynamic variables. Eighteen separate Cox regression survival analyses with time dependent covariates were conducted for each dynamic measure that was re-assessed in the community to determine which variables were independently related to survival time. Thus, this phase of the analysis incorporated all dynamic information available from Time 1, Time 2 and Time 3. As Table 24 illustrates, thirteen of the measures were significantly, $p < .05$, related to survival time. Interestingly, with the exception of expected negative value of crime, the time dependent results paralleled the Time 1 dynamic results. Although the expected negative value of crime assessed at pre-release was not a significant predictor of survival time, it did become significant once information collected in the community was considered. Noteworthy is the degree to which substance abuse, employment problems, unsupportive partner/single, social support, perceived global stress, negative affect and perceived problem level increased the overall fit between the survival model and the observed data (parallel results using revocation with new offence(s) as the outcome measure are presented in Appendix DD).

Receiver Operator Characteristic (ROC) Analysis: Univariate Results.

A series of independent ROC analyses (generated from X¹beta scores) were conducted for each time dependent dynamic measure. In sum, the ROC findings are consistent with the survival analysis results. However, unlike the pre-release results, the time-dependent analysis demonstrated that certain time-dependent dynamic variables, specifically employment, negative affect and social support were able to generate AUC's in excess of .70 (see Table 24).

Table 24

Time Dependent Dynamic Measures: Cox Regression and ROC Results

Dynamic Measure	-2 Log L ^a (with variable)	χ^{2b}	<u>b</u> ^c	<u>SE</u> b	% change in hazard rate ^d (unstandardized)	B ^e	% change in hazard rate ^f (standardized)	AUC (CI) ^g
<u>Trigger</u>								
Single/unsupportive partner	436.64	13.66***	1.36	.37	3.9 ^h	.67	95.4	-. -.i
Employment problems	432.71	22.99***	.31	.06	36.2	.62	85.9	.72 (.62-.80)
Accommodation problems	453.81	0.29	.05	.10	5.5	.07	7.3	.52 (.41-.62)
Financial problems ⁱ	453.50	0.62	.10	.13	10.0	.12	12.8	.54 (.43-.64)
Leisure problems	453.99	0.11	-.03	.09	-2.7	.05	5.1	.52 (.41-.62)
Health problems	451.09	3.25	.31	.17	35.7	.25	28.4	.57 (.37-.74)
<u>Appraisal</u>								
Perceived global stress	432.93	24.21***	.11	.02	12.1	.64	89.6	.67 (.56-.76)
Perceived problem level	432.69	24.54***	.07	.02	7.6	.61	84.0	.68 (.57-.77)
Negative affect	420.31	45.93***	.09	.01	9.9	.70	101.4	.71 (.61-.80)
Positive affect	447.31	7.19**	-.06	.03	-6.1	.40	49.2	.61 (.50-.71)

Table continued

Response Mechanisms

Strong social support	420.77	34.39***	-.02	.00	-1.8	.95	158.6	.75 (.65-.83)
Criminal associates	452.99	1.17	.35	.32	1.4 ^h	.44	55.3	--- ^j
Positive coping ability	440.93	13.68***	-.13	.03	-12.1	.44	55.3	.69 (.59-.77)
Criminal self-efficacy	450.07	4.20*	.08	.04	8.7	.28	32.3	.61 (.51-.70)
Expected negative value of crime	449.95	4.37*	-.19	.09	-17.3	.28	32.3	.57 (.45-.68)
Expected positive value of crime	449.69	4.23*	-.40	.20	-33.1	.29	33.6	.60 (.49-.70)
Poor supervision compliance	447.72	6.78**	.33	.13	38.6	.35	41.9	.61 (.49-.71)
Substance abuse	415.09	39.32***	1.84	.29	6.3 ^h	.75	111.7	--- ^j
Impression management ^k	---	---	---	---	---	---	---	---

Note. N = 136. DF = 1 per analysis.

^a-2 Log L (without variable) = 454.10; -2 Log L = -2 multiplied by the log likelihood value.

^b χ^2 = Wald Statistic.

^cunstandardized b. It represents the degree to that the baseline survival function increases or decreases as a function of a unit change in the variable.

^dthis value represents the percentage change in the hazard rate for each one-unit increase in the variable.

^estandardized B.

^fthis value represents the percentage change in the hazard rate for each increase of one standard deviation in the variable.

^gAUC = Area under the Curve; CI = 95% confidence intervals.

^hGiven that these variables are dichotomous these values represents relative risk rather than % change in hazard rate (i.e. single individuals are 2.4 times more likely to be revoked than individuals with a supportive partner).

ⁱthis variable violated the proportional hazard assumption. Thus, the interaction between time and financial problems (time*finance) was used instead as a predictor variable.

^jGiven that these variables were dichotomous AUC values could not be calculated.

^kvariable was not collected during the post-release phase.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Cox Regression[stepwise] Survival Analysis with Time Dependent Covariates: Multivariate Results.

Next, the strongest subset of time dependent dynamic variables from the combined trigger and response mechanism domain were selected using Cox [stepwise] Regression survival analysis. However, only those variables that previously demonstrated a significant univariate relationship with survival time were included. As Table 24 illustrates, substance abuse, employment, social support, single/unsupportive partner and expected positive consequences of crime entered the equation. Although coping ability, criminal self-efficacy, expected negative value of crime and supervision compliance were previously shown to be univariately related to survival time they did not add significantly to the predictive power of the set.

The analysis was then repeated for the appraisal subset. As Table 25 demonstrates, only perceived problem index and negative affect entered the equation. Although positive affect and perceived global stress were previously shown to be related to survival time, they could not add significantly to the predictive strength of the set. Once again, a parallel series of analysis involving the second outcome measure (revocation with new offence(s)) is presented in Appendix DD.

Regression and Receiver Operator Characteristic (ROC) Analysis: Multivariate Results.

X¹Beta scores were then used to assess 1) the magnitude of the strength of the relationship between the strongest appraisal subset and revocation and 2) the magnitude of the strongest combined trigger and response mechanism subset and revocation. Additionally, the predictive accuracy of each model (i.e., Model 1: Time dependent appraisal & Model 2: Time dependent combined trigger & response mechanism) was assessed using ROC analysis (derived from X¹Beta scores). See Table 25 for a summary of the results.

Table 25

Time Dependent Dynamic Subset: Cox [stepwise] Regression and ROC Results

Dynamic Measure	-2 Log L ^a (with variable(s))	B ^b	SE b	χ^2 ^c	% change in hazard rate (unstandardized) ^d	B ^e	% change in hazard rate (standardized) ^f	Incremental τ^2 (X'Beta θ)	AUC (CI) ^h
<u>Trigger & Responses</u>									
Step 1	415.09								---
Substance Abuse		1.84	.29	39.32****	6.3 ⁱ	.75	111.7	.25****	
Step 2	403.23								.82 (.69-.80)
Substance Abuse		1.6	.30	29.41****	5.2 ⁱ	.56	75.1	.05****	
Employment		.23	.07	12.24****	25.8	.46	58.4		
Step 3	394.34								.83 (.74-.89)
Substance Abuse		1.22	.35	12.39****	3.4 ⁱ	.50	64.9		
Employment		.22	.07	10.68****	25.0	.44	55.3		
Social Support		-.01	.00	8.05****	-0.9	.47	59.9	.04****	
Step 4	390.63								.84 (.76-.90)
Substance Abuse		1.13	.34	10.95****	3.1 ⁱ	.46	58.4		
Employment		0.20	.07	8.11****	21.9	.39	47.7		
Social Support		-0.01	.00	6.80****	-0.9	.47	59.9		
Single/unsupportive partner		0.71	.39	3.30*	2.0 ⁱ	.35	41.9	.02****	

Table continued

Step 5	385.21								.85 (.78-.91)
Substance Abuse		1.20	.33	50.67****	3.3 ⁱ	.49	63.2		
Employment		0.19	.07	12.85****	20.4	.37	44.8		
Social Support		-.01	.00	8.05***	-0.8	.47	59.6		
Single/unsupportive partner		0.91	.39	3.45*	2.5	.46	58.4		
Positive consequences-crime		-0.46	.20	5.31**	-37.1	.34	40.5	.01ns	
Appraisal									
Step 1	420.31								.71 (.61-.80)
Negative affect		0.09	.01	45.93****	9.9	.70	101.4	.16****	
Step 2	415.24								.73 (.63-.81)
Negative affect		0.08	.02	48.41****	8.1	.62	85.9		
Perceived problem index		0.04	.02	5.54**	4.1	.35	41.9	.02*	

Note. N = 136. Trigger & Response subset: Final $R^2 = .37$. Adjusted $R^2 = .34$. Appraisal subset: Final $R^2 = .18$. Adjusted $R^2 = .17$. No other variables met the .10 significance level for entry into the model.

^a-2 Log L (without variable) = 454.10; -2 Log L = -2 multiplied by the log likelihood value.

^bunstandardized β . It represents the degree to that the baseline survival function increases or decreases as a function of a unit change in the variable. ^c $\chi^2 =$ Score Statistic.

^dthis value represents the percentage change in the hazard rate for each one-unit increase in the variable while holding all other variables in the model constant. ^estandardized β .

^fthis value represents the percentage change in the hazard rate for an increase of one standard deviation in the variable while holding all other variables in the model constant.

^gX'Beta is a standardized score that represents the predicted survival function for each subject or alternatively, the best linear combination of predictor variables. It is analogous to the standardized predicted value obtained in regular linear regression representing the best linear combination of predictor variables. ^hAUC = Area under Curve; CI = 95% confidence intervals.

ⁱGiven that these variables are dichotomous these values represents relative risk rather than % change in hazard rate (i.e. single individuals are 2 times more likely to be revoked than individuals with a supportive partner).

^lGiven that this variable is dichotomous AUC values could not be calculated. *p < .10. **p < .05. ***p < .01. ****p < .001.

Summary of the Best Predictors

A series of Cox regression and Cox [stepwise] regression survival analyses identified the strongest predictors of general revocation (i.e., any reason: technical violations or new offences) within three subsets of variables: 1) static, 2) dynamic triggers & response mechanisms, and 3) dynamic appraisals. A parallel series of survival analyses was also conducted using time to revocation for new offence(s) as an alternative outcome measure (see Appendix DD). Table 26 provides a summary of the variables that entered the final stepwise solution within each pre-designated subset. Additionally, the final stepwise solution is presented for each prediction model (i.e., static, Time 1 dynamic, and time dependent dynamic) for each outcome measure.

In sum, three general trends emerged. First, more variables entered the equation for the prediction of general revocation than for revocation with new offence(s). This trend was consistent across the static and the time dependent prediction models. However, in regards to the Time 1 dynamic model, the same number of variables entered the equation across both outcome measures. Second, although the variables that formed the best Time 1 dynamic model also tended to comprise the strongest time dependent model, additional variables that were not included in the Time 1 model emerged as significant predictors in the time dependent model. This trend was consistent across both outcome measures. Lastly, although the same Time 1 dynamic variables entered the equation across both outcome measures two noteworthy differences emerged in regards to the dynamic time dependent model. Specifically, although substance abuse played a significant role in the prediction of general revocation it was noticeably absent in the prediction of new offences. Second, although perceived global stress outperformed negative affect in the pre-release Time 1 dynamic model, it was negative affect that outperformed perceived global stress in the time dependent dynamic model.

Table 26

A Summary of the Best Predictors

Prediction model	Revocation - Any reason	Revocation - New offence
<u>Static Model</u>	SIR-R1 Prison misconducts	SIR-R1
<u>Time 1 Dynamic Model</u>		
Dynamic triggers & response mechanisms	Substance abuse Impression management	Substance abuse Impression management
Dynamic appraisals	Perceived problem level Perceived global stress	Perceived problem level Perceived global stress
<u>Time Dependent Model</u>		
Dynamic triggers & response mechanisms	Employment problems Social support Single/unsupportive partner Expected positive consequences of crime Substance abuse	Employment problems Social support Single/unsupportive partner Expected positive consequences of crime
Dynamic appraisals	Negative affect Perceived problem level	Negative affect

Comparison of Prediction Models

The final set of analyses involves testing the hypotheses and predictions made at the beginning of the study. Specifically, this section will examine the relative predictive accuracy of six different prediction models using a series of hierarchical regression (using X¹ Beta scores), ROC (using X¹ Beta scores) and Kaplan-Meier survival analyses. The models to be compared include: 1) the SIR-R1, 2) the best static model, 3) the best pre-release (time 1) dynamic model, 4) the best static and best pre-release dynamic (time 1) model combined, 5) the best time dependent dynamic model, and 6) the best static and best time dependent dynamic model combined. Analyses are also conducted across both outcome measures. Variables comprising 'the best dynamic models' include variables from both the appraisal and the combined trigger and response mechanism subsets.

Multiple Regression Results.

The results of the regression analysis (see Table 27) clearly demonstrate that the addition of dynamic variables, particularly those re-assessed in the community add significantly to the explained proportion of variance in outcome. Additionally, this trend was observed regardless of which outcome measure was used. However the magnitude of the results were approximately twice as great for general revocation versus revocation with a new offence(s). Also noteworthy was the finding that the strongest static model and the strongest pre-release dynamic model performed equally well across both outcome measures. Lastly, the model that generated the greatest proportion of variance in explained outcome for both the prediction of general revocation and revocation with new offence(s) included static as well as time dependent dynamic measures.

Receiver Operator Characteristic (ROC) Results.

A second method for comparing the relative power of each prediction model is to examine each model's predictive accuracy using ROC analysis. An Area Under the Curve (AUC) value (along with 95% confidence intervals) corresponding to each prediction model was calculated. As Table 27 illustrates the ROC results are consistent with the regression results. The inclusion of dynamic variables, particularly those re-assessed in the community greatly enhanced predictive accuracy. Once again, this trend was consistent across both outcome measures. Noteworthy, was the finding that unlike the previous regression results, the magnitude of the ROC results remained consistent across both outcome measures. This finding is most likely attributable to the fact that ROC analysis is unaffected by the base rate.

In order to test whether or not the AUC values corresponding to each prediction model were significantly different from one another a series of pairwise comparisons were conducted using the test of correlated ROC areas outlined by Hanley and McNeil (1983): $Z = (A_1 - A_2) / \sqrt{SE_1^2 + SE_2^2 - 2rSE_1SE_2}$. As Table 28 illustrates, a number of significant differences emerged however, only three differences reached the .001 significance level²¹. First, in regards to the prediction of general revocation, the combined static and pre-release dynamic model significantly outperformed the SIR-R1 model, $p < .001$ as did the combined static and time dependent dynamic model. Second, in regards to the prediction of new offences, only one comparison rendered significant differences at the .001 level, the combined static and time dependent dynamic model significantly outperformed the static model.

²¹ Bonferonni correction (.05/15 = .003).

Table 27

Comparison of Prediction Models: Regression and ROC Results

Prediction Model	Revocation - Any Reason				Revocation - New offence			
	R ² (X' Beta)	Adjusted R ² (X' Beta)	R ² change ^a (X' Beta)	AUC (CI) ^b (X' Beta)	R ² (X' Beta)	Adjusted R ² (X' Beta)	R ² change ^a (X' Beta)	AUC (CI) ^b (X' Beta)
SIR-R1 ^c	.23***	.22		.78 (.70 - .85)	.15***	.14		.79 (.69 - .86)
Static ^d	.27***	.27	.05**	.81 (.73 - .87)	.15***	.14	.00	.79 (.69 - .86)
Dynamic (time 1)	.26***	.25	.03**	.80 (.72 - .87)	.13***	.12	-.02	.76 (.64 - .86)
Static & dynamic (time 1)	.34***	.33	.11***	.85 (.78 - .91)	.17***	.16	.02*	.82 (.73 - .89)
Time dependent dynamic	.38***	.37	.15***	.85 (.77 - .91)	.24***	.23	.09***	.87 (.80 - .93)
Static & time dependent	.43***	.43	.20***	.89 (.81 - .93)	.27***	.26	.12***	.90 (.82 - .95)

Note. See Table 26 for a summary of the variables that comprised each model.

^arepresents the incremental increase in R² achieved when each model is compared to the SIR-R1 model.

^bAUC (CI) = Area under the Curve; 95% confidence intervals

^cSIR-R1 = Statistical Information on Recidivism Scale

^dthe Static model for the outcome measure: revocation-new offences is comprised solely of the SIR-R1

*p < .05. **p < .01. ***p < .001.

Table 28

ROC Results: Pairwise Comparisons between Prediction Models

Model Comparison	z value
General Revocation	
SIR-R1 versus Static	-1.67*
SIR-R1 versus Dynamic (Time 1)	-0.56
SIR-R1 versus Static & Dynamic (Time 1)	-2.99***
SIR-R1 versus Time dependent	-1.52
SIR-R1 versus Static & Time dependent	-3.17***
Static versus Dynamic (Time 1)	0.11
Static versus Static & Dynamic (Time 1)	-2.22**
Static versus Time dependent	0.89
Static versus Static & Time dependent	-2.53**
Time 1 dynamic versus Time dependent	1.16
Revocation - New offences ^a	
Static versus Dynamic (Time 1)	0.62
Static versus Static & Dynamic (Time 1)	-2.10*
Static versus Time dependent	-2.00*
Static versus Static & Time dependent	-2.99***
Time 1 dynamic versus Time dependent	-2.22**

Note.^aThe best static model for the prediction of new offences was comprised solely of the SIR-R1.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Kaplan-Meier Survival Analysis Results.

A final set of analyses (i.e., Kaplan-Meier survival analyses) was conducted to compare the relative predictive power of each prediction model. Kaplan-Meier survival analysis allows one to examine how survival time varies as a function of a categorical variable. By dividing the X¹Beta value at the median, one can create two groups: 1) low risk or 2) high risk as predicted by each respective model. Thus, a survival curve can be generated for each risk group. The Log Rank Statistic can then be used to assess whether or not the survival curves (i.e., high risk vs. low risk) are significantly different from one another. As Table 29 demonstrates, offenders classified as 'high risk' fail at a significantly faster rate than individuals classified as 'low risk'. This finding is consistent across outcome measures and prediction models. A graphical representation of selected models is provided in Figures 2, 3,4, 5, 6 and 7.

Table 29

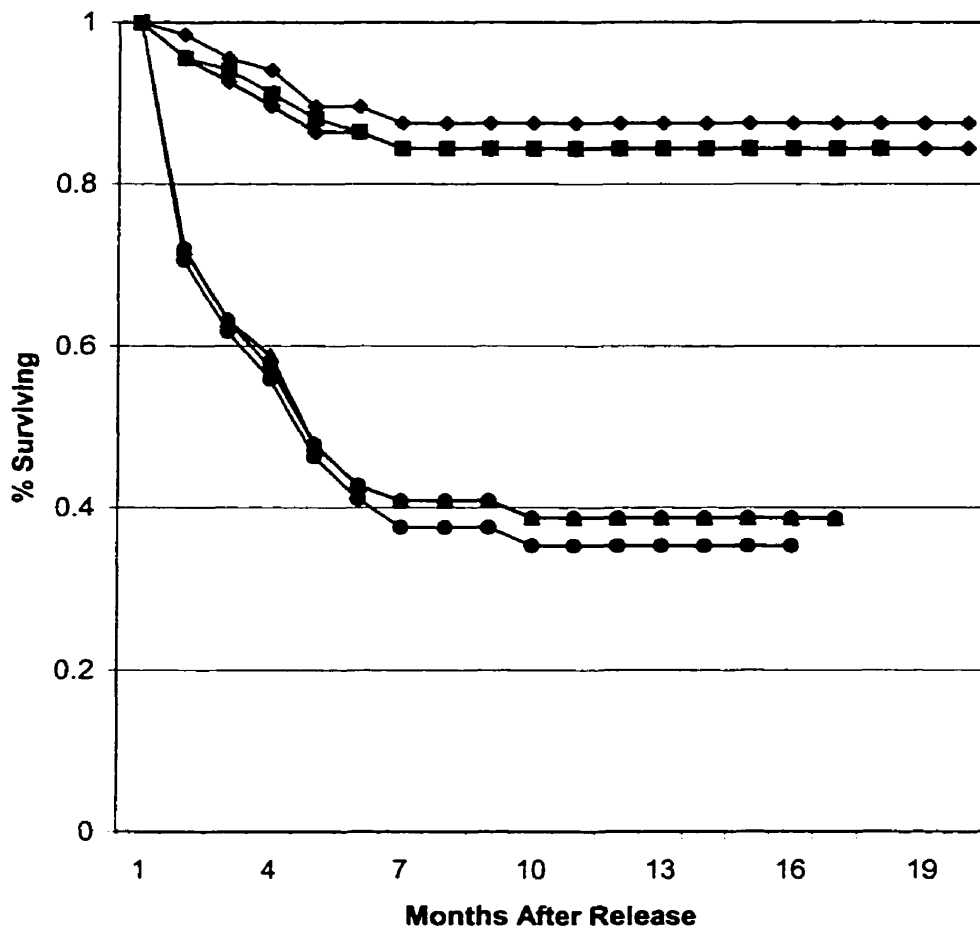
Comparison of Prediction Models Using Kaplan-Meier Survival Analysis

Model	Revocation - Any reason	Revocation - New offence
	Kaplan-Meier Log Rank (χ^2)	Kaplan-Meier Log Rank (χ^2)
SIR-R1	31.31***	15.10***
Static	30.14***	15.10***
Dynamic (time 1)	32.08***	14.87***
Static & dynamic (time 1)	39.43***	22.98***
Time-dependent dynamic	45.61***	27.64***
Static & time-dependent	57.77***	28.01***

Note. *p < .05. **p < .01. ***p < .001.

Figure 2:

Kaplan-Meier Pre-release Model Comparisons: Predicting General Revocation

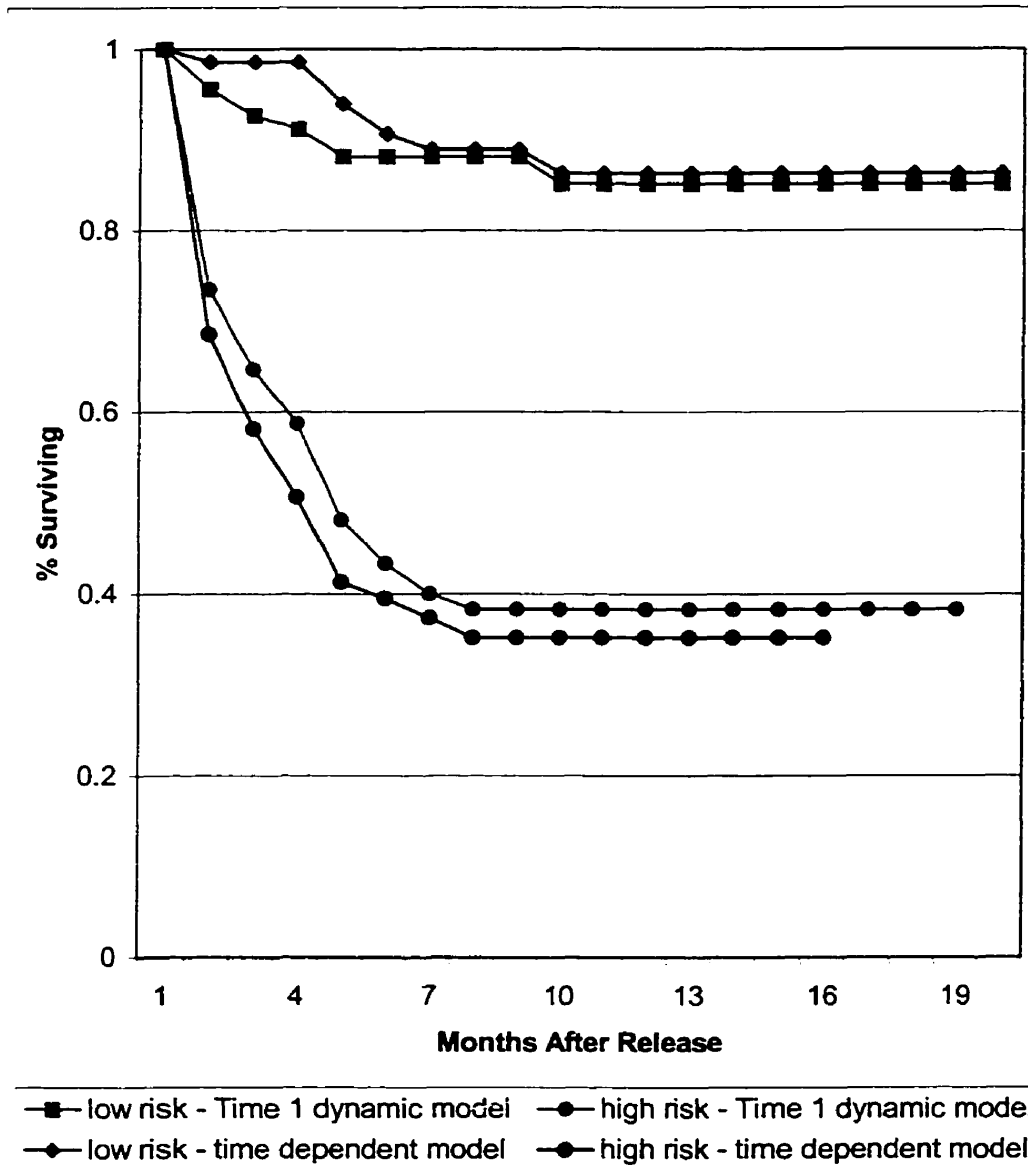


- low risk - SIR-R1 model
- high risk - SIR-R1 model
- ◆ low risk - static model
- ▲ high risk - static model
- ◆ low risk - static & time 1 dynamic model
- high risk - static & time 1 dynamic model

Note. Risk groups were determined by splitting each respective model (represented by the relevant X¹ Beta score) at the median.

Figure 3:

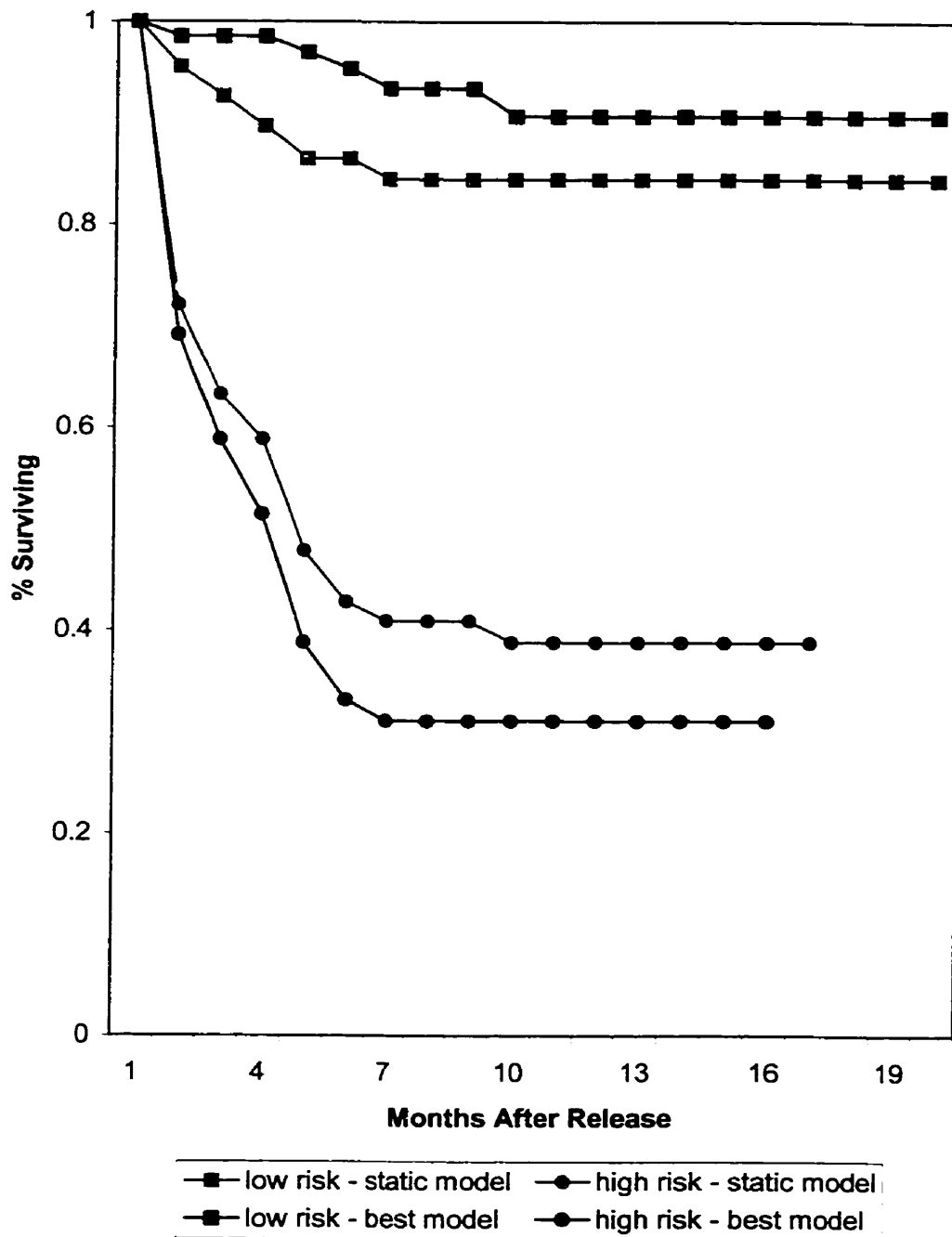
Kaplan-Meier Dynamic Model Comparisons: Predicting General Revocation



Note. Risk groups were determined by splitting each respective model (represented by the relevant X¹ Beta score) at the median.

Figure 4:

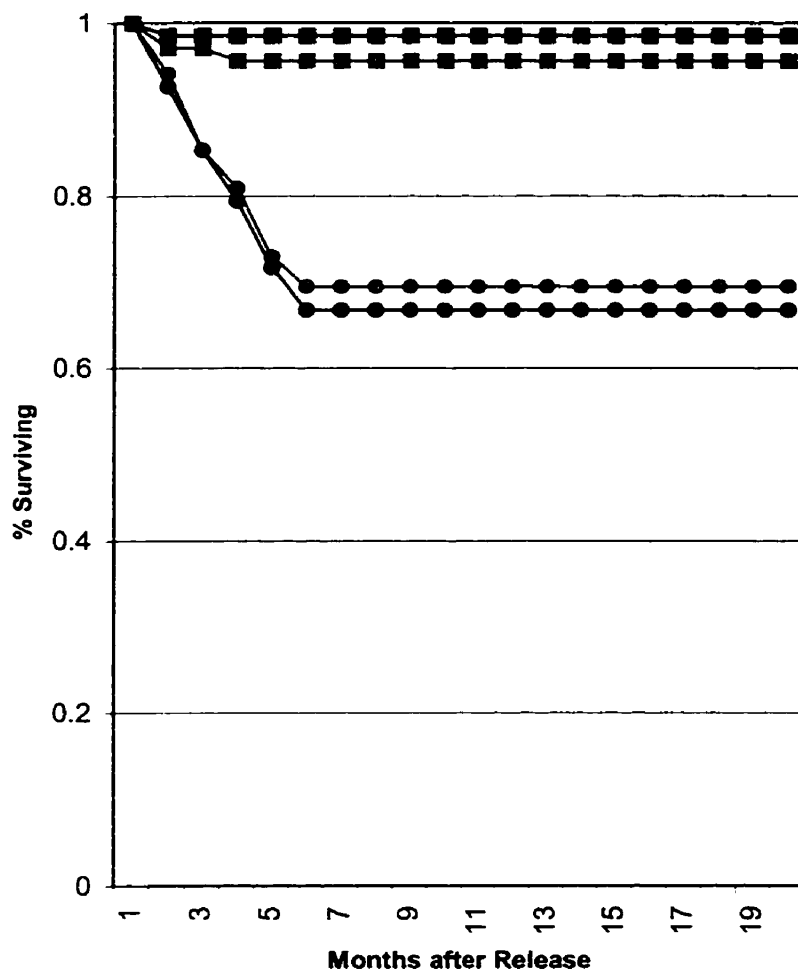
Kaplan-Meier Best Model Comparisons: Predicting General Revocation



Note. Risk groups were determined by splitting each respective model (represented by the relevant X¹ Beta score) at the median. Best model = combined static and time dependent model.

Figure 5:

Kaplan-Meier Pre-Release Model Comparisons: Predicting New Offences

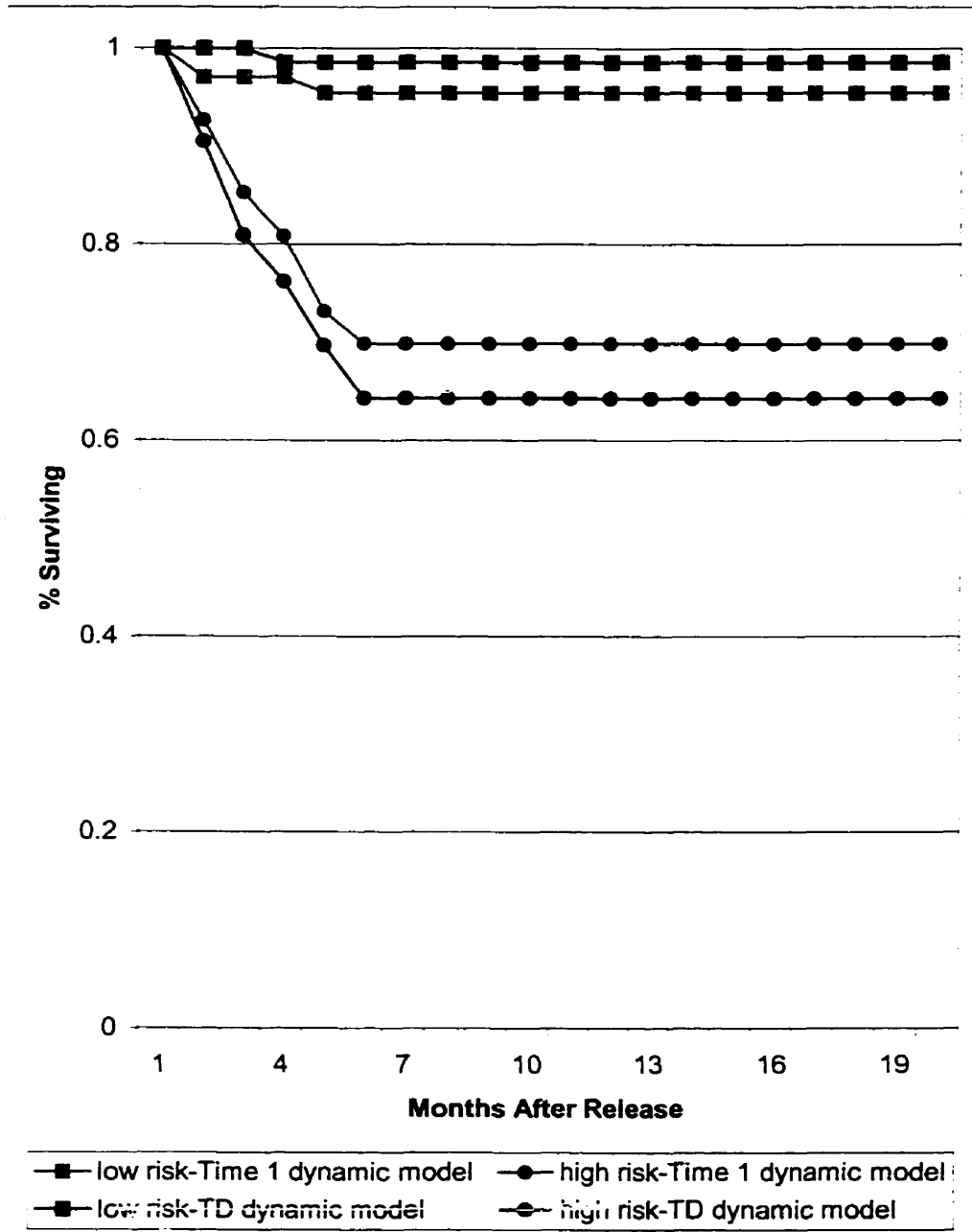


- low risk- static model
- high risk-static model
- low risk-static & time 1 dynamic model
- high risk static & time 1 dynamic model

Note. Risk groups were determined by splitting each respective model (represented by the relevant X¹ Beta score) at the median.

Figure 6:

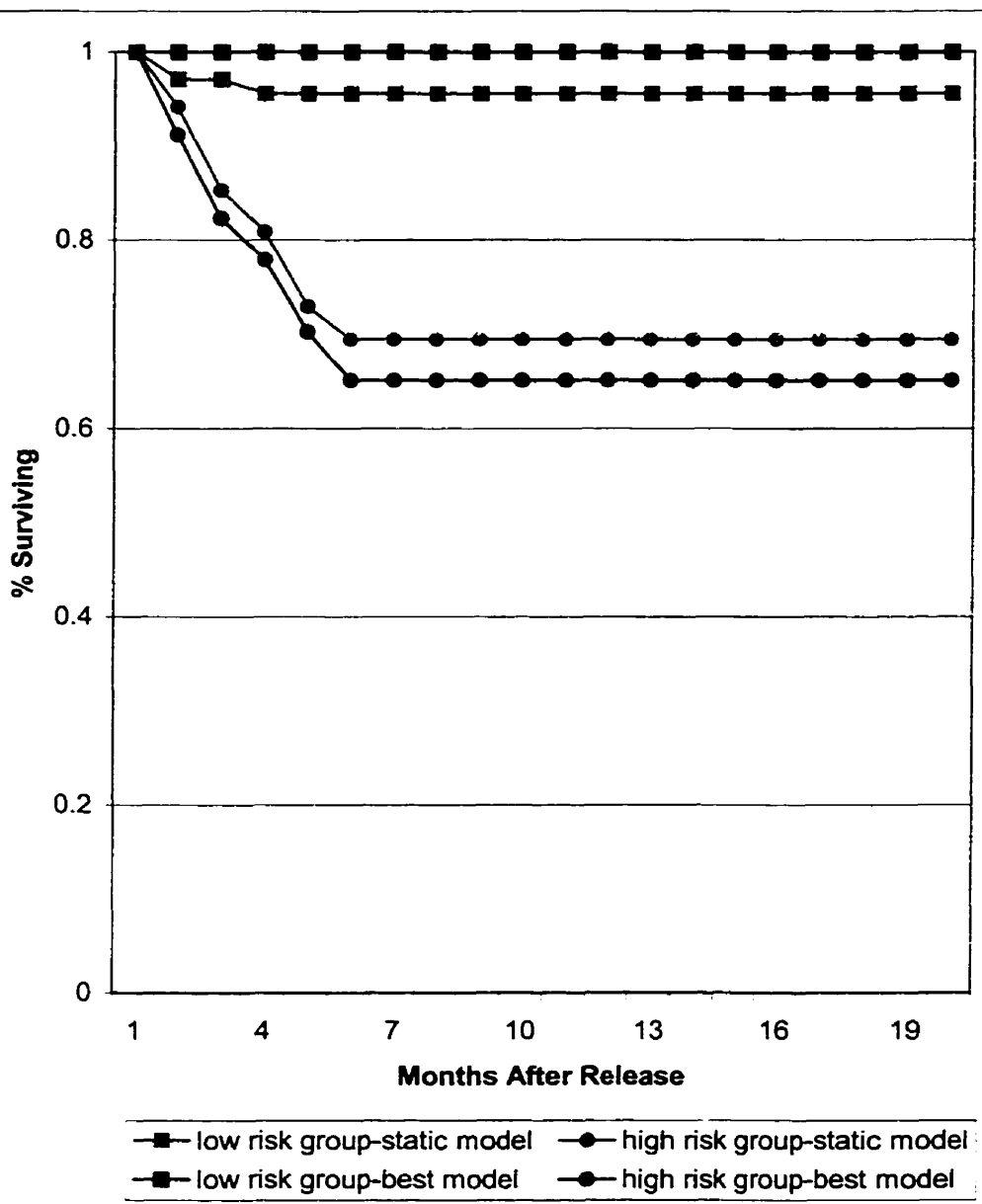
Kaplan-Meier Dynamic Model Comparison: Predicting New Offences



Note. Risk groups were determined by splitting each respective model (represented by the relevant X¹ Beta score) at the median.

Figure 7:

Kaplan-Meier Best Model Comparisons: Predicting New Offences



Note. Risk groups were determined by splitting each respective model (represented by the relevant X^1 Beta score) at the median. Best model = combined static and time dependent model.

Chapter 5: Discussion

Overview

This study examined the ability of dynamic risk assessment to predict adult criminal recidivism. A three-wave, prospective, research design involving 136 male offenders about to be released from federal institutions in the Ontario region was used. Although static measures were assessed only once, prior to release, dynamic measures were assessed on three separate occasions: pre-release, 1 month, and 3 months post-release. The ability of static and dynamic measures to predict conditional release failure was measured using Cox regression survival analysis with time dependent covariates and Receiver Operator Characteristic (ROC) analysis. Additionally, a within subject repeated measures design determined whether or not dynamic variables actually changed during the course of the study.

As predicted, the strongest time-dependent dynamic model outperformed the strongest static model in terms of predicting general revocation and new offences. However, the greatest level of predictive accuracy was achieved when both static and time-dependent dynamic measures were included. In regards to the pre-release information, the best Time 1 dynamic model was more or less equivalent to the best static model in terms of predicting general revocation as well as new offences. However, once again, the most accurate pre-release predictive model included both static and Time 1 dynamic measures.

Static Measures

As predicted, all of the static measures except age significantly predicted general revocation. Although the Hare Psychopathy Checklist-Revised (PCL-R) emerged as a solid predictor of general revocation, it could not account for unique variance above the Statistical Information on Recidivism Scale - R1 (SIR-R1). Although this finding was inconsistent with Hart,

Kropp and Hare (1988) it was consistent with a recent meta-analysis that demonstrated that the PCL-R has no unique advantage over actuarial tools such as the Statistical Information on Recidivism Scale - R1 (SIR-R1) in terms of predicting general recidivism (Hemphill et al., 1998). Thus, the study's prediction in regards to the relative efficacy of the PCL-R versus the SIR-R1 was upheld. Interestingly, only the SIR-R1 successfully predicted new offences.

As predicted, the Childhood Adolescent Taxon Scale-Self Report Version (CATS-SR) significantly predicted general revocation, albeit not new offences. However, the CATS-SR did not add incrementally to the SIR-R1. Additionally, although the CATS-SR predicted general revocation, correlational and ROC analyses revealed that the PCL-R was a substantially stronger univariate predictor. Consequently, the prediction that the CATS-SR would perform equally well as the PCL-R was not supported. Regardless, further research is required before definitive conclusions or recommendations can be made regarding the relative efficiency of the PCL-R versus the CATS-SR. However, in the interim, it would seem prudent to continue using the PCL-R rather than the CATS-SR for risk assessment purposes.

As expected, prison misconducts significantly predicted general revocation, albeit not new offences. Noteworthy was the finding that the number of prison misconducts was the only static measure that added significant unique variance above the SIR-R1 in terms of predicting general revocation. However, equally important was the finding that this trend did not hold for the prediction of new offences. Nonetheless, the results confirm previous research underscoring the importance of prison misconducts (Nugent, 2000; Palmer, 1997).

It is also necessary to emphasize that prison misconducts was operationalized as a static variable. Future research that conceptualizes this variable as dynamic (i.e., pre-release: has the number of prison misconducts been declining or increasing since admission; post-release: has the number of disciplinary interviews, issued suspension warrants etc been declining or increasing

since release?) could enhance predictive accuracy even further. Additionally, such a concrete measure of behaviour change would be relatively easy to record if standardized time intervals were used (e.g., assess every three months). Such a measure would require little subjective interpretation on the part of decision-makers provided that objective criteria for what constitutes significant change are established apriori.

Time-Dependent Dynamic Measures

As predicted, the change analysis demonstrated that individuals who were not revoked during the study period generally improved with each successive wave of data collection. Although each dynamic variable category generated significant change in the predicted direction, certain individual variables evidenced the greatest level of change while others remained constant. In terms of prediction, certain time-dependent variables were particularly strong predictors of failure, while others demonstrated moderate, weak or no predictive power. A summary of the findings is now presented.

Dynamic Factors: Strong Empirical Support

In sum, seven of the original eighteen time-dependent dynamic factors demonstrated strong predictive power. Not only did they demonstrate significant change during the assessment phase of the study but those changes uniquely predicted general revocation or new criminal offences. They included two variables from the trigger subset: employment and single/unsupportive partner; two variables from the appraisal subset: negative affect and perceived problem level; and lastly, three variables from the response mechanism subset: substance abuse, social support, and expected positive consequences of crime.

Employment and Marital Support.

As predicted, changes in employment difficulties and marital support predicted not only general revocation but also new offences. These findings are consistent with past research that

has reported that changes in the marital/family and the employment domain of the Level of Supervision Inventory (LSI) are associated with recidivism (Andrews & Robinson, 1984). Moreover, Motiuk (1991) also demonstrated that changes in the employment domain of the LSI sub-domain predicted re-offending. This finding is particularly noteworthy given that Motiuk could not link changes in the remaining LSI domains to recidivism, hence underscoring the relative importance of employment in the reintegration process.

From a theoretical perspective, the results are not only consistent with the coping-relapse model of criminal recidivism (Zamble & Quinsey, 1997) but they can also be interpreted under the rubric of developmental paradigms. Briefly, developmental models emphasize how the role of certain risk factors varies as a function of a child's chronological stage of development (Loeber & Stouthamer-Loeber, 1996; Moffitt, 1993; Patterson, 1992; Tolan & Gorman-Smith, 1998). For example, although parenting style is afforded considerable weight during early childhood, the role of school and peers becomes increasingly more important as the child enters adolescence. Extending the same logic to adulthood, employment and marital factors should play a dominant role in the resumption and maintenance of criminal conduct post-adolescence. This developmental perspective might also explain why family of origin support items that were part of the original Problem Survey Checklist did not perform particularly well. However, the possibility of faulty measurement issues should not be overlooked and further research examining the role of support from parental and extended family members is recommended.

The particularly strong role of marital and employment factors in the recidivism process may also be due to the manner in which the constructs were measured. For example, the study operationalized employment as a multi-dimensional construct. Similarly, an attempt was made to broaden the scope of the marital variable to include marital status as well as the quality of marital support. This strategy represents a departure from the majority of past research (see Brown &

Dowden, 1999; Gendreau et al., 1998) that has typically relied upon dichotomous measures of employment (e.g., employed: yes or not) and marital status (e.g., single: yes or no). Also, the predictive power of employment may have been further bolstered by allowing the measurement tool to be driven largely by a number of employment-specific theories such as intrinsic work motivation theory (Warr et al., 1979), and job involvement theory (Kanungo, 1979; 1982). Thus, the employment-related findings in the current study seem to confirm Lazarus's belief that measurement is always best when it springs from theory (1990).

On-going employment research of this nature, most notably, that currently being conducted by Gillis (1998, 2001) should yield promising results. Similarly, future marital/family research that incorporates broader theoretical perspectives from the non-criminological literature such as Olson's (1993) Circumplex Model of Marital and Family Systems should also generate incremental benefits.

Perceived Problem Level and Negative Affect.

As predicted, two measures of cognitive and emotional distress: perceived problem level and negative affect improved significantly among the successes during the course of the assessment phase of the study. Additionally, the observed changes in negative affect significantly and uniquely predicted general revocation and new offences. Although changes in perceived problem level also uniquely predicted general revocation they did not uniquely predict new offences.

The findings that the prospective assessment and re-assessment of perceived problem level and negative affect predicted recidivism is particularly important given that similar results have only been reported in retrospective studies (e.g., Groth & Bimbaum, 1979; Pithers et al., 1988; Zamble & Quinsey, 1997). However, Hodgins, el-Guebaly and Armstrong (1995) did report that the systematic assessment and re-assessment of negative mood predicted substance abuse

relapse. The results also support the continued use of the appraisal component of the coping-relapse model of criminal recidivism, arguably a construct that has been under-emphasized in the criminological literature. Also, from an operational standpoint, these findings are particularly useful in that most front line staff could assess negative affect and perceived problem level if they were trained appropriately. Lastly, the results do lend support to the continued use of cognitive behavioural and relapse prevention programs that seek to enhance the recognition and management of negative emotions.

Substance Abuse.

As predicted, substance abuse was one of the best dynamic measures within the response mechanism subset of the coping relapse model. Not only did this factor change in the predicted direction but the observed change was quite substantial, particularly between non-revoked cases assessed prior to release (34% with substance problems) and non-revoked cases assessed one-month post release (13% with substance problems). More importantly, these changes uniquely predicted general revocation, albeit not new offences. Not only are the results consistent with meta-analytic findings (e.g., Dowden & Brown, in press; Gendreau et al., 1996) but they are also consistent with survey data. For example, American and Canada survey results indicate that at least 70% of incarcerated offenders have experienced substance abuse problems (US Bureau of Statistics, 1983, 1993; Weekes, Fabiano, Porporino, Robinson, & Millson, 1993).

It is necessary to emphasize however that the predictive strength of substance abuse may have been artificially inflated. It is generally assumed that many offenders are revoked for substance abuse violations. Consequently, it could be argued that substance abuse is not really predictive of criminal behaviour, merely that past substance abuse predicts future substance abuse. This hypothesis is bolstered by a meta-analytic review that specifically examined the role of substance abuse factors in the prediction of adult criminal recidivism (Dowden & Brown, in press).

Dowden and Brown reported that larger effect size estimates were linked to studies utilizing broad outcome measures such as general revocation. In contrast, smaller effect size estimates were linked to studies that relied upon narrow definitions of failure such as the commission of new criminal charges or convictions. Although this finding may have in part been attributed to base rate variance, it nonetheless raises the issue of whether or not this study as well as past research has over stated the importance of substance abuse.

In the current study substance abuse did not enter the final multivariate solution for the prediction of new offences. However, it did enter the final general revocation solution. This finding in and of itself appears to lend credence to the above stated hypothesis. However, front line staff would quickly counter, 'by revoking individuals with chronic substance abuse problems we simply prevented the inevitable, the commission of a new crime'. Additionally, an examination of the reasons for revocation in this study seems to counter the tautological hypothesis regarding substance abuse and the prediction of revocation. For example, substance abuse was only cited as the sole reason for revocation in 10% of the cases. While approximately ½ of the revocations were officially linked to criminal offending the remaining 40% were associated with a combination of risk factors that typically included substance abuse, criminal attitudes, and criminal associates. Consequently, it is difficult to tease out the unique contribution of substance abuse to revocation. In sum, there is no doubt that substance abuse plays a leading role in conditional release failure. However, the exact nature of this role, particularly in terms of interactional effects with other dynamic factors requires further study.

Social Support.

As predicted, changes in social support were related not only to general revocation but also to new offences. This finding is particularly important given that social support plays a central role within the coping relapse model of criminal recidivism. Also noteworthy is that social support

retained its predictive power despite the fact that it did not discriminate between criminal and pro-social supporters. However, the density of pro-social supporters was considerable. At each wave of data collection the ratio of pro-social to criminal supporters was at least four to one. These results are consistent with the theory of differential association, a theory originally crafted by Sutherland (1947) and colleagues (Sutherland & Cressey, 1970) and later reformulated by Burgess and Akers (1966). Briefly, the theory emphasizes that criminal behaviour is a learned process and that the strength of the deviant behaviour results directly from the amount, frequency and probability of its reinforcement through criminal others. Consequently, given that the number of pro-social reinforcing agents considerably outweighed the number of criminal reinforcing agents one can assume that there would be fewer opportunities for the reinforcement of deviant behaviour which in turn would naturally reduce the risk of re-offending. Further research examining the role of social support, particularly in the community is required.

It is important to underscore that the social support measure was multidimensional as well as multi-disciplinary in nature. It arose from four different theories from three distinct domains: health psychology (Barrera et al., 1981; Kasl & Cooper, 1987; Procidano, 1992), the psychology of crime literature (Andrews & Bonta, 1998; Zamble & Quinsey, 1997) and the general attitude literature (Ajzen, 1985; 1996; Ajzen & Fishbein, 1980). Thus, once again this demonstrates that theoretical and operational advancements in the psychology of criminal conduct are most likely to occur when mainstream and criminological theories are integrated.

Expected Positive Consequences of Crime.

The expected positive consequences of crime measure was the final time dependent variable to demonstrate strong empirical support. Not only did this variable change over time but the changes uniquely predicted both general revocation and new offences. However, the changes occurred in a counter-intuitive direction. For example, the expected positive outputs of crime (e.g.,

money, thrill, friendship etc.) actually increased during the first three months of release among those cases who managed to remain revocation-free. One would hypothesize that with each successive day spent crime-free that the positive consequences of crime would decrease accordingly, however, this did not occur.

In the absence of additional research, it is difficult to explain this result. However, there are at least, three plausible explanations. First, one could hypothesize that treatment effectiveness played a role. Most treatment programs typically include a module describing the advantages and disadvantages of crime. Perhaps as a result of effective programming, successful cases simply had more insight into the general consequences of crime, whether they were good or bad. However, this hypothesis is highly speculative given that information regarding the sample's treatment history was not recorded.

Perhaps a more feasible explanation can be derived from anecdotal feedback from the research interviewers. The research interviewers, particularly those in the community, reported difficulty in administering and soliciting genuine responses to the positive consequences of crime measure. Although the measure was reliable, the interviewers questioned its validity. Anecdotal impressions revealed that certain offenders became extremely defensive when asked, "If you were engaging in crime what would be the advantage(s) of doing so?". These individuals were also strongly adamant that they were currently living a crime-free lifestyle and that 'crime never pays'. Interestingly, at the same time, other offenders exhibited no signs of discomfort or defensiveness when asked about the positive consequences of crime. Although highly speculative and based entirely on clinical impressions, it is possible that highly defensive individuals were "protesting too much". Thus, a situation was created where crime-free individuals were more likely than their criminally active counterparts to speak freely about the positive consequences of crimes, thereby

skewing the results in a counter-intuitive direction. However, more research is needed to investigate this hypothesis further.

Third, it is possible that individuals living a prosocial lifestyle, presumably working in a conventional job earning a conventional salary are acutely aware of the benefits of crime, namely fast, easy money accompanied by less responsibility. Unlike their criminally active counterparts, the prosocial offenders are perhaps more tuned into the positive outputs of crime as they struggle to adapt to a prosocial lifestyle. Like the preceding two hypotheses, this hypothesis is highly speculative in need of further validation. It is hoped that additional research using structured, standardized measures will shed light on this matter.

Dynamic Factors: Moderate Empirical Support

Three dynamic factors were categorized as moderate predictors: perceived global stress, coping ability, and negative consequences of crime. To receive this classification the variable had to have changed significantly and those changes had to have been univariately predictive of either general revocation or new offences.

Perceived Global Stress.

Although changes in perceived global stress did not account for unique variance in survival time, they were nonetheless, significantly related to both forms of failure when examined individually. Although this finding appears to contradict mainstream criminological perspectives (e.g., Personal-Interpersonal-Community (PIC-R) Perspective, Andrews & Bonta, 1998) that reject personal distress variables it is consistent with the coping-relapse model of criminal recidivism.

It is important to note that negative affect and perceived global stress were highly correlated ($r_s > .70$) at all three waves of data collection. Consequently, one could readily argue that it is difficult to make firm conclusions regarding the relative predictive efficacy of one construct over another. However, in the end, negative affect did add unique variance to the final multivariate

solution while perceived global stress did not. Interestingly, this finding is consistent with Lazarus's (1990) recommendation to move away from measures of perceived global stress in favour of measures of negative emotion.

Coping Ability.

Unlike past research (e.g., Palmer, 1997; Zamble & Quinsey, 1997) coping ability was not among the strongest subset of dynamic predictors, although it did evidence significant change in the predicted direction. Moreover, those changes when examined independently of any other variable predicted general revocation, albeit not new offences. The findings were somewhat unexpected due to the centrality of this construct within the coping-relapse model. However, other dominant theories of criminal behaviour (e.g., Personal-Interpersonal Community Reinforcement (PIC-R) Perspective; Andrews & Bonta, 1998) have not afforded coping ability a central role in understanding the psychology of criminal conduct. Nonetheless, coping still emerged as a moderate predictor, a finding that should not be overlooked given that the majority of cognitive-based treatment programs strive to enhance general problem solving skills and coping efficacy.

Expected Negative Consequences of Crime.

As predicted, individuals who were not revoked during the study period exhibited an increased awareness of the negative consequences associated with crime with each successive wave of data collection. Moreover, when examined individually, the observed changes predicted general revocation, albeit not new offences. Although the magnitude of the change was not strong enough to permit entry into the final multivariate solution, it does demonstrate that criminal attitudes can change in a relatively short period of time if the appropriate measure strategy is adopted.

In contrast to past research (e.g., Andrews & Bonta, 1998; Gendreau et al., 1996; Law, 1998) this particular measure of criminal attitudes did not emerge as a strong predictor of failure. Although it is possible that existing criminal attitude measures cannot be enhanced, it is also

equally plausible that the measure used in the current study simply requires refinement. Recall that the expected negative consequences of crime measure relied on an open-ended interview strategy. This method generated 21 responses deemed to be qualitatively different from one another. Based on these responses, a new standardized measure could be developed that requires each individual to rate the probability and corresponding severity level for each pre-determined consequence.

Dynamic Factors: Weak or No Empirical Support

Eight dynamic factors exhibited either weak or no empirical support. They included four variables from the trigger subset: accommodation, finances, leisure and health, one variable from the appraisal subset: positive affect, and three variables from the response mechanism subset: criminal self-efficacy, supervision compliance, and criminal associates. Variables were placed in this category if any one of the following criteria were met: 1) significant change was absent during the course of the study and the variable was in no way related to conditional release failure, 2) significant change was evident but it did not translate into predictive power, or 3) significant change was absent but re-test information enhanced predictive validity.

Accommodation & Finances.

Not only did the accommodation variable remain constant during the first three months of release but the pre-release value of the variable also did not predict failure. Similarly, although the finance variable evidenced some change, the change did not predict outcome. Given that these results contradict previous meta-analytic findings (e.g., Gates et al., 1998) regarding the predictive merit of both accommodation stability and financial management, it is possible that the measures were either insensitive to change or simply, invalid.

In retrospective, however it may have been unrealistic to expect significant change in accommodation patterns or financial difficulties during the first three months after release. Not only

were the majority of offenders required to reside at a halfway house during the first six months of release but most appeared to have very little money during the early stages of release.

Consequently, it was difficult to conduct valid financial assessments. Additionally, prior to release, offenders were asked whether or not they had thought about a budget, whether or not they currently had debts or were worried about having enough money upon release in order to assess financial problems. Although the questions were clearly 'present-orientated', perhaps such questions, in the absence of a real-life context, have little bearing on success or failure. Also, given that a large number of offenders resided in halfway houses after release, they were automatically precluded from receiving social assistance. As a result, the potential role of this item was artificially constrained. Similarly, the potential role of accommodation instability as measured by 'no fixed address' could not be assessed due to restricted variance. Virtually no offender was classified as 'no fixed address' once in the community.

An alternative explanation may be that the role of financial and accommodation difficulties in the recidivism process is truly time dependent. That is, the variables may not become relevant or active until a sufficiently long enough period of time has passed to allow for stabilization and hence, the ultimate loss of that stability. This reasoning is consistent with arguments advanced by Kraemer et al. (1997) and developmental paradigms. For example, Kraemer et al. reference research that shows that although marriage is a risk factor for suicide among teenage girls it is actually a protective factor among adult women. Similarly, Farrington (2001) argues that criminal association plays a causal role in explaining the onset of criminal behaviour during the pre-teen years but shifts to more of a supportive or maintenance role once a pattern of criminal behaviour has been firmly established.

Leisure.

Contrary to the stated prediction, scores on the leisure scale actually increased over the course of the study among the successes. Thus, it appeared that the successful cases were more likely to experience more problems with leisure activity the longer they remained in the community. However, the observed changes in leisure problems were not related to failure.

There are three plausible explanations for these findings. First, it is possible that leisure activity is simply unrelated to criminal recidivism. However, this explanation seems unlikely in light of past research that has demonstrated that the absence of constructive leisure activity predicts future criminal behaviour (e.g., Gates et al., 1998; Brown, Motiuk, & Serin, 2001). Second, it is possible that leisure activity plays a very small role in the recidivism process when an offender is first released from prison. Between programming requirements and halfway house restrictions (e.g., curfews) several offenders may find themselves with very limited free time. Perhaps, like finances and accommodation, the effect of leisure is truly time dependent it that its role in the recidivism process does not emerge until an offender has managed to spend a significant period of time in the community crime-free.

The third and most plausible explanation once again focuses on measurement problems. Recall that the leisure sub-scale was a component of the newly created Problem Survey Checklist (PSC) and that the PSC was created to intentionally enhance measurement sensitivity to change. Prior to release, questions pertaining specifically to leisure asked what the offender planned to do once released: "How do you plan to spend you time?", "Do you plan to take part in any sporting activities, clubs, hobbies etc?". Thus, concrete behavioural indices of current behaviour were not used. In contrast, questions in the community focused on the present and what the offender was actually doing rather than what he planned to do in the future. For example, during the first month interview the questions shifted to, "In the last month, have you joined a club, participated in sports,

took up a hobby etc?". Thus, it is plausible that the observed changes in the opposite direction were more a function of wishful thinking on the part of the offender prior to release rather than reality. In actuality, the pre-release and post-release leisure sub-scales may have in fact, been two entirely different measures. Thus, making it impossible to make sense of any observed changes. In retrospect, it may have been more advantageous to ask questions about how the offender had been spending his leisure time in prison during the last six months rather than asking him to project how he anticipates he will spend his time on release. However, the relationship between prison leisure time and criminal recidivism has yet to be investigated.

Health.

Mental and physical health problems did not change during the study nor did initial pre-release scores predict conditional release failure. This finding is not only consistent with theory that categorizes physical health problems as non-criminogenic (Andrews & Bonta, 1998). Additionally, it is also consistent with past research that has demonstrated that both physical and mental health problems do not predict criminal recidivism among the general criminal population (Brown et al., 2001; Gates et al., 1998; Robinson, Porporino, & Beale, 1998). However, the global measurement strategy adopted in the current study may have also contributed to the findings.

Recall that the health sub-scale was comprised of two items: has mental health concerns and has physical health concerns. In regards to mental health, raters were instructed to score evidence of current symptoms as problematic. By doing so this may have inadvertently masked any specific changes. For example, although Quinsey et al. (2001) found that psychotic behaviours did change for the worst prior to violent behaviour among a sample of developmentally handicapped individuals, they also reported that psychotic symptoms and poor medication compliance did not change. This finding illustrates the importance of employing measurement strategies that are sufficiently varied and specialized to capture a wide range of potential changes.

Another plausible explanation for the lack of observed change in regards to mental health might have also been due to the composition of the sample. Simply stated, the majority of the sample was not suffering from a psychiatric disorder or illness. Thus, any real changes that were occurring among the minority of individuals with a history of psychiatric problems would have been masked by the overwhelming majority of non-psychiatric cases who would have received a consistent score of 'no problems' throughout the study. Further research regarding the rate of change among psychiatric-related dynamic variables is required. However, to yield the most promising results researchers should concentrate on homogeneous psychiatric samples such as those released from forensic psychiatric institutions or from specialized treatment centers within the criminal justice system.

The majority of reported physical health problems were of a chronic rather than acute nature (e.g., liver or heart disease, back problems, arthritis etc). Thus, in retrospect, it was not surprising that health problems remained constant over the course of the study. However, it does seem reasonable to postulate that the rate of change in physical health problems would be more accelerated among the aged offender population (e.g., over 50) than among the general offender population. Although physical health problems are not criminogenic, this domain still requires attention by correctional organizations.

Positive Affect.

Contrary to the stated prediction, positive affect remained relatively constant over the course of the study, although there was an observable, albeit not statistically significant increase in positive affect between the second and third assessment waves. Additionally, positive affect measured at Time 1 was inversely related to conditional release failure at the univariate level. Thus, individuals who reported higher levels of positive mood prior to release were less likely to recidivate. However, given that positive affect did not change significantly during the assessment

phase of the study one cannot determine whether or not changes in positive affect are or are not related to recidivism. Future research that investigates whether or not positive affect is capable of change is required before firm conclusions can be reached.

Criminal Self-efficacy.

Criminal self-efficacy did not change significantly during the study. Additionally, in contrast to past research (e.g., Nugent, 2000), criminal self-efficacy assessed pre-release did not predict conditional release failure. At this stage it is difficult to explain why criminal self-efficacy predicted recidivism in the Nugent study but not so in the present study. However, it is possible that the extreme group design employed by Nugent (e.g., detained vs. non-detained offenders) may have artificially inflated the predictive power of criminal self-efficacy. Regardless, further research is merited.

In retrospect, it was unrealistic to expect that global changes in attitude would occur naturally over the course of three months in the absence of an active treatment intervention. Recall that the criminal self-efficacy measure was comprised of general attitudinal items such as "If someone I knew wanted a score done, they would probably ask for my help", "I always have a backup plan in case a score goes bad". In hindsight, the items may have been too global to be sensitive enough to capture subtle attitudinal changes. This explanation is consistent with the hypothesis that it may take months or even years for certain dynamic variables to change particularly in the absence of treatment (Hanson & Harris, 2000; Quinsey et al., 1998).

Supervision Compliance.

Contrary to the stated prediction, supervision compliance did not improve among the revocation-free cases during the course of the study. Moreover, the variable did not emerge as a strong predictor of conditional release failure. Although this finding is inconsistent with past research (i.e., Hanson & Harris, 2000) it is possible that the current measurement strategy simply

requires refinement. Alternatively, it is possible that past research has over stated the relative importance of supervision compliance. Recall that Hanson and Harris (2000) employed a retrospective design whereby parole officers were asked retrospectively, to identify the precursors to sexual re-offending. Arguably, due to high visibility, parole officers might unintentionally overstate the importance of supervision compliance variables (e.g., shows up late, argumentative etc). Regardless, future research is not only required but is also recommended.

Criminal Associates.

As predicted, the number of criminal associates diminished among the successes during the course of the study. However, contrary to the stated prediction, the observed changes were not linked to conditional release failure. This finding contradicts previous single-wave prediction outcome studies that have repeatedly found that criminal association is one of the best predictors of criminal recidivism (e.g., Goggin et al., 1998; Gendreau et al., 1998b). However, while one previous multi-wave study did report that changes in criminal association were linked to criminal recidivism (e.g., Andrews & Wormith, 1994) another did not (e.g., Motiuk, 1991).

The absence of significant findings may have been due to the adopted measurement strategy. Recall that a relatively direct approach was adopted. In essence, offenders were directly asked whether or not any of their previously identified supporters were criminally active or had a criminal record. Given that most offenders have a non-association clause as part of their conditional release, it is conceivable that they would be unlikely to directly answer, 'yes, I have criminal associates'.

In contrast, Andrews and Wormith (1984) employed a considerably less direct and consequently, less threatening method. The authors utilized the 'Identification with Criminal Others' sub-scale of the Criminal Sentiments Scale. This subscale does not ask direct questions about current association patterns but rather focuses on global statements such as "I would rather

associate with people that obey the law than those that do not" or "I do not have much in common with people that obey the law than those who do not". The hypothesis that the current study's measure was simply too direct to generate valid responses is further bolstered by the finding that the item, "currently having problems with friends" from the Perceived Problem Index measure predicted criminal recidivism. Future research that seeks to enhance the accurate assessment of dynamic risk factors that are particularly susceptible to deception while an offender is under community supervision is recommended.

Pre-release Factors versus Time Dependent Dynamic Factors

The study demonstrated that the re-assessment of dynamic information in the community enhanced the predictive accuracy of dynamic factors assessed pre-release. Furthermore, most of the dynamic variables did not become strong predictors of recidivism until they were re-assessed in the community. Although these findings are promising for community-based operations they raise questions about how best to enhance pre-release risk assessments, particularly given that the majority of conditionally released offenders fail during the first six months of release (Motiuk, 1999; Motiuk & Brown, 1993; Motiuk & Porporino, 1989). Additionally, there is evidence to suggest that the one-month period post-release is particularly hazardous. Not only did this study demonstrate that ½ of the failures occurred during the first month of release but an Atlantic based research study illustrated that 70% of all conditional release suspensions occur within 30 days of release (Correctional Service of Canada, 2000). Consequently, a significant proportion of offenders will fail before dynamic risk can potentially be re-assessed.

As a result, it is important that pre-release risk assessment strategies not only identify who is most likely to fail over the long term but who is at the greatest risk to re-offend during the early stages of release. Experts have argued that the best method for accomplishing this objective is to incorporate dynamic information. Specifically, static risk should be used to identify long term risk

potential, and dynamic risk should be used to determine when failure is most likely to occur (Quinsey & Walker, 1992).

The re-assessment of dynamic risk in the community is relatively straightforward in comparison to the assessment of dynamic risk prior to release. Post-release re-assessments simply involve re-administering the same measurement protocol at systematic intervals to determine whether or not there has been a noticeable deterioration or improvement since the last assessment. In contrast, two different strategies could be adopted pre-release. First, decision-makers could consider how an offender has changed (e.g., shown improvement, deterioration, stayed the same) since admission across a number of core dynamic variables. This model would not only incorporate traditional indices of treatment gain but would also incorporate additional indicators of behaviour change that occur outside of the treatment milieu (e.g., prison misconducts, how leisure time is spent, have they incurred debts, degree of contact with family and other support systems). Although this model is consistent with certain correctional policies (e.g., Correctional Service of Canada) as well as treatment advocates it requires considerable more research in terms of measurement refinement and in terms of determining to what degree static risk level should be adjusted as a consequence of recent behaviour change. It is also important to note that some have recommended that actuarial estimates of risk should not be re-adjusted as a function of treatment gain given that predictive accuracy may actually be decreased by doing so (e.g., Quinsey et al., 1998).

A second pre-release strategy would be to ignore change altogether. Instead, the focus would be on assessing static risk (e.g., the Statistical Information on Recidivism Scale) and dynamic risk at time of admission. Dynamic risk would be defined as how the offender was functioning prior to arrest on a number of variables that in theory, are potentially treatable such as substance abuse, employment, attitudes, and associates. Measurements most suitable for this

approach include the Level of Service Inventory-Revised (LSI-R; Andrews & Bonta, 1995) as well as CSC's Offender Intake Assessment (OIA) process (Motiuk, 1997; CSC, 1999b). From a theoretical standpoint, this approach is truly not dynamic in that change is not considered. Additionally, such an approach is inconsistent with certain correctional policies (e.g., Correctional Service of Canada) and operational requirements. Nonetheless, recent research clearly demonstrates that instruments such as the LSI-R are superior to static measures such as the PCL-R in terms of predicting both general and violent recidivism (Gendreau et al., in press).

Regardless of the strategy adopted, the approach must ultimately identify the highest risk cases. Moreover, once identified the only way to prevent immediate failure is to intervene at the dynamic level. Traditionally, the Correctional Service of Canada has opted for community-based treatment. However, perhaps in the case of high-risk cases who are particularly resistant to treatment, during the early stages of release 'treatment' should focus on stabilizing the offender's environment. For example, priority should be given to securing and maintaining steady employment and building support networks. Additionally, policy must be adjusted such that the systematic re-assessment of dynamic risk occurs at a much more frequent interval (e.g., once per week immediately following release) for particularly high-risk offenders.

Theoretical Implications

Overall, the study supports retaining the majority of risk factors that the coping relapse model of criminal recidivism hypothesizes as being important in the recidivism process. Particularly noteworthy is the degree of empirical support that emerged for the appraisal domain. Although appraisal variables have played a strategic role in generic relapse prevention theories they have been under emphasized in mainstream criminological theoretical perspectives.

Although the study supports the continued inclusion of certain risk factors comprising the model, the study can neither support nor refute the predicted interactional and bi-directional

relationships among the domains and subsequently, among the variables. For example, in the absence of path analyses and structural equation modeling it is impossible to determine whether or not a true causal pathway exists between environmental triggers and negative appraisals. Consequently, more research is recommended.

The model also postulates that there are at least four categories of risk variables uniquely distinguishable from one another: triggers, appraisals, individual influences and response mechanisms. Empirically, this prediction was supported for the appraisal and the individual influences domains. However, the trigger and response mechanism domains did not emerge empirically as distinct constructs.

At this stage it is too early to recommend that the model be reformulated. However, future research should investigate whether or not it would be prudent to consider modifying the concepts of 'triggers' and 'response mechanisms' in the recidivism process. Perhaps the distinction between these two constructs is unnecessary for offenders who have not yet desisted or achieved a certain level of lifestyle stability. For these individuals the process has either already started or never really ended, thus rendering the concept of a 'trigger' irrelevant. Theoretically this would indicate that variables currently classified as 'triggers' would have to be re-classified perhaps as 'response mechanisms'. Once an offender has achieved a certain level of lifestyle stability then perhaps the concept of triggers could be re-introduced. Operationally, this would mean that during the early stages of release, the goal of community supervision would be to stabilize the offender's lifestyle. Once this objective was met, supervision strategies would be re-directed and focused on identifying early warning signs indicative of destabilization.

Another possible change to the model involves reformulating the definition of a trigger. Currently, the model postulates that triggers can be highly labile, emerging over the course of a few days, hours, or even minutes. Although this concept is theoretically rich, it is operationally

impractical. Although triggers that develop over the course of a day or two may be visible and consequently manageable by a correctional agency, triggers that emerge in the span of a few hours or minutes will undoubtedly go undetected. Consequently, perhaps it would be prudent to remove these types of the triggers from the model. Instead greater emphasis could be placed on identifying individuals who have a propensity to respond to environmental cues in a hostile, maladaptive or unpredictable manner. Thus, the 'individual influences' component of the model could be enriched for example, by incorporating elements from recent research conducted by Bettman (1998) regarding the role of social cognition and violence.

Empirical validation of the dynamic risk factor: Rethinking the litmus test

Establishing a gold standard for the statistical analysis of change data in relation to recidivism is one of the most formidable obstacles facing correctional research. As the literature review demonstrated, there appears to be no consensus in terms of what constitutes the most appropriate method for analyzing change data and recidivism. However, two common approaches involve creating artificial change variables or using hierarchical regression approaches (i.e., do re-test scores add incremental variance in explained outcome above pre-test scores). These approaches have likely been adopted because they are literally consistent with earlier definitions that describe dynamic risk factors as, '....ones in which assessments of change (or re-tests) possess a level of predictive criterion validity that is incremental to the criterion validity of pretests (p. 31, Andrews et al., 1990). Moreover, these methods, specifically hierarchical regression can be readily applied to two-wave panel designs. Recall that two-wave panel designs have dominated the majority of previous multi-wave research.

In contrast, this study took the position that the empirical litmus test or gold standard for testing whether or not a predicted dynamic risk factor is truly dynamic requires three types of statistical analyses. These include standard within-subject change analyses, Cox regression

survival analysis with time-invariant and time-dependent covariates and Receiver Operator Characteristic (ROC) analysis. Furthermore, a risk factor was interpreted as dynamic if it changed significantly over time as evidenced by the within-subject change results and, if by incorporating information about how the variable changed over time actually increased predictive accuracy. This later criterion was demonstrated empirically through Cox regression survival analysis and ROC analysis.

Although this approach may seem inconsistent with traditional definitions and methods it is nonetheless, consistent with modern day definitions of the dynamic risk factor. Recall that current definitions state that in order for a risk factor to be deemed dynamic it must be shown that predictive accuracy is improved by incorporating information about how the factor changes over time (Andrews & Bonta, 1998; Kraemer et al., 1997). The Cox regression approach also has several additional advantages. Not only can it incorporate an indefinite number of assessment waves but also it readily prevents sample censoring by incorporating information about cases that fail before the first scheduled re-assessment. Lastly, within-subject analyses and Cox regression procedures can analyze change without having to artificially tinker with the original scale of a variable. It is hoped that as prospective, multi-wave prediction studies become more prevalent so will the use and general acceptance of Cox regression survival analysis with time dependent covariates as the change analysis of choice.

Operational Implications

Several operational implications have already been discussed. However, it is important to highlight four additional areas: 1) the role of employment and successful reintegration; 2) the significance of risk factors that spike during the first month of release but later decline, 3) the value of self-report data and; 4) the need for innocuous assessment strategies.

A growing body of research has demonstrated that employment is a risk factor for future criminal activity (e.g., Gendreau et al., 1996; Gendreau et al., 1998). Moreover, this study firmly established that employment is also a strong dynamic risk factor. Nonetheless, a significant number of front line workers continue to reject the role that employment plays in the recidivism process (e.g., Brown et al., 2001). For example, immediately upon release there is considerable pressure to continue programming in the community usually at the expense of securing and maintaining steady employment. The results suggest however, that prioritizing treatment over employment opportunities may not always be the best course of action. Striking a balance between the competing interests of community-based programming and employment will undoubtedly continue to remain a challenge for correctional organizations.

The study also revealed that successful cases are likely to experience an elevation in certain risk factors during the first month of release. Specifically, employment problems, financial difficulties, marital support, negative affect, and perceived problem level spiked during the first month of release but later declined by the third month. These results suggest that the first month of release could be viewed as an adjustment phase whereby a slight increase in dynamic risk level is to be expected and not necessarily indicative of impending failure. However, it is also important to emphasize that a large majority of offenders who do demonstrate an increase in dynamic risk level during the first month of release will nonetheless, fail (CSC, 2000). Consequently, devising methods for differentiating genuine, imminent risk cases from false positives particularly during the first month of release remains a challenge for researchers and practitioners alike.

The study also demonstrated that self-report information can play a valuable role in discriminating between successes and failures. Particularly of interest are variables derived exclusively from an offender's self perception such as perceived level of support, perceived problem level and perceived global stress. Consequently, future assessment procedures should

consider affording more weight to self-reported information of this nature. However, this may be difficult given that anecdotal evidence suggests that certain front line workers (e.g., federal parole officers) are resistant to accepting self-report data. Moreover, some policy requirements (e.g., CSC) underscore the importance of obtaining collateral information, which in turn may inadvertently diminish the value placed in self-report data.

Determining whether or not an offender is actually drinking on a regular basis or associating with known criminals in high-risk environments (e.g., bars, parties) is also difficult to assess reliably in a community setting. Most offenders are unlikely to respond candidly to subject areas that are directly linked to conditional release violations (e.g., substance abuse and criminal association). Moreover, collateral sources do not always know how an offender is spending all of his/her time. Further, even if they do know they may not be willing to share this information with the system. Consequently, in addition to monitoring traditional dynamic risk factors such as substance abuse and criminal associates monitoring seemingly innocuous domains like perceived stress and perceived problem level via self-report methods may help warn front line staff such as parole officers that a given offender is starting to deteriorate.

Study Limitations

Although the study generated encouraging results there were various limitations such as attrition, missing data, premature covariates, reliance on new and unvalidated measures, potential learning effects, and the absence of cross validation. First, attrition was particularly troublesome during the community phase of the study. Approximately, 20% of the sample refused to take part in the study once released into the community. Moreover, a greater percentage of the sample (about 35%) refused to complete the self-report questions administered in the community. An analysis of the data indicated that overall, the study dropouts did not differ substantially from the study completers on a number of key variables. However, interestingly, by the third wave of data

collection, study dropouts scored significantly lower on the Psychopathy Checklist than the study completers. At first, this finding seemed somewhat counterintuitive given that one would expect that higher risk cases would be more likely to drop out of the study. However, in retrospect it made sense given that the higher risk cases were easier to track down in the community given that they had more frequent contact with their parole officers. Additionally, the higher risk cases were more likely to be unemployed. As a result, scheduling difficulties were minimized.

Most statistical experts (e.g., Tabachnick & Fidell, 1989) indicate that missing data can be readily addressed provided that less than 10% of the data are missing. In the current study however, missing data exceeded 10%. Moreover, the occurrence of missing data was particularly high (e.g., approximately 40%) for self-report measures administered during third community assessment wave. Instead of choosing to drop the community phase of the study entirely, a decision was made to substitute the mean for missing data, thereby permitting the analysis of change. A comparison of the analysis with and without mean substitution revealed two key findings. First, the same variables emerged as significant predictors in both the univariate and multivariate analyses, regardless of whether or not mean substitution was employed. Second, mean substitution actually deflated the magnitude of both the univariate and multivariate effect sizes. Thus, while missing data was troublesome, the manner in which it was addressed did not alter the study findings. Nonetheless, future research that minimizes the occurrence of missing data is warranted.

The premature covariate is one of the most problematic limitations of multi-wave longitudinal research. Essentially, the premature covariate is a phenomenon that emerges when the dynamic variable of interest changes or exerts its influence on the outcome before the researcher has an opportunity to measure it (Menard, 1991; Plewis, 1985). This issue is particularly problematic when one expects that dynamic variables will change rapidly. For example, a problem

is created if it predicted that a given variable will change daily but re-assessment waves are scheduled to occur at monthly intervals. Although this limitation posed a real threat to the current study and may have accounted for some of the nonsignificant findings, it is necessary to emphasize that the study was still able to report significant change across a number of key variables. Moreover, change was linked to conditional release failure. Nonetheless, the study would have benefited from additional assessment waves. In retrospect, it would have been advantageous to have conducted weekly assessments during the first month of release. However, this would have been difficult to implement due to operational and fiscal constraints.

Another limitation of the study was the use of a number of new, unstandardized measures. Although these measures were strongly grounded in theory and based on past research they nonetheless were empirically untested at the beginning of the study. As a consequence, it was difficult to ascertain whether or not the absence of significant findings for certain variables (e.g., leisure) was genuine or simply a function of faulty measurement.

Repeated measures designs are invariably susceptible to carry-over and learning effects. Thus, it is possible that some of the observed changes may have in part been due to increased familiarity with the test questions, although anecdotal evidence suggests that the majority of the men in the study did not recall much detail about previous assessment interviews. Additionally, it is important to recognize that carry-over effects in self-report measures are just as likely to exist in a real world setting. Consequently, if carry-over effects did play a role, the internal validity of the study may have been threatened. However, external validity would not have been compromised.

Like all prediction research the study requires cross validation. Although the results were impressive, the prediction models require validation on a new sample, particularly given that some have argued that beta weights will not achieve stability until a ratio of 15/20 cases to 1 variable is achieved (Dawes, 1979). Once again future research involving different samples is recommended.

Directions for Future Research

The current study provides several avenues for future research. First and foremost, are those related to the refinement of the measures. Although the study incorporated several new measures that were heavily grounded in theory, certain measures in their current form would be too cumbersome for use in an operational setting. The Social Support Scheme (SSS) underscores this issue most accurately. On a positive note, this measure was heavily grounded in theory, sensitive to change and predictive of conditional release failure. Unfortunately, the theoretical model that guided the SSS necessitated somewhat complex scoring procedures that the average front line worker would undoubtedly find too time consuming. Fortunately, additional research resulting in a more streamlined yet equally predictive instrument would readily remedy the problem.

At first glance it may seem imprudent to water-down a theoretically rich measure in order to enhance its practical utility, particularly, if there is a real risk of diminishing its empirical merit. However, the results pertaining to substance abuse suggest that this worry is unwarranted. Recall that the original substance abuse measure was comprised of six, highly specific items each rated on a three-point scale. In reality, it was impossible to obtain the level of specificity (i.e., is this person a recreational, binge or chronic drug user?) called for by the original measure. Given that most offenders have a condition to abstain from drugs and alcohol it was virtually impossible to obtain open and honest answers about the degree of substance abuse problems. Not only were answers vague but it was extremely difficult to determine the severity of the problem. As a consequence, due to restricted variance, a measure that originally ranged from 0 to 12 was collapsed into a dichotomous yes/no variable: yes - any evidence of a problem, no - absolutely no evidence of a problem. Most important, however was that this simple, yes/no variable was not only sensitive to change but also emerged as one of the strongest predictors of general revocation.

Consequently, this demonstrates that detailed measurement strategies are not always needed to achieve the desired outcome.

Another avenue for future research involves investigating whether or not it would be beneficial to broaden the goal of dynamic assessment. Currently, dynamic assessment protocols aim to identify whether or not dynamic risk factors are present and to what extent. On the surface this seems like a relatively straightforward task. However, during the course of the study several parole officers lamented that it is extremely difficult to determine whether or not an offender is actually associating with criminal others or is currently using drugs or alcohol. Clinical impressions obtained retrospectively from the community researchers indicated however, that there were visible cues that in hindsight, seemed to indicate that a given dynamic risk factor (e.g., substance abuse) was actually active. For example, the researchers indicated that in retrospect, the following cues were reliable warning signs that the offender was about to experience or was in the middle of a serious relapse: 1) inconclusive urinalysis results perhaps caused by flushing (i.e., consuming an inordinate amount of water in order to mask the presence of alcohol/drugs); 2) half way house staff reporting that they noticed the offender had alcohol on his breath, 3) offenders who were overly curious during the research interview about the consequences of a positive urinalysis result and, 4) if an offender admitted to having an occasional drink. Future research that develops valid methods for detecting when previously dormant dynamic factors actually become active, particularly while the offender is under community supervision should have an enormous impact on a front line worker's ability to successfully manage risk in the community.

Future research should also seek to refine measurement sensitivity to change. Although the majority of the measures used in the study demonstrated change, some did not. Although it is possible that these variables really did not change during the course of the study it is also possible that the measures were simply not sensitive to change.

It also became evident during the course of the study that the full range of change experienced by the men in the study was not fully reflected in some of the measures. For example, employment status was rated on a three-point scale: unemployed; employed part time and employed full time. Initially this approach seemed reasonable. However, after having used the measure, it became apparent that offenders experienced considerably more variability in terms of employment stability than the measure could capture. For example, although some offenders worked sporadically either on contract (working one day, but not the next) others reported performing odd jobs for friends (e.g., fixing a car), while others reported more stable forms of part time work (e.g., 15 hours per week). Additionally, by the last assessment wave some offenders had been working full time at the same job since release while others had been working full time throughout the course of the study but had changed jobs on a number of occasions. As a consequence, future research should examine how to further enhance measurement sensitivity to change.

The issue of how best to assess real-world dynamic factors prior to release from a secure environment requires additional research. Future studies should investigate methods for reliably assessing behaviour in prison that best approximates real life situations (e.g., how does the offender spend leisure time in prison? Has he acquired any debts while inside? How has his employment performance been during incarceration?). An alternative route would be to pursue objective vignette assessment strategies.

Future research should also examine whether or not there are differential predictors of revocation and recidivism. This is particularly important in order to determine whether the predictive potency of certain dynamic factors has been overstated due to the tautological nature of certain research designs. Also, identifying different precursors for different types of reoffending (i.e., general, violent, sexual) is needed. Additionally, examining the role of moderator variables such as

psychopathy and risk level is warranted. For example, determining whether or not psychopaths are triggered by different factors than non-psychopaths is one promising avenue for future research. Also, determining whether or not low- and high- risk offenders exhibit different warning signs prior to failure requires investigation.

Future research should also explore whether or not the relevance of certain dynamic factors does in fact change as a function of time and population as others have argued (e.g., Farrington, 2001; Kraemer et al., 1997). For example, determining what dynamic factors are most relevant during the early phases of release versus those that do not become important until the offender's life has stabilized would yield substantial operational gains.

In terms of future research designs, the ideal study should combine a controlled treatment outcome study with a systematic multi-wave follow-up component. By doing so, one could determine whether or not recent findings that show that treatment gain is not related to recidivism (Quinsey et al., 1998) are attributable more so to the erosion of treatment effects over time rather than the inability of treatment to have a significant impact on recidivism.

Impression management is the final area for future research. Like previous studies (e.g., Bettman, 1998) this study found that impression management was a strong predictor of conditional release failure. However, the direction of the relationship was counterintuitive. Specifically, individuals who were more likely to manage their impressions were less likely to fail. One possible explanation is that the Balanced Inventory of Desirable Response (BIDR) instrument measures content areas that are relevant and meaningful for mainstream society but not so for the criminal population. For example, one wonders whether or not a typical offender would worry about making himself or herself look good in areas pertaining to voting, swearing and telling minor lies when he/she has probably been convicted of serious offences such as theft, assault, rape, or robbery. Perhaps the BIDR is simply good at identifying low risk offenders who by definition more closely

resemble the average law-abiding citizen and as a consequent, do care about such things as voting, lying and swearing. Regardless, given that the BIDR is routinely used in psychological risk assessments, future research involving criminal populations is recommended.

Chapter 6: Conclusion

In sum, the study supports the position that the systematic re-assessment of dynamic risk can enhance predictive accuracy. Specifically, the study indicated that the most promising dynamic factors include employment, marital support, perceived problem level, negative affect, substance abuse, social support, expected positive consequences of crime, and to a lesser extent, coping ability, perceive stress level and expected negative consequences of crime. In contrast, less promising targets include leisure activities, accommodations, finances, health, positive affect, supervision compliance, and criminal self-efficacy. However, the greatest predictive accuracy can be achieved when both static and dynamic factors are considered. Also noteworthy is that the Statistical Information on Recidivism Scale (SIR-R1) remains one of the strongest static measures. As a result, in regards to the prediction of general recidivism, the Correctional Service of Canada need not worry about formally adopting other risk scales that are potentially more controversial such as the Hare Revised Psychopathy Checklist. However, including information pertaining to prison misconducts could enhance the predictive accuracy of the SIR-R1 further. Lastly, existing dynamic risk measures can be improved by incorporating factors derived from theoretical perspectives such as the coping relapse model that emphasize the role of proximal cues in the recidivism process. However, considerable more research is required, specifically, prospective studies with multiple assessment waves that focus on enhancing measurement sensitivity to change.

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APPENDICES

APPENDIX A: INFORMATION AND CONSENT FORM

RELEASE FOLLOW-UP RESEARCH PROJECT

Information Form

What is the study about?

This study is about talking to offenders in order to get their opinions on what works for them and what does not. As you know, some offenders who are released from federal institutions end up returning for different reasons. We are interested in learning from you what factors make some people successful in staying out in the community, and living a crime-free lifestyle once released. If you agree to participate, we would like to talk to you about:

- Who you are (general background information-e.g. where you grew up, where you went to school, who raised you etc.)
- What brought you to the institution, why you're here (criminal history)
- Why you think you became involved in crime
- What has changed for you and about you while you have been in the institution
- What factors you think will help you stay out and crime-free, once you've been released
- Your release plans (e.g. future job plans, living arrangements, goals, relationships etc)

Once you've been released into the community, we would like to talk to you about what's going right and what's not. We also want to know how you are dealing with things that aren't going the right way. This will help us determine what keeps offenders from returning to prison. It is hoped that this kind of information will eventually help keep offenders in the community once they have been released.

What will we ask you to do?

Each person who takes part in the study will be interviewed four times over 6 months. The first interview will take place in your institution before you are released. The other three interviews will take place about 1 month after release, 3 months after release, and 6 months after release at your supervising parole office or halfway house. If your conditional release is revoked or if you are charged with a new crime before we have done all the interviews, we will skip the remaining interviews.

The first interview will last 2 to 3 hours or so. It will look at things like your personal and criminal history, your feelings, and plans for release. The community interviews will be much shorter, about an hour. The questions will ask about your life at the time, for example your living arrangements, any problems you are having on the outside, how you're dealing with those problems, and so forth. We will also have some questionnaires for you to complete each time we see you. These should take no more than a few minutes. We would also like to get some information about your history as well as your current progress from your institutional and parole files. Also with your permission, we would like to talk to your parole officer about your progress once you have been released.

How did you get picked?

You were chosen because you will be released soon. We try to speak to every person being released, who is going to the Ottawa or Toronto area. We have not picked you because of anything in your file or your history.

Who will hear what you tell us?

Whatever you tell us will be kept strictly confidential. All information will be coded in our reports so that no person's answers can be identified. This confidentiality is guaranteed by the Canadian Human Rights Act, and we will also give our personal guarantee that it is respected. Also, the data will be used ONLY for research purposes. Whether or not you agree to participate will *not* count for or against you with CSC. It is also important to understand that we are only collecting information, so if you have any problems now, we cannot change anything for you. However, if you do agree to take part we will try our best to listen to what you have to say.

However, you should know there are circumstances when we can *not* guarantee confidentiality. If you tell us anything that threatens the good order or security of the institution, parole office or halfway house or if you give us information about the abuse of a child, or if you give us detailed information about a *future* crime that might cause serious harm to anyone, including yourself, we would have to report it. You should remember this when you answer our questions.

Who is doing the study?

This study is being carried out by Shelley Brown (613-995-1986), a Doctoral candidate from the Department of Psychology at Queen's University under the direct supervision of Professor Edward Zamble (613-533-2892) and Dr. Ralph Serin, Research Division, CSC (613-536-4169). Shelley is also now working for the Research Division of CSC which is paying the costs of the study. Portions of the pre-release data will also be used by Michelle St. Amand (613-533-7203), also a Doctoral candidate from the Department of Psychology, Queen's University working under the direct supervision of Professor Edward Zamble. If you have any questions or complaints about the study please feel free to contact any one of us. If you are still not satisfied you should call or write the Acting Head of the Psychology Department at Queen's University, Dr. J. Knox (613-533-2492) or Dr. Susan Lederman (613-533-2878), Chair of the Psychology Ethics Committee.

Before we ask you to agree to take part in this study, we will do our best to answer any questions you may have. Do you have any questions?

APPENDIX B: RECIDIVISM CODING MANUAL

RECIDIVISM CODING MANUAL

Research IDNO _____

Date _____

1. Release Date (dd/mm/yyyy): _____
2. Suspension issued during follow-up period:
 0. no
 1. yes
3. Date first suspension issued (dd/mm/yyyy): _____
4. Reason first suspension was issued:
 1. violation of special conditions, specify, _____
 2. committed a new crime (arrested, charged or convicted)
 3. to prevent a new crime from occurring
 8. not applicable
 9. not known
 10. other, specify, _____
5. Date first suspension withdrawn (dd/mm/yyyy): _____
[CSC may withdraw a suspension warrant before the offender is apprehended by the police]
6. Date first suspension executed (dd/mm/yyyy): _____
[a suspension warrant is considered executed once the offender has been apprehended by the police]
7. Date first suspension canceled (dd/mm/yyyy): _____
[CSC or the NPB may cancel a suspension warrant after the offender has been apprehended]
8. Date second suspension issued (dd/mm/yyyy): _____
9. Reason second suspension was issued:
 1. violation of special conditions, specify, _____
 2. committed a new crime (arrested, charged or convicted)
 3. to prevent a new crime from occurring
 8. not applicable
 9. not known
 10. other, specify, _____

10. Date second suspension withdrawn (dd/mm/yyyy): _____
[CSC may withdraw a suspension warrant before the offender is apprehended by the police]
11. Date second suspension executed (dd/mm/yyyy): _____
[a suspension warrant is considered executed once the offender has been apprehended by the police]
12. Date second suspension canceled (dd/mm/yyyy): _____
[CSC or the NPB may cancel a suspension warrant after the offender has been apprehended]
13. Date third suspension issued (dd/mm/yyyy): _____
14. Reason third suspension was issued:
1. violation of special conditions, specify, _____
 2. committed a new crime (arrested, charged or convicted)
 3. to prevent a new crime from occurring
 8. not applicable
 9. not known
 10. other, specify, _____
15. Date third suspension withdrawn (dd/mm/yyyy): _____
[CSC may withdraw a suspension warrant before the offender is apprehended by the police]
16. Date third suspension executed (dd/mm/yyyy): _____
[a suspension warrant is considered executed once the offender has been apprehended by the police]
17. Date third suspension canceled (dd/mm/yyyy): _____
[CSC or the NPB may cancel a suspension warrant after the offender has been apprehended]
18. Date fourth suspension issued (dd/mm/yyyy): _____
19. Reason fourth suspension was issued:
1. violation of special conditions, specify, _____
 2. committed a new crime (arrested, charged or convicted)
 3. to prevent a new crime from occurring
 8. not applicable
 9. not known
 10. other, specify, _____

20. Date fourth suspension withdrawn (dd/mm/yyyy): _____
[CSC may withdraw a suspension warrant before the offender is apprehended by the police]
21. Date fourth suspension executed (dd/mm/yyyy): _____
[a suspension warrant is considered executed once the offender has been apprehended by the police]
22. Date fourth suspension canceled (dd/mm/yyyy): _____
[CSC or the NPB may cancel a suspension warrant after the offender has been apprehended]
23. Total number of suspensions issued [enter 0 for none]: _____
24. Total number of suspensions executed [enter 0 for none]: _____
25. Revoked during follow-up period?
- 0. no
 - 1. yes
26. Revocation date (dd/mm/yyyy) ____/____/____
27. Reason for revocation:
- 1. violation of special conditions, specify, _____
 - 2. committed a new crime (arrested, charged or convicted)
 - 3. to prevent a new crime from occurring
 - 8. not applicable
 - 9. not known
 - 10. other, specify, _____
28. Charged with a new offence during follow-up period
- 0. no
 - 1. yes
29. Date of first charge (dd/mm/yyyy) ____/____/____
30. Charged with a new violent offence during follow-up period
- 0. no
 - 1. yes
31. Date of first violent charge (dd/mm/yyyy) ____/____/____

32. Criminal charge type:

[enter the number of charges for each type of offense]

Major

- _____ a. Murder: (first, second and attempted)
- _____ b. Kidnapping/forcible confinement, abduction or hostage taking, hijacking, terrorism
- _____ c. Armed robbery with extreme violence, or organized
- _____ d. Assault (with or without a weapon) causing serious injury, risk of death or disfigurement/mutilation

Serious

- _____ e. Armed robbery or attempted robbery with violence
- _____ f. Manslaughter
- _____ g. Sexual Assault (rape, attempted sexual assault, aggravated sexual assault) on an adult 15 or over
- _____ h. Sexual Assault (rape, incest, buggery, sexual assault) on victim under age 14
- _____ i. Assault causing bodily harm (CBH), with or without a weapon
- _____ j. Other serious violent offense (arson, escape with violence, participation in a riot, use of firearm during commission of an offense)
- _____ k. Other serious non-violent offense (conspiracy to traffic or import drugs/firearms, extortion, escape from medium or above without violence, prison breach)

Moderate

- _____ l. Drug offenses (possession of dangerous drug, trafficking soft drugs, conspiracy)
- _____ m. Fraud, forgery, false pretense, bribery, possession of instruments for forgery
- _____ n. Property offense, (forced entry, B&E, attempted B&E, auto, stolen property, theft over)
- _____ o. Non-violent sex offenses (Gross indecency, sex with a minor, voyeurism)
- _____ p. Robbery without a weapon, attempted robbery without a weapon
- _____ q. Other moderate non-violent offenses (obstruction of justice, perjury, resist arrest, escape minimum or below without violence)
- _____ r. Other moderate violent offenses (obstruct peace officer, possession of weapon to commit indictable offense, concealed weapon, assault with no injury, criminal negligence causing death or resulting in bodily harm, dangerous driving)

Minor

- _____ s. Breach of probation/parole or MS/SR, failure to appear/comply/attend, unlawfully at large
- _____ t. Possession (stolen property under, theft under, soft drugs, forged documents, weapons)
- _____ u. Other minor non-violent offenses (driving offenses, public mischief, fail to remain at the scene, criminal negligence not resulting in bodily harm)

- v. Other minor violent offenses (common assault)
- w. Minor driving offenses (driving while impaired, driving over .08, driving under suspension, take auto without consent, careless driving etc)
- x. Utter death threats

33. Convicted for a new offence during follow-up period

- 0. no
- 1. yes

34. Date of first conviction (dd/mm/yyyy) ____/____/____

35. Convicted for a new violent offence during follow-up period

- 0. no
- 1. yes

36. Date of first violent conviction (dd/mm/yyyy) ____/____/____

37. Criminal conviction type:

[enter the number of charges for each type of offense]

Major

- a. Murder: (first, second and attempted)
- b. Kidnapping/forcible confinement, abduction or hostage taking, hijacking, terrorism
- c. Armed robbery with extreme violence, or organized
- d. Assault (with or without a weapon) causing serious injury, risk of death or disfigurement/mutilation

Serious

- e. Armed robbery or attempted robbery with violence
- f. Manslaughter
- g. Sexual Assault (rape, attempted sexual assault, aggravated sexual assault) on an adult 15 or over
- h. Sexual Assault (rape, incest, buggery, sexual assault) on victim under age 14
- i. Assault causing bodily harm (CBH), with or without a weapon
- j. Other serious violent offense (arson, escape with violence, participation in a riot, use of firearm during commission of an offense)
- k. Other serious non-violent offense (conspiracy to traffic or import drugs/firearms, extortion, escape from medium or above without violence, prison breach)

Moderate

- l. Drug offenses (possession of dangerous drug, trafficking soft drugs, conspiracy)
- m. Fraud, forgery, false pretense, bribery, possession of instruments for

- _____ n. Property offense, (forced entry, B&E, attempted B&E, auto, stolen property, theft over)
- _____ o. Non-violent sex offenses (Gross indecency, sex with a minor, voyeurism)
- _____ p. Robbery without a weapon, attempted robbery without a weapon
- _____ q. Other moderate non-violent offenses (obstruction of justice, perjury, resist arrest, escape minimum or below without violence)
- _____ r. Other moderate violent offenses (obstruct peace officer, possession of weapon to commit indictable offense, concealed weapon, assault with no injury, criminal negligence causing death or resulting in bodily harm, dangerous driving)

Minor

- _____ s. Breach of probation/parole or MS/SR, failure to appear/comply/attend, unlawfully at large
- _____ t. Possession (stolen property under, theft under, soft drugs, forged documents, weapons)
- _____ u. Other minor non-violent offenses (driving offenses, public mischief, fail to remain at the scene, criminal negligence not resulting in bodily harm)
- _____ v. Other minor violent offenses (common assault)
- _____ w. Minor driving offenses (driving while impaired, driving over .08, driving under suspension, take auto without consent, careless driving etc)
- _____ x. Utter death threats

38. Date first offence actually occurred (dd/mm/yyyy) ____/____/____
[may or may not correspond to the charge date]

39. Date first violent offence actually occurred (dd/mm/yyyy) ____/____/____
[may or may not correspond to the charge date]

APPENDIX C: STATISTICAL INFORMATION ON RECIDIVISM SCALE-R1 (SIR-R1)

STATISTICAL INFORMATION ON RECIDIVISM SCALE-R1 (SIR-R1)
(Nuffield, 1982; Correctional Service of Canada, 1996)

Current Offense:	
Incest, sexual intercourse with the underage, seduction, gross indecency	+4
Homicide: any act resulting in death, except by automobile	+3
Narcotics offenses (Food & Drug Act/Narcotic Control Acts)	+3
Unarmed robbery (armed robbery has 0 score)	+2
Dangerous driving, criminal negligence while operating a motor vehicle, arson, kidnapping, hijacking, abduction, obstructing a peace officer	+2
Receiving or possession of stolen goods	-1
Theft	-1
Break and enter, forcible entry, unlawfully in dwelling, illegal possession of firearm, carrying concealed weapon	-2
Escape	-4
Age at Admission	
40 or over	+2
20 or under	-2
Previous Incarceration	
Has never been in a penal institution before	+4
Has served a sentence in a penal institution on 3 or 4 previous occasions	-1
Has served a sentence in a penal institution on 5 or more previous occasions	-2
Revocation or forfeiture	
Has at any time been revoked or has forfeited day parole, full parole, or statutory release	-2
Act of escape	
Has escaped or attempted to escape on 1 or more occasions	-3
Security Classification	
Is in maximum security at time of parole hearing	-1
Age at first adult conviction	
Was 50 or over at time of first adult conviction	+7
Was between 41 and 49 (inclusive) at time of first adult conviction	+6
Was between 31 and 40 (inclusive) at time of first adult conviction	+3
Was between 23 and 30 (inclusive) at time of first adult conviction	+2
Was 18 or under of first adult conviction	-2
Previous convictions for assault	
Has 1 previous conviction	-2
Has 2 or more convictions for assault	-3
Marital status at most recent admission	
Was married or had common-law spouse	+1
Interval at risk since last offense	
If an offender has spent 24 months or more in the community between the current conviction or reincarceration, and his last prior conviction or last release	+2
If an offender has spend less than 6 months in the community between the current conviction or reincarceration and his last prior conviction or last release	-1

Table continued

Number of dependents at most recent admission Had 3 or more dependents	+2
Current Total Aggregate Sentence Aggregate sentence is 5 years and up to 6 years	+3
Aggregate sentence is 6 years or more	+2
Previous Convictions for sexual offenses Has 2 or more previous convictions for any of rape, or attempted rape, or indecent assault, or sexual assault, or aggravated sexual assault	-4
Previous Convictions for break and enter Has no previous convictions for break and enter, or being unlawfully in dwelling house	+2
Has 1 or 2 previous convictions for break and enter, or being unlawfully in dwelling house	-2
Has 3 or 4 previous convictions for break and enter, or being unlawfully in dwelling house	-3
Has 5 or more previous convictions for break and enter, or being unlawfully in dwelling house	-6
Employment status at arrest Was employed at time of arrest for current offense(s)	+1

Note: Items should be scored 0 if none of the stated values apply.	Success Rate for Groups of Offenders Scoring: +6 to +27: 4 out every 5 offenders will not commit an indictable offense after release	Total Score: _____
	+1 to +5: 2 out of every 3 offenders will not commit an indictable offense after release	
	-4 to 0: 1 out of every 2 offenders will not commit an indictable offense after release	
	-8 to -5: 2 out of every 5 offenders will not commit an indictable offense after release	
	-30 to -9: 1 out of every 3 offenders will not commit an indictable offense after release	

Note. In 1996, CSC implemented 2 amendments to the SIR. First, 'has been convicted of escape or attempted escape on one or more previous occasions' was changed to 'has escaped or attempted to escape on 1 or more occasions'. Similarly, 'had only 1 previous conviction for any rape or attempted rape/indecent assault' was changed to 'has 2 or more previous convictions for any rape, attempted rape, indecent assault, sexual assault, or aggravated sexual assault'. The revised SIR is now called the SIR-R1.

APPENDIX D: HARE PSYCHOPATHY CHECKLIST-REVISED (PCL-R) ITEMS

HARE PSYCHOPATHY CHECKLIST-REVISED (PCL-R)
(Hare, 1991)

PCL-R items	Factor
1. Glibness/superficial charm	1
2. Grandiose sense of self-worth	1
3. Need for stimulation	2
4. Pathological lying	1
5. Conning/manipulative	1
6. Lack of remorse or guilt	1
7. Shallow affect	1
8. Callous/lack of empathy	1
9. Parasitic lifestyle	2
10. Poor behavioural controls	2
11. Promiscuous sexual behaviour	Neither
12. Early behaviour problems	2
13. Lack of realistic goals	2
14. Impulsivity	2
15. Irresponsibility	2
16. Failure to accept responsibility for own actions	1
17. Many short-term marital relationships	Neither
18. Juvenile delinquency	2
19. Revocation of conditional release	2
20. Criminal Versatility	Neither

APPENDIX E: PRE-RELEASE INTERVIEW

**RELEASE FOLLOW-UP RESEARCH PROJECT:
PRE-RELEASE INTERVIEW**

Before we begin, let me explain a little bit about the type of questions I will be asking. Generally, I want to get a picture about the kind of a person you once were and who you are now. In order to do this I will want to know about several areas of your life. For example, I will want to know about your family, criminal history, friendships, feelings, and thoughts. I will want to know about your past, but I am most interested in learning about your present and your future plans. I know a lot of these questions may seem familiar to you but please bear with me. If at any time I ask a question that makes you feel uncomfortable, please tell me, and we will just skip it.

PART A: GENERAL BACKGROUND INFORMATION

**Let's begin with some background information
[rapport building, modify accordingly]**

How old are you?

How long is your current sentence?

Including dead time, how much time have you served since you were arrested on your current charges?

Where were you initially placed?

How have you kept busy while inside?

** What is your job here?

**Have you been in any educational programs during this term?

**What about other programs, for example, cognitive skills, or for drug or alcohol use?

PART B: CRIMINAL HISTORY (PCL-R & CAT-SR)

OK, now lets talk about your involvement with the criminal justice system. Let's first talk about your current offence.

What conviction(s) are you serving time for now?

What happened? **[Get his version of the offence(s)]**

Do you feel your sentence was fair?

What kind of job did your lawyer do?

Do you have any other convictions in your adult record?

**Describe

Who or what do you think is to blame for this (these) offence(s)?

What effects have these crimes had on the victims?

How do you feel about that?

How did your own family react to what happened?

** How did that make you feel?

Do you regret having done the things you did?

**Why/why not?

How serious do you consider your crimes to be?

How do you usually feel when you are doing crime?

**Nervous?

**Excited?

**Scared?

Were your crimes (usually) spur-of-the-moment or planned?

In general, what factors do you feel have been responsible for your own involvement in criminal behaviour?

What factors would help in keeping you out of trouble in the future?

Have you ever used aliases?

[If yes] How often and why?

Did you ever have any contact with the police before you were 17?

**How old were you the first time you were arrested?

**What was it for?

**How many charges did you have before age 16?

**Were you ever sentenced as a juvenile?[If yes] How many times?

Did you ever engage in any of the following behaviours as a child or a teenager?

- _____ Initiating physical fights (often) **[differentiate between some versus a lot]**
- _____ Lying often (other than to avoid physical and/or sexual abuse)
- _____ Running away from home overnight (at least twice, or once without returning)
- _____ Stealing (including forgery)
- _____ Fire-setting (deliberately)
- _____ Skipping school (often)
- _____ Cheating at school
- _____ Drunk or stoned at school
- _____ Suspended or expelled from school
- _____ Breaking into a car, house, or building

- _____ Vandalism (other than fire-setting)
- _____ Cruel to animals
- _____ Forcing sexual activity on someone
- _____ Using a weapon in more than one fight
- _____ Physically cruel to people

[If yes to any, establish age onset, under age 12 and under age 15 are the key ages]

Did you ever do anything else that was illegal as a kid and not get caught?

Like shoplifting or thefts, carrying a weapon, using marijuana, joyriding, or something else?

****What?**

****How old were you?**

Were you every removed from home as a result of these problems
(C.A.S., group home, training school)?

Were you ever seen by a counsellor or doctor for these problems?

****Diagnosis as 'hyperactive'/or prescribed ritalin?**

PART C: SCHOOL BACKGROUND (PCL-R INTERVIEW)

Let's talk now about your early life, especially school.

As a child, how did you like going to school?

Did you find it boring?

How far did you go in school before you left?

[Distinguish from upgrading in prison]

****[If <G12] Have you upgraded since then?**

****[If yes] What level have you completed now?**

How old were you when you left school?

****Why did you leave?**

PART D: FAMILY BACKGROUND (PCL-R AND CAT-SR INTERVIEW)

We can move on now to talk about your early life outside of school.

Who raised you?

[Details, especially adoptive or foster parents; if not living with natural parents, get age at separation]

Was there any time before you were 16 when you were separated from your parents?

**If yes, for how long?

What was the home life like?

**Did your parents get along well with each other?

**Did they drink? Do you feel that either had a drinking problem while you were growing up?

**Did they argue?

**Did they fight, physically?

**Did anyone in the family have any serious health or emotional problems? Like something that required psychiatric care?

Were things strict at your house?

**Were there lots of rules?

**What happened when you broke the rules?

**Did you have a curfew? [If yes] Until what age?

**What would happen if you broke the curfew?

Did anyone ever physically hurt you for any reason, like for punishment, or just because they were drunk or very angry? [Details – need: age first time, relationship of perpetrator, estimated number of times before age 14]

Did you have any sexual experience, pleasant or unpleasant, with an adult before you were 14? [If yes, get details – need: age first time, relationship of perpetrator, estimated number of times]

PART E: PRESENT FAMILY RELATIONS (PROBLEM SURVEY CHECKLIST)

Are you in contact now with your parents? [Clarify whether one, both, or neither]

**When was the last time you spoke with them on the phone or wrote to them?

**How often have they come to visit you in the last year?

**How much do they know about your life?

**How often do you expect to see parent(s) after you are released?

How well would you say you get along with your parents? [Explain scale]

1	2	3	4	5	6	7
not at all						couldn't be better
(or no contact)						

Have they offered to let you live with them after you are released?

**How about money? Would they help you out with that?

**What about other things, like for example meals, or advice, or anything else?

Do you have brothers or sisters?

**How many?

**Are you in contact with any of them?

**When was the last time you spoke with any of them on the phone or wrote to them?

**How often has any of them come to visit you in the last year?

**How often do you expect to see them after you are released?

How well would you say you get along with (siblings)?

1 2 3 4 5 6 7

not at all

couldn't be better

(or no contact)

Does anyone in the family except you have a criminal record?

**Is anyone involved in things that would get them arrested, even if they don't have a record?

What sort of problems do you think you might have with your family when you are released?

PART F: CURRENT RELATIONSHIPS (PROBLEM SURVEY CHECKLIST)

What is your relationship status now?

- a. legally married
- b. common law [more than six months]
- c. separated or divorced
- d. girlfriend/boyfriend, specify length in months _____
- e. single
- f. other _____

What is your relationship with your wife/girlfriend like now?

**How often do you talk with her or write?

**When was the last time?

**How often has she come to visit you in the last year?

**How many trailer visits have you had in the past two years?

**When you were on the outside before this term, did you live together?

**Do you plan to live together when you are released this time?

**Does she (he) have any criminal involvement or is she (he) straight?

How well would you say you are satisfied with this relationship? Use the same 7-point scale as before.

1 2 3 4 5 6 7

not at all

couldn't be better

(or broken up)

What sort of problems do you think you might have with your (lack of a) partner when you are released this time?

PART G: RELATIONSHIP HISTORY (PCL-R)

How many times have you been married/common law?

**Describe

[If respondent denies any live-in relationships]

Have you ever had a serious girlfriend/boyfriend?

**Describe

Have you ever been unfaithful to any of your partners?

** Tell me about it.

Apart from your marriages/relationships, have you had affair(s) with other women?

**How many?

** How many of these would you describe as one-night stands?

What are your views towards sex?

** casual vs. commitment; intimacy vs. sex

Have you ever been deeply in love/

**Describe

Do you have any children?

**Do you financially support them in any way?

PART H: EMPLOYMENT (PCL-R AND PROBLEM SURVEY CHECKLIST)

Now lets talk about work.

How many different jobs have you had?

**Describe

What was your longest job?

**What was the shortest?

Were you employed at the time of the offence?

How do you think your boss(es) would describe you?

**Reliable employee?

**Hard working?

**Did you ever get in trouble at work, for example for being late or absent, for drinking or using **drugs, or anything else?

**Were you ever fired?

Can you work at something for a long time or do you tend to jump from one thing to another?

Did you ever leave a job with no other job in sight?

Do you enjoy working? I mean for it's own sake rather than just the money?

Have you ever felt pride in your work?

** Describe

Do you believe in the value of hard work?

Has work ever been one of the most important things in your life?

**If yes, describe

Have you liked the type of work you have done in the past?

**Is there something else you would rather do in the future?

Have you ever been unemployed?

**If yes, how often?

** For how long?

**Have you ever collected unemployment insurance or welfare?

**How often? For how long?

Since you've been living on your own, did you ever rely on other people for food, money or a place to live?

**What were the circumstances?

**For how long?

**How do you feel about others helping you?

How do you usually support yourself on the street?

**Did you ever support yourself through crime, for example selling drugs, stealing regularly, or anything else that would get you put into jail?

When on the street, do you move around a lot?

[If not already answered]

Do you have a job or educational program arranged?

[If yes] Doing what?

How much do you think you will like that job (program)?

**Do you plan to find another job as soon as you can?

[If no] Are you searching for a job? What sort of work?

**What type of job would you like to have?

What sort of problems do you expect you might have with that job/program (or with being without a job)?

**Do you think you will have any problems with your boss/co-workers?

PART I: LEISURE ACTIVITIES (PCL-R AND PROBLEM SURVEY CHECKLIST INTERVIEW)

All right, now I am interested in what you do in your spare time, that is, when you're not working.

How do you plan to spend your spare time on the outside?

How much time are you planning on spending at home with your family/children/partner?

Do you expect to spend any time with friends?

**Doing what? Particular things or just hanging out?

**How much time each week?

What sort of problems do you expect you might have with friends?

Do you plan to be in any organized activities like sports or take up any hobbies?

**What?

**How often?

On the street do you tend to plan your time or live day by day?

Do you have any short-term goals once you are released?

**What are they?

What would you like to accomplish during the first month or two of your release?

Do you have any long-term goals?

**What are they?

Where would you like to be in a few years? I mean, in terms of how you're living and what you're doing.

PART J: ACCOMODATIONS (PROBLEM SURVEY CHECKLIST INTERVIEW):

That's enough about what you do with your time. Let's talk about where you lived and where you will live.

After you are released this time, where are you going to be living?

- a. house or apartment (owned or rented)
- b. with friends
- c. room in boarding house, shelter or hostel

- d. institution or half-way house, specify, _____
- e. moving around
- f. don't know, not arranged yet.

Do you have your new mailing address, in case we want to send you something, or to arrange a follow-up interview?

Who do you plan to live with?

- a. nuclear family (wife, common-law, children)
- b. family of origin (parents) or other family
- c. friends
- d. alone
- e. strangers (i.e. in a hostel or half-way house)
- f. moving around, changing
- g. don't know, not arranged yet

What sort of problems do you think you might have with the people you will be living with?

What sort of problems do you think you might have with the place, physically, or with other things about it, like the neighbourhood or the neighbours?

What kind of condition is the place you are going to be living in like?

- a. Would you describe it as a classy place or a dive?
- b. Is it clean? For example, do you think you will have any problems with cockroaches or mice?
- c. Do you think you have to worry about getting beaten up or broken into by some other guys in the neighbourhood?
- d. Would you worry about your children playing outside on the street around there?

If you had to rate your new accommodations on a 7-point scale, ranging from 1 to 7, where 1 represents "extremely unsatisfied" and 7 means "completely satisfied", what number would you pick?

1	2	3	4	5	6	7
extremely unsatisfied			indifferent			extremely satisfied

PART K: FINANCES (PROBLEM SURVEY CHECKLIST)

Now I have just a few questions about how you support yourself on the outside?

Do you have money problems from the past, like an old bank loan or debts?

**How is your credit rating?

**Could you get a credit card now?

What is going to be your main source of income when you get out?

- a. employment
- b. UI (EI) or disability
- c. welfare
- d. spouse/family
- e. friends
- f. illegal activities
- g. other or unknown _____

Have you set up a budget?

****Do you think you will have enough money to live on? (I mean nobody ever has enough money, but will you have enough to get through the month if you're careful?)**

****How much of your money will go for food and rent?**

What new problems do you think you might have with money or finances when you are released this time?

PART L: SUBSTANCE ABUSE (PROBLEM SURVEY CHECKLIST & CATS-SR & PCL-R)

Now lets move on to substance use

[can get most of this information from file review, if running short on time skip; remember to probe for last six months while incarcerated in addition to period preceding incarceration]

Did you drink or use drugs on the outside?

Have you ever felt that, as a teenager, you had a problem with alcohol (i.e. that your drinking interfered in some way with your life)?

Let's consider the last few months you were outside. How much did you drink on a usual drinking day?

On how many days in a month did you drink your usual amount?

Did you ever go on binges, that is, you drank a lot on one or a few days, and then stopped for a while?

[If yes]

How many times? Once or twice? Several times? Lots of times? Regularly?

What about drugs? What drugs did you use?

In your last few months on the outside, how many days in a month did you take (each of the above mentioned)?

Did your drinking/drug use cause problems for you in any of the following areas?

****Health or physical problems, like the DT's shaky hands, frequent vomiting, unable to sleep, or other things?**

- **With family, like problems with your parents or fights with your wife?
- **Problems getting along with friends, or other people you knew, for example getting into fights?
- **Legal problems, including getting into trouble with the law?
- **Trouble in school or at work? Like, did you ever miss a day because you had a hangover or because you were too stoned to work?
- **Money or debt problems?
- **Anything else?

Have you ever been treated for an alcohol or drug problem?

[If no] Has anyone ever told you that you needed treatment?

[If yes to original] What and where was the treatment?

What sort of problems do you expect you might have with alcohol or drugs after you are released?

PART M: HEALTH (PROBLEM SURVEY CHECKLIST)

One thing we haven't talked about yet is your health.

Currently, how are you health-wise?

Do you have a problem of any kind?

**What is it?

**Do you think it might be a problem on the outside?

Are you taking any kind of medication?

Have you ever been seen by a psychologist or psychiatrist?

**In prison, or on the street?

**For what?

**What treatment(s) did you get?

PART N: SUPERVISION COMPLIANCE (PROBLEM SURVEY CHECKLIST)

Do you expect that you will be supervised in the community?

Do you know now what special terms will be attached to your release?

**What are they?

**Do you expect that these rules will be hard to keep?

**Do you think you might cheat, just a little?

How well do you expect you will be able to satisfy your community supervisor/parole officer? Use a 7-point scale, where 1 is "no problems at all" and 7 is "it will be impossible for me to do what he/she says".

1	2	3	4	5	6	7
no problems at all						impossible

In general, how much do you think parole officers can really help in keeping guys from getting into trouble again?

What sort of problems do you expect you might have with your supervision or supervisor after release?

PART O: GENERAL QUESTIONS (PCL-R)

I've got a bunch of leftovers for you now, questions that don't fit anywhere else.

Do you ever feel like there isn't enough interesting stuff to keep you busy?

**Do you get bored easily?

Do you ever get the feeling that you have itchy feet, or need to travel or always be on the go?

Do you like to take chances for fun or excitement?

**How about when you drive? Do you sometimes do something like speeding just for fun?

**Have you ever taken drugs just for kicks?

**How often would you do something on a dare?

**Have you ever done other crazy or dangerous things for the excitement?

If you need to, can you lie and convince people?

What do you do when you are caught in a lie?

Has anyone ever called you a hustler or a manipulator?

**Why?

**Were they right?

Do you think that people are easy to "con" or manipulate?

Have people told you that you have a bad temper?

**Do you think they're right?

What kinds of things get you really angry?

When you're angry, do you "see red" and do things you just would not do ordinarily?

Have you ever lost control, so you didn't even know what you were doing anymore?

Since the age of 16, about how many times have you been in physical fights?

**What was the worst damage you ever did to someone in a fight?

Have you had any institutional misconduct in the past twelve months?

Has anyone close to you died recently?

**How did you feel?

****What did you do?**

Are you patient and tolerant of other people?

What does 'survival of the fittest' mean to you?

PART P: COPING ABILITY (COPING SITUATIONS QUESTIONNAIRE)

We're getting close to the end now, but I have a few final tasks for you. Here's the first. The following situations, or things like them, sometimes happen to people on the street. I want you to listen while I read each situation, and then I would like you to try to imagine that it is happening to you. Then I will ask you some questions about what you would do if it really did happen to you. Make sure that you tell me how you would react, not how somebody might think you should react.

[Record response(s) verbatim for all of the following]

You're living with your partner and having troubles with her. She wants you to do half of the house work, but you're working full time and you're pretty tired every day after you get home.

How would you deal with it?

[After the initial answer, prompt for more by asking:]

Is there anything else you would do?

How well do you think you would handle this situation?

1 2 3 4 5 6 7
not well very well

Here's another situation. You get a new job. It pays well and you enjoy the work, but your supervisor keeps bugging you to work harder. You can feel him watching you all the time, and he's accused you of slacking off several times.

How would you deal with it?

[After the initial answer, prompt for more by asking]

Would you do anything else?

How well do you think you would handle this situation?

1 2 3 4 5 6 7
not well very well

Answer

Rating (1 - 10)

[Now ask the following question for each different response provided in question 1]

3. On a scale of 1 to 10, how bad would it be if **[response(s) to #1]** occurred where 1 = not bad at all and 10=extremely bad?

Answer

Rating (1 - 10)

4. What are some of the good things that could happen to people who commit crime?

[write answer verbatim. Goal: have offenders answer questions in regards to own personal experience. First in regards to the future- 'What if you started committing crime again', if they deny this possibility ask them to talk about their own past experiences', if this fails ask them to talk about offenders in general]

[Now ask the following question for each different response provided in question 4]

5. On a scale of 1 to 10, what do you think the chances are that **[response(s) to #4]** would occur where 1 = no chance and 10 = absolutely?

Answer

Rating (1 - 10)

[Now ask the following question for each different response provided in question 4]

6. On a scale of 1 to 10, how good would it be if **[response(s) to #4]** where 1 = not good at all and 10=extremely good.

Answer	Rating (1 - 10)
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

PART R: SOCIAL SUPPORT SCHEME (SSS)

[see scoring guidelines in manual for social support definitions]

1. Who do you plan to spend most of your free time with when you get out?

[measures social support; don't need their whole names, just first names or initials]

2. Who would you go to if you needed a loan, a place to stay, a drive somewhere?

[measures instrumental support; material aid]

3. Who would you see if you needed cheering up? Or if you simply wanted to talk to someone about a problem you were having (e.g. bad day at work)

[emotional support; non-material aid]

4. Who would you talk to if you simply needed information about how to do something (e.g. get social assistance, write a resume, find a job?)

[informational support]

5. Is this everyone you will be living with? Are there others you will spend time with? Is there anyone else who will help you in some way, maybe to get a job or with advice on a problem? Or someone else you will be talking to?

Now I want to ask you a series of questions about each of the people you have mentioned.

[Ask the following questions (6-11) for each person noted above]

6. On a scale of 1 to 7, where 1 is "very rarely" and 7 is "very often" how often do you expect to come in contact with _____ **[person(s) noted above]** after you are released?

1	2	3	4	5	6	7
very rarely						very often

9. On a scale of 1 to 7, where 1 is "not at all" and 7 is "very strongly", how much do you want to do what [person(s) noted above] thinks you should do? [if offender doesn't understand question expand as follows, "to what extent do you want to live your life the way X things you should?"]

1	2	3	4	5	6	7
not at all						very strongly
Person						Score
_____						_____
_____						_____
_____						_____
_____						_____
_____						_____
_____						_____
_____						_____

10. On a scale of 1 to 7, where 1 is "not at all" and 7 is "very strongly", how happy are you with (person(s) noted above) support/help?

1	2	3	4	5	6	7
not at all						very strongly
Person						Score
_____						_____
_____						_____
_____						_____
_____						_____
_____						_____
_____						_____
_____						_____

11. Have any of these people ever been in jail or prison?
- a. (If yes) Who?
 - b. Even if they haven't got a record, who (else) on the list has done things that might put them in prison if they were caught?

APPENDIX F: PRE-RELEASE CODING MANUAL

**RELEASE FOLLOW-UP RESEARCH PROJECT:
PRE-RELEASE CODING MANUAL**

This page is to be detached & stored securely after completion, along with the consent form. It is the sole means of identifying individual subjects.

Research ID number _____

Name _____

FPS _____

Releasing institution _____

Release date _____

Release type _____

Date consented _____

Date interviewed in institution _____

Date of institutional file review _____

Projected date of first (1 month) community interview (include \pm 7 day time frame)

Projected date of second (3 month) community interview (include \pm 7 day time frame)

Projected date of third (6 month) community interview (include \pm 7 day time frame)

Location of first community interview _____

Name of pre-release interviewer _____

PRE-RELEASE CODING MANUAL

Part A: Demographic Information

1. Date of Birth (yy/mm/dd) _____/_____/_____

2. Age at pre-release interview _____

3. Ethnicity

- 1. White
- 2. Black
- 3. Asian
- 4. Native
- 5. Other (specify) _____
- 9. Not known

4. Primary language

- 1. English
- 2. French
- 3. Other (specify) _____
- 9. Not known

5. Marital Status at time of pre-release interview

- 1. Married
- 2. Common Law (relationship more than six months)
- 3. Divorced/Separated
- 4. Single/never married
- 5. Widowed

6. Citizenship

- 1. Canadian (born in Canada)
- 2. Naturalized Canadian (place of birth: _____)
- 3. Landed immigrant (Citizen of: _____)
- 4. Other (specify) _____

Part B: Sentence Management Information

1. Sentence commencement date (yy/mm/dd) _____
2. Admission date (yy/mm/dd) _____
3. Day parole eligibility date (yy/mm/dd) _____
4. Full parole eligibility date (yy/mm/dd) _____
5. Statutory release date (yy/mm/dd) _____
6. Warrant expiry date (yy/mm/dd) _____
7. Total aggregated sentence in days [**include** time not yet served for previous terms]

_____ **code 999 for life, 888 for indefinite (dangerous offenders)**

8. Sentence length in days for current offense only [**exclude** time not yet served for past terms]

_____ **code 999 for life, 888 for indefinite (dangerous offenders)**

9. Releasing institution

1. Collins Bay
2. Joyceville
3. Bath
4. Frontenac
5. Pittsburgh
6. Kingston Penitentiary
7. Regional Treatment Centre (KP)
8. Millhaven
9. Warkworth
10. Beaver Creek
11. Femdale

10. Level of security at initial placement

- 1. minimum
- 2. medium
- 3. maximum
- 9. not known

Part C: Criminal History Information

Only use information from the official criminal history record (CPIC file) to code the following section EXCEPT for juvenile criminal history items. Juvenile history items can be coded from official file information AND self-report information obtained during the interview. If the offender's version and the official version conflict, try to reconcile differences. If differences cannot be reconciled use the more incriminating version.

1. Current index offense

[enter the number of convictions for each type of offense]

Major

- _____ a. Murder: (first, second and attempted)
- _____ b. Kidnapping/forcible confinement, abduction or hostage taking, hijacking, terrorism
- _____ c. Armed robbery with extreme violence, or organized
- _____ d. Assault (with or without a weapon) causing serious injury, risk of death or disfigurement/mutilation

Serious

- _____ e. Armed robbery or attempted robbery with violence
- _____ f. Manslaughter
- _____ g. Sexual Assault (rape, attempted sexual assault, aggravated sexual assault) on an adult 15 or over
- _____ h. Sexual Assault (rape, incest, buggery, sexual assault) on victim under age 14
- _____ i. Assault causing bodily harm (CBH), with or without a weapon
- _____ j. Other serious violent offense (arson, escape with violence, participation in a riot, use of firearm during commission of an offense)
- _____ k. Other serious non-violent offense (conspiracy to traffic or import drugs/firearms, extortion, escape from medium or above without violence, prison breach)

Moderate

- _____ l. Drug offenses (possession of dangerous drug, trafficking soft drugs, conspiracy)
- _____ m. Fraud, forgery, false pretense, bribery, possession of instruments for forgery
- _____ n. Property offense, (forced entry, B&E, attempted B&E, auto, stolen property, theft over)
- _____ o. Non-violent sex offenses (Gross indecency, sex with a minor, voyeurism)

- _____ p. Robbery without a weapon, attempted robbery without a weapon
- _____ q. Other moderate non-violent offenses (obstruction of justice, perjury, resist arrest, escape minimum or below without violence)
- _____ r. Other moderate violent offenses (obstruct peace officer, possession of weapon to commit indictable offense, concealed weapon, assault with no injury, criminal negligence causing death or resulting in bodily harm, dangerous driving)

Minor

- _____ s. Breach of probation/parole or MS/SR, failure to appear/comply/attend, unlawfully at large
- _____ t. Possession (stolen property under, theft under, soft drugs, forged documents, weapons)
- _____ u. Other minor non-violent offenses (driving offenses, public mischief, fail to remain at the scene, criminal negligence not resulting in bodily harm)
- _____ v. Other minor violent offenses (common assault)
- _____ w. Minor driving offenses (driving while impaired, driving over .08, driving under suspension, take auto without consent, careless driving etc)
- _____ x. Utter death threats
- _____ y. Smuggling offences
- _____ z. Prostitution-related offences

2. Criminal History [excluding current index offenses]

[enter the number of convictions for each type of offense]

Major

- _____ a. Murder: (first, second and attempted)
- _____ b. Kidnapping/forcible confinement, abduction or hostage taking, hijacking, terrorism
- _____ c. Armed robbery with extreme violence, or organized
- _____ d. Assault (with or without a weapon) causing serious injury, risk of death or disfigurement/mutilation

Serious

- _____ e. Armed robbery or attempted robbery with violence
- _____ f. Manslaughter
- _____ g. Sexual Assault (rape, attempted sexual assault, aggravated sexual assault) on an adult 15 or over
- _____ h. Sexual Assault (rape, incest, buggery, sexual assault) on victim under age 14
- _____ i. Assault causing bodily harm (CBH), with or without a weapon
- _____ j. Other serious violent offense (arson, escape with violence, participation in a riot, use of firearm during commission of an offense)
- _____ k. Other serious non-violent offense (conspiracy to traffic or import drugs/firearms, extortion, escape from medium or above without violence, prison breach)

Moderate

- _____ l. Drug offenses (possession of dangerous drug, trafficking soft drugs, conspiracy)
- _____ m. Fraud, forgery, false pretense, bribery, possession of instruments for forgery
- _____ n. Property offense, (forced entry, B&E, attempted B&E, auto, stolen property, theft over)
- _____ o. Non-violent sex offenses (Gross indecency, sex with a minor, voyeurism)
- _____ p. Robbery without a weapon, attempted robbery without a weapon
- _____ q. Other moderate non-violent offenses (obstruction of justice, perjury, resist arrest, escape minimum or below without violence)
- _____ r. Other moderate violent offenses (obstruct peace officer, possession of weapon to commit indictable offense, concealed weapon, assault with no injury, criminal negligence causing death or resulting in bodily harm, dangerous driving)

Minor

- _____ s. Breach of probation/parole or MS/SR, failure to appear/comply/attend, unlawfully at large
- _____ t. Possession (stolen property under, theft under, soft drugs, forged documents, weapons)
- _____ u. Other minor non-violent offenses (driving offenses, public mischief, fail to remain at the scene, criminal negligence not resulting in bodily harm)
- _____ v. Other minor violent offenses (common assault)
- _____ w. Minor driving offenses (driving while impaired, driving over .08, driving under suspension, take auto without consent, careless driving etc)
- _____ x. Utter death threats
- _____ y. Smuggling offences

Part D: Institutional Adjustment

[enter 0 for none]

1. Number of minor institutional convictions during past 12 months _____

2. Number of major institutional convictions during past 12 months _____

PART E: Childhood and Adolescent Taxon Scale (CATS-SR)

Score this section based on interview and file review; if the offender's version and the official version conflict, check and try to reconcile differences; if differences cannot be reconciled use the more incriminating version.

1a. Has been arrested before age 16

- 0. No
- 2. Yes
- 9. Not know

1b. Living with both parents until age 16

- 0. Yes
- 2. No (if caused by leaving, divorce, abandonment, or institutionalization)
- 9. Not know

1c. Childhood aggression (under age 16)

1 2 3 4 5 6 7
no fights some fights a lot of fights

- 0. 1-2 scores
- 1. 3-4 scores
- 2. 5-7 scores
- 9. Not known

1d. Childhood behaviour problems (under age 16)

[add up answers to 12 questions (1 point for each question answered yes) from interview]

1 2 3 4 5 6 7
no problems some problems many problems

- 0. 1-2 scores (0 or 1 items rated yes)
- 1. 3-4 scores (2 items rated yes)
- 2. 5-7 scores (3 or more items rated yes)
- 9. Not known

1e. Elementary school problems

1 2 3 4 5 6 7
no problems some problems many problems

- 0. 1-2 scores
- 1. 3-4 scores
- 2. 5-7 scores
- 9. Not known

1f. School suspension or expulsion

- 0. No
- 2. Yes
- 9. Not known

1g. Teenage alcohol abuse

1 2 3 4 5 6 7
none moderate severe

- 0. 1-2 scores
- 1. 3-4 scores
- 2. 5-7 scores
- 9. Not known

1h. Parental alcohol abuse

- 0. No
- 2. Yes
- 9. Not known

Part F: Problem Survey Checklist

[consult scoring guidelines in manual]

Marital/Family

1. Monogamous relationship

- 0. no
- 1. yes

2. The partner is noncriminal

- 0. no
- 1. yes (rate yes if single)

3. The offender is satisfied with current relationship situation

- 0. no
- 1. somewhat
- 2. yes

4. Partner is supportive

- 0. no (unsupportive or single)
- 1. somewhat
- 2. yes

5. Offender is close to family

- 0. no (includes no contact)
- 1. somewhat
- 2. yes, specify family members _____

6. Family of origin is noncriminal

- 0. no
- 1. somewhat
- 2. yes
- 8. non applicable (no contact)

7. Family is personally supportive of the offender

- 0. no (includes no contact)
- 1. somewhat
- 2. yes, specify family members _____

Employment/Education

1. Has the basic physical, intellectual, educational, and/or vocational skills to secure steady employment or attend a full time educational or vocational program.

- 0. no
- 1. somewhat
- 2. yes

2. Has secured full time employment or has enrolled in a full time educational or vocational program in the community.

- 0. no
- 1. somewhat
- 2. yes

3. Well motivated toward work or education

- 0. no
- 1. somewhat
- 2. yes

4. Strong personal investment in work or education

- 0. no
- 1. somewhat
- 2. yes

5. Is generally satisfied with current job/educational program

- 0. no
- 1. somewhat
- 2. yes
- 8. not applicable (not working)

Substance Use

[For the past six months only]

1. Completely abstains from alcohol use or is best described as a social drinker.
 0. no
 1. somewhat
 2. yes

2. Has a binge-drinking problem.
 0. no
 1. somewhat
 2. yes

3. There is evidence of a chronic alcohol problem.
 0. no
 1. somewhat
 2. yes

4. Completely abstains from drug use, or uses recreational drugs only.
 0. no
 1. somewhat
 2. yes

5. Has a binge drug-use problem.
 0. no
 1. somewhat
 2. yes

6. There is evidence of a chronic drug problem.
 0. no
 1. somewhat
 2. yes

Accommodations

1. Will have a legal mailing address.
 0. no
 1. yes

2. Will be living in a relatively healthy and sanitary environment.
 0. no
 1. somewhat
 2. yes

3. Will be living in a relatively crime-free neighborhood.

- 0. no
- 1. somewhat
- 2. yes

4. Is at least moderately satisfied with his/her future living situation.

- 0. no
- 1. somewhat
- 2. yes

Finances

1. Will be on some form of social assistance.

- 0. no
- 1. yes

2. Will be experiencing financial stress.

- 0. no
- 1. somewhat
- 2. yes

3. Evidence of poor financial management.

- 0. no
- 1. somewhat
- 2. yes

Leisure Activities/Time use

1. Leisure time will include structured activity.

- 0. no
- 1. somewhat
- 2. yes

2. Plans to spend all or most of free time in structured socializing.

- 0. no
- 1. somewhat
- 2. yes

3. Plans to spend most of free time at home with immediate family.

- 0. no
- 1. somewhat
- 2. yes

4. Intends to plan time.

- 0. no
- 1. somewhat
- 2. yes

Interpersonal

1. Anticipates problems in getting along with friends.
 0. no
 1. somewhat
 2. yes

2. Anticipates problems in getting along with partner.
 0. no
 1. somewhat
 2. yes
 8. NA (single)

3. Anticipates problems in getting along with family members.
 0. no
 1. somewhat
 2. yes
 8. NA (not in contact)

4. Anticipates problems in getting along with co-workers or supervisors.
 0. no
 1. somewhat
 2. yes
 8. NA

Supervision Compliance/Self Management

1. Appears genuinely motivated to comply with supervision requirements.
 0. no
 1. somewhat
 2. yes

2. Anticipates problems in getting along with parole supervisor.
 0. no
 1. somewhat
 2. yes

3. Appears manipulative.
 0. no
 1. somewhat
 2. yes

4. Likely to attend scheduled appointments regularly.
 0. no
 1. somewhat
 2. yes

5. Has realistic release plans.

- 0. no
- 1. somewhat
- 2. yes

Physical/Mental Health Needs

1. Has no current physical health concerns.

- 0. no
- 1. somewhat
- 2. yes

2. Has no current mental health concerns.

- 0. no
- 1. somewhat
- 2. yes

Part G: Coping Situations Questionnaire

[remember to score each different coping response provided by the offender, see scoring guidelines]

Situation 1: Relationship

1. ___ 2. ___ 3. ___ 4. ___ 5. ___ Benefit score
1. ___ 2. ___ 3. ___ 4. ___ 5. ___ Cost score

Situation 2: Employment

1. ___ 2. ___ 3. ___ 4. ___ 5. ___ Benefit score
1. ___ 2. ___ 3. ___ 4. ___ 5. ___ Cost score

Situation 3: Party situation

1. ___ 2. ___ 3. ___ 4. ___ 5. ___ Benefit score
1. ___ 2. ___ 3. ___ 4. ___ 5. ___ Cost score

Situation 4: Loneliness

1. ___ 2. ___ 3. ___ 4. ___ 5. ___ Benefit score
1. ___ 2. ___ 3. ___ 4. ___ 5. ___ Cost score

PART H: Expected Value of Crime

[transcribe relevant information generated from the interview here, remember to specify the consequence that the offender provided]

Negative consequence #1 (specify) _____

Probability rating: _____ Badness rating: _____

Negative consequence #2 (specify) _____

Probability rating: _____ Badness rating: _____

Negative consequence #3 (specify) _____

Probability rating: _____ Badness rating: _____

Negative consequence #4 (specify) _____

Probability rating: _____ Badness rating: _____

Negative consequence #5 (specify) _____

Probability rating: _____ Badness rating: _____

Negative consequence #6 (specify) _____

Probability rating: _____ Badness rating: _____

Negative consequence #7 (specify) _____

Probability rating: _____ Badness rating: _____

Negative consequence #8 (specify) _____

Probability rating: _____ Badness rating: _____

Negative consequence #9 (specify) _____

Probability rating: _____ Badness rating: _____

Negative consequence #10 (specify) _____

Probability rating: _____ Badness rating: _____

Positive consequence #1 (specify) _____

Probability rating: _____ Goodness rating: _____

Positive consequence #2 (specify) _____

Probability rating: _____ Goodness rating: _____

Positive consequence #3 (specify) _____

Probability rating: _____ Goodness rating: _____

Positive consequence #4 (specify) _____

Probability rating: _____ Goodness rating: _____

Positive consequence #5 (specify) _____
 Probability rating: _____ Goodness rating: _____

Positive consequence #6 (specify) _____
 Probability rating: _____ Goodness rating: _____

Positive consequence #7 (specify) _____
 Probability rating: _____ Goodness rating: _____

Positive consequence #8 (specify) _____
 Probability rating: _____ Goodness rating: _____

Positive consequence #9 (specify) _____
 Probability rating: _____ Goodness rating: _____

Positive consequence #10 (specify) _____
 Probability rating: _____ Goodness rating: _____

PART I: Social Support Scheme

[For each separate individual identified in the interview record the following]

Person	Criminal	Support	Part S, #6 'Contact'	Part S, #7 'Respect'	Part S, #8 'Upset'	Part S, #9 'Comply'	Part S, #10 'Satisfaction'

- Codes for Person
1. wife/girlfriend
 2. family (specify)
 3. friend
 4. co-worker/supervisor
 5. acquaintance
 6. CSC staff (inc. contract)
 7. Other service provider (specify)
 8. Other (specify)

- Codes for Criminal
0. prosocial
 1. criminal
- Codes for Support
1. social
 2. instrumental
 3. emotional
 4. information

PART J: Final Problem Survey

[enter 7 point rating obtained from interview]

1. ___ Family – parents or siblings
2. ___ Wife partner or other relationship (or lack of)
3. ___ Work – co-workers or boss/supervisor
4. ___ Work – work itself (or lack of it)
5. ___ Friends
6. ___ Accommodations – physical
7. ___ Accommodations – other people (co-habitants, neighbours)
8. ___ Money or finances
9. ___ Drugs or alcohol
10. ___ Health – physical
11. ___ Health – emotional or psychiatric
12. ___ Supervision – terms
13. ___ Supervision – supervisor
14. ___ Boredom
15. ___ Other, specify _____
16. ___ Other, specify _____

PART K: Tracking Information

1. Release Date (yy/mm/dd) _____
2. Release Type
 1. Day Parole
 2. Full Parole
 3. Statutory Release
3. Community Supervision Agency
 1. Ottawa Area Supervision Office
 2. Ottawa, Salvation Army
 3. Downtown Toronto
 4. Team Supervision
 5. Peel
 6. Keele CCC
 7. Toronto East
 8. Toronto West
 9. Other, _____

4. Residence

- 1. Brampton: St. Leonard's House (Peel)
- 6. Oshawa: Hostel Services (Durham Region Inc.)
- 11. Ottawa: House of Hope
- 13. Ottawa: Kirkpatrick House
- 14. Ottawa: Maison Decision House
- 24. Toronto: Bunton Lodge (Salvation Army)
- 26. Toronto: Crossroads (St. Leonard's House)
- 27. Toronto: Delisle Youth Services
- 31. Toronto: Harbour Light Centre (Salvation Army)
- 32. Toronto: Keele Community Correctional Centre
- 34. Toronto: Maxwell Meighen Centre (Salvation Army)
- 43. Private residence
- 44. Other, specify _____
- 99. Not known

5. If offender is residing in a private lodging or a rooming house, specify address
_____ (apt number, street number)

6. Home phone number of offender in community

_____ [include half way house number if applicable]
9. Not Known

7. Community parole officer: _____

8. Additional contact person (such as relative or friend): _____
(relationship to participant): _____

9. Contact person's address and phone number (if available):

APPENDIX G: PRE-RELEASE SCORING GUIDELINES

PART A: PROBLEM SURVEY CHECKLIST: SCORING GUIDELINES

General Guidelines

- Write as much as you can verbatim on the interview schedule.
- Avoid missing data as much as possible. For example, if there is no mention of childhood abuse in the file and the offender does not self-report childhood abuse during the interview then assume that offender was not abused.
- Use all available information (file and interview). When information is conflicting follow the following procedures as outlined in the PCL-R manual "occasionally there are large discrepancies between the interview and collateral information. If it is possible to determine that one source of information is more credible than the other, the greater weight is given to information from the more credible source. Otherwise, preference is given to the source most suggestive of psychopathology, on the assumption that the majority of people tend to underreport or minimize pathological behaviour" (p. 6, Hare, 1991).

Item	Scoring Guidelines	Score
*1. In a monogamous relationship.	Must be legally married, in a common-law relationship or be with a serious (non-cohabiting) regular sexual partner. No minimum timeframe is required, but rather evidence of a commitment to one person. Answer no for separated, divorced, or single offenders. Offenders with a partner but are unfaithful are still rated yes.	<input type="checkbox"/> no <input type="checkbox"/> yes
*2. Has a noncriminal partner.	"Partner" includes a spouse as defined in item 1, or a serious (non-cohabiting) regular sexual partner. The partner should be engaged in a non-criminal lifestyle, and there must be absolutely no evidence (official or nonofficial) of criminal involvement. Thus, has never been arrested, charged, or convicted. Score 'yes' if offender is currently single, divorced or separated.	<input type="checkbox"/> no <input type="checkbox"/> yes
*3. The offender is satisfied with current relationship situation.	Offenders who rate their relationship as 6 or above in the interview are scored 'yes', 2 or below are scored 'no', and between 3 and 5 are scored 'somewhat'. Offenders who are satisfied with being single are rated yes. Don't forget to rate single offenders in terms of how satisfied/dissatisfied they are with being single. Thus, no one should be rated as NA for this item.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes

*4. Partner supportive.	Partner is actively supportive and encouraging of offender's efforts to maintain non-criminal behaviour, giving time and material support to this end. Partner also discourages criminal values, cognitions, or associations. Score 'somewhat' if support is present but passive, or if evidence uncertain. Score 'no' if offender single. Use information from the Social Support Scheme (SSS) to supplement information obtained during marital/family section of interview.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
*5. Offender is close to family.	If not in touch or only irregularly rate 'no', if regularly in contact (at least once per week) but not involved in each lives rate 'somewhat'; rate yes if they are frequently in contact and are involved in each other's lives (e.g. do things together, know what's going on in each other's lives etc). Family includes family of origin AND children from current nuclear family. Specify who the family members are in the space provided even if rated 'somewhat'. Do not include the offender's partner as she/he is accounted for above in question #4. Ex-partners are not considered 'family' for this item. However, if an ex-partner is providing support they should be accounted for in the SSS. Contact includes phone calls but it should be specified in the coding manual if the contact is only by telephone.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
*6. Family members are noncriminal.	In order to be classified as noncriminal there must be absolutely no evidence (official or nonofficial) of criminal involvement by parents, siblings, cousins, grandparents etc or if applicable, children (must be over 18) from the nuclear family. The family members should be engaged in non-criminal lifestyle. Score NA if not in contact.	<input type="checkbox"/> no <input type="checkbox"/> yes <input type="checkbox"/> NA
*7. Family is personally supportive of the offender.	The family is willing to provide living accommodations, material aid, or financial support. There is at least one family member whom the offender depends on for emotional support and guidance. Score 'no' if not in contact. Family includes family of origin but could also include children from current nuclear family provided that the child is no longer a dependent (i.e., over 18 years of age). Family does NOT include current partner or ex-partner. However, if an ex-partner is providing support it should be recorded in the Social Support Scheme (SSS). Specify who the family members are in the space provided even if rated 'somewhat'.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes

Item	Scoring	Score
<p>*1. Has the basic physical, intellectual, educational, and/or vocational skills to secure steady employment or attend a full time educational or vocational program.</p>	<p>The purpose of this item is to determine whether the offender suffers from any rudimentary barriers that prevent him/her from obtaining steady employment. Examples include: physical disability, poor hygiene, intellectual impairment, learning disability, absence of a marketable skill or trade, or insufficient education. It is important to note that simply possessing one or more of these criteria does <u>not</u> merit an automatic scoring of 'no'. There must be clear evidence that the barrier(s) clearly interfere with the offender's ability to secure steady employment. Thus, an offender who has a grade 8 education but has managed to maintain employment for at least 6 months in the year prior to incarceration would be rated 'yes'. Score question based on most recent and/or representative employment/education experiences prior to incarceration. However, any changes (e.g. now has a job skill/educational upgrade etc. as a result of programming) that may have occurred during incarceration should be included. Offenders who have secured a full or part time job upon release will typically be rated 'yes'.</p>	<p><input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes</p>
<p>*2. Has secured full time employment or has enrolled in a full time educational or vocational program in the community.</p>	<p>There must be clear evidence of hiring or acceptance into a program, not just promises. Requires a minimum of 30 hours per week for full-time, and at least 16 hours for part-time work/half-time enrollment. Score 'somewhat' for part-time employment/enrollment or if there is some evidence that the offender has some genuine lead on a job upon release but it is not confirmed. For example, the offender has talked to a 'friend' who thinks he has work for him but he won't be 100% sure until released.</p>	<p><input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes</p>
<p>*3. Well motivated toward work or education.</p>	<p>Appears to take pride and personal satisfaction for a job well done. Examples include: punctual and regular in appearing for work; rarely if ever hung over at work; described by superiors as diligent, hard working. Score based on past work experience and present attitude. Thus, individuals who have a negative employment history as defined above but truly appears motivated now (use institutional work record) would in most cases be rated 'somewhat'.</p>	<p><input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes</p>

*4. Strong personal investment in work or education.	Highly involved or personally invested in his work/education. Values work for it's own sake. Believes in the value of hard work, rather than just a job as means to an end. For example, responses such as 'I work for a pay cheque' in the absence of additional comment would be rated 'no'. Work/school may even have played a central role in his life. Score based on attitudes expressed today towards past work experience or current institutional work.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
*5. Is generally satisfied with current job/educational program.	The offender expresses positive (and few if any negative) thoughts or feelings about future job/education program. Shows no desire to look for another job/program. If offender does not have a job lined up for the future, score NA. If offender is both working and going to school rate the one that will occupy most of his time. Alternatively, if offender dedicates equal amounts of time to both school and work consider both. If he likes school but not work consider rating as 'somewhat'.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes <input type="checkbox"/> NA

ALCOHOL USE		
Item	Scoring Guidelines [during the last six months]	Score
*1. Completely abstains from alcohol use or is best described as a social drinker.	Has no more than 4 drinks (one per hour) on any drinking occasion. Weekly consumption may not exceed more than 12 drinks. Absolutely no evidence that drinking interferes with any aspect of his life. Underline in the coding manual whether they are abstainers or social drinkers.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
2. Has a binge-drinking problem.	Heavy drinking (5 or more drinks for one or several days) followed by a period of abstinence. Although these individuals can control when a binge drinking session will occur they are unable to control the amount they consume during a drinking episode. One binge episode merits a rating of 'somewhat'. More than one binge episode merits a rating of 'yes'.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
*3. There is evidence of a chronic alcohol problem.	Uses alcohol (5 or more drinks) daily or near daily. Evidence for loss of control, increased tolerance to alcohol, repeated withdrawal symptoms, or other physical, social or psychological problems.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes

*4. Completely abstains from drug use, or uses recreational drugs only.	Has not used illegal drugs, or has only used forms of cannabis, but no more than twice a week. No evidence of drug interference in any aspect of life. Abuse of medically prescribed drugs merits a rating of no. Underline whether they completely abstain or whether they use recreational drugs only, if so, specify nature and frequency of recreational drug use (e.g. pot twice a week) in the coding manual.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
5. Has a binge drug-use problem.	Heavy drug use for one or several days in a row, followed by a period of abstinence. One binge episode merits a rating of 'somewhat'. More than one binge episode is a 'yes'.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
6. There is evidence of a chronic drug problem.	Evidence of inability to abstain from drug use on a daily or near daily basis. Reported daily or near daily use of cannabis merits a yes rating. Evidence of loss of control, increased tolerance to drugs, withdrawal symptoms, or other physical, social or psychological problems.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
Substance Use	NO = 0, SOMEWHAT = 1, YES = 2 <small>reverse key that only Computer generated</small>	total

ACCOMMODATIONS		
Item	Scoring Guidelines	Score
*1. Will have a legal mailing address.	Essentially, the answer will be yes for all offenders except those who are of 'no fixed address'.	<input type="checkbox"/> no <input type="checkbox"/> yes
*2. Will be living in a relatively healthy and sanitary environment.	The answer is yes if the offender will be living in a dwelling that is structurally safe, has hot running water, sufficient heat, not infested, not over crowded, not overly loud, nor prone to frequent maintenance issues.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
*3. Will be living in a relatively crime-free neighborhood.	Evidence of living in a relatively crime-free neighborhood includes absence of regular police patrols, drug dealers, prostitutes, absence of frequent break-ins or muggings, or the offender does not perceive the area as being particularly high in crime.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes

<p>*4. Is at least moderately satisfied with his/her future living situation.</p>	<p>Offenders who rate their living situation as 6 or above in the interview are scored 'yes', 2 or below are scored 'no', and between 3 and 5 are scored 'somewhat'. However, must also consider all information provided by the offender during the interview. For example, if an offender complains about numerous aspects about his future living situation but provides a rating above 6 when asked to do so a rating of 'somewhat' is most likely justified.</p>	<p><input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes</p>

Item	Scoring Guidelines	Score
<p>1. Will be on some form of social assistance.</p>	<p>Social assistance includes welfare assistance, family benefits allowance, worker's compensation, unemployment insurance, disability pensions , Old Age Security, or Canadian Pension Plan. Exclude student loans or anything else that has to be paid back. If receiving CPP please make a written note in the appropriate section of the coding manual.</p>	<p><input type="checkbox"/> no <input type="checkbox"/> yes</p>
<p>2. Will be experiencing financial stress.</p>	<p>Possibility of bankruptcy, bank foreclosure on any assets, or has accumulated substantial debts. Also, evidence (as indicated by the offender in most circumstances) that income will be inadequate to provide basic needs. Each offender should be evaluated individually regardless of whether or not they will be receiving the exact same amount of money (i.e. halfway house residents each receiving \$28.00 per week). It is the offender's perception combined with collateral information (if available) that matters.</p>	<p><input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes</p>

3. Evidence of poor financial management.	Includes an inability to design and follow a budget, no future plans for money management (e.g. does not recognize the need for a bank account or budget). Also includes evidence of impromptu spending, likely to engender new debts as well as evidence that the offender will likely prioritize non-essential living expenses (e.g. entertainment, drinking etc) over essential living expenses (i.e. rent, food, bills, clothing etc). Individuals with little money (e.g. will only getting the weekly stipend from the halfway house) could still be rated 'no' if they show evidence of wanting to budget what little money they will receive. Mixed evidence merits a 'somewhat' rating.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
Finances		

Item	Scoring Guidelines	Score
*1. Leisure time will include structured activity.	The offender plans to engage in at least one organized activity (e.g., part of a league, goes to the Y regularly to work out, plays hockey every Tuesday night etc), hobbies, church groups etc. Passive activities, e.g., listening to recorded music or watching TV do not constitute structured activities. CSC-mandated treatment programs do not count. However, planned attendance in non-mandated programs or programs that they attend by choice (e.g., AA) count.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
*2. Plans to spend all or most of free time in structured socializing.	Does not plan to "hang around" with friends or acquaintances (usually in a large and diffuse network) without a designated purpose. Thus, when the offender gets together with friends there will be a specific purpose (e.g., to watch or participate in sports). Thus, there should be a PURPOSE & PLAN associated with socialization patterns to obtain a 'yes' rating.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
*3. Plans to spend most free time at home with his immediate family.	Family includes family of original as well as nuclear family (e.g. parents, spouse, children, and siblings). Include all family members regardless of criminal involvement. Include activities that occur outside the home with the family (e.g. attending hockey games with children etc).	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes

*4. Intends to plan time.	Will not live moment to moment with little concern for the future. A sense of aimlessness, no identifiable goals or milestones in the near or distance future should produce a 'no' rating.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
Leisure Activities		

PROBLEMS		
Item	Scoring Guidelines	Score
1. Anticipates problems in getting along with friends.	"Problems" means evidence of conflict or problems more than ordinary living irritations, or which are not dealt with effectively to mutual satisfaction. Use evidence from interview and Coping Situations Questionnaire. Any evidence of physical or aggressive confrontation <u>requires</u> a score of 'yes'. However, most often this item will be based on interview obtained from the offender during the interview.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
2. Anticipates problems in getting along with partner.	As above. Score "NA" if currently single.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes <input type="checkbox"/> NA
3. Anticipates problems in getting along with family members.	As above. Score "NA" if not in contact. Family includes family of origin as well as nuclear family. However, indicate in the coding manual which family member is problematic if applicable.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes <input type="checkbox"/> NA
4. Anticipate problems in getting along with co-workers or work supervisors.	As above. Score "NA" if no job or educational program pre-arranged. If in school question applies to teachers and/or fellow students.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes <input type="checkbox"/> NA
Interpersonal Issues		

SUPERVISOR COMPLIANCE		
Item	Scoring Guidelines	Score
*1. Appears genuinely motivated to comply with supervision requirements.	Score 'yes' if offender appears generally likely to work with supervisor and really wants to stay out of trouble while under community supervision, or if offender is open to talking about treatment or appears invested in treatment. Score 'no' if you judge that offender is just going through the motions. Supplement with file information if available.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
2. Anticipates problems in	As for items in previous section.	<input type="checkbox"/> no

getting along with supervisor.		<input type="checkbox"/> somewhat <input type="checkbox"/> yes
3. Appears manipulative.	Score 'yes' if the offender has tried to manipulate you, if you have any feeling that he/she is being phony with you, if you have caught him/her in lies or contradictions, if he/she tries to 'play the system', if he/she tries to take control of the interview or tries to be 'buddy buddy' with you or attempts to focus the interview on irrelevant issues.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
*4. Likely to attend scheduled appointments regularly.	Score 'no' if the offender does not appear promptly for appointment, only if you scheduled the appointment with him 'face-to-face' and he doesn't show without a good reason. Also, if he tells you that he doesn't care whether he is late or on time for his parole officer or has no plans to facilitate cooperation with his parole officer rate 'no'. Supplement with file information if available.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
*5. Has realistic release plans.	Score 'yes' if offenders' release plans are clear, definite, and feasible given all relevant circumstances.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
Supervision Compliance	NO = 0; SOMEWHAT = 1; YES = 2 [reverse key then sum (computer generated)]	total

Item	Scoring Guidelines	Score
1. Has no current physical health concerns.	<p>Examples include: dental care, serious illnesses, physical disabilities. Conditions such as Hepatitis C, HIV, liver problems or any currently active life threatening illness should be rated 'yes'.</p> <p>Fixable/temporary medical problems, or illnesses that haven't progressed to the point where daily functioning is impaired should, in most cases be rated 'somewhat' (e.g. arthritis). Exclude addictions.</p>	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
2. Has no current mental health concerns.	<p>Examples include: failure to comply with psychotropic medication, depression, suicide risk, psychiatric symptoms (e.g., hallucinations, disordered thought content). Thus, individuals being treated (with drugs or not) regularly by a psychologist, psychiatrist or medical doctor for a mental disorder (e.g. depression, anxiety, post traumatic stress disorder) would be rated 'no'. Note, that not all offenders who are referred to a psychologist would necessarily be rated 'no' for this item.</p>	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes

**PART B: PRE-RELEASE COPING SCORING GUIDELINES
(Zamble & Palmer, 1996)**

Situation 1

You're living with your partner and having troubles with her. She wants you to do half of the house work, but you're working full time and you're pretty tired every day after you get home.

RESPONSE CATEGORIES AND SCORING GUIDELINES

Benefits: Optimal [+5]	Good [+4]	Some [+3]	Little [+2]	Action W/O [+1]
Costs: None [0]	Minor [-1]	Major [-2]	Extreme [-3]	

- | | |
|---|---------------------------|
| 1. Negotiate or compromise with her. | Benefits = +4: Costs = 0 |
| 2. Help more. | Benefits = +3: Costs = -1 |
| 3. Suggest she give me reasonable duties. | Benefits = +3: Costs = -1 |
| 4. Tell her to do it. | Benefits = +2: Costs = -2 |
| 5. Express own feelings re: worksharing. | Benefits = +3: Costs = -1 |
| 6. Go for a walk, visit a friend (leave field). | Benefits = +3: Costs = -2 |
| 7. Will do my share but won't be used. | Benefits = +3: Costs = -1 |
| 8. Deal with the situation. | Benefits = +1: Costs = 0 |
| 9. I'd do half the work. | Benefits = +3: Costs = -1 |
| 10. Yell at her! Make point clear. | Benefits = +1: Costs = -2 |
| 11. Tell her "Later!" Watch T.V. | Benefits = +2: Costs = -2 |

**ADD 1 category for especially comprehensive responses
DEDUCT 1 category for minimally adequate responses
SCORE ALL DISCERNIBLE RESPONSES SEPARATELY**

Situation 2

You get a new job. It pays well and you enjoy the work, but your supervisor keeps bugging you to work harder. You can feel him watching you all the time, and he's accused you of slacking off several times.

RESPONSE CATEGORIES AND SCORING GUIDELINES

Benefits: Optimal [+5]	Good [+4]	Some [+3]	Little [+2]	Action W/O [+1]
Costs: None [0]	Minor [-1]	Major [-2]	Extreme [-3]	
1. Ask him to clarify faults and solutions				Benefits = +4: Costs = 0
2. Try to improve.				Benefits = +3: Costs = 0
3. Confront! Find out what his problem is.				Benefits = +3: Costs = -2
4. Try to talk to someone else at company.				Benefits = +2: Costs = -2
5. Talk to him.				Benefits = +2: Costs = 0
6. Start looking for a new job				Benefits = +3: Costs = 0
7. Go talk to the union Rep.				Benefits = +3: Costs = -1
8. Put up with it.				Benefits = +2: Costs = -2
9. Talk, listen, he changes or I quit.				Benefits = +3: Costs = -1
10. This would really bother me. (irrel.)				Benefits = +1: Costs = 0
11. Give him an ultimatum that I'll quit.				Benefits = +2: Costs = -2
12. Quit immediately				Benefits = +1: Costs = -2
13. Distance self from the situation				Benefits = +2: Costs = -1
14. Tell him to "Fuck Off!"				Benefits = +1: Costs = -2
15. Report him to the B.B.B.				Benefits = +1: Costs = -2

ADD 1 category for especially comprehensive responses
DEDUCT 1 category for minimally adequate responses
SCORE ALL DISCERNIBLE RESPONSES SEPARATELY

Situation 3

Someone you have known for several years invites you to another guy's house party. He knows the guy but you don't. Your friend says that it will be a really wild party. You're not sure if you want to go with this person because you were never really close friends and you have to work tomorrow.

RESPONSE CATEGORIES AND SCORING GUIDELINES

Benefits: Optimal [+5] Good [+4] Some [+3] Little [+2] Action W/O [+1]
Costs: None [0] Minor [-1] Major [-2] Extreme [-3]

- | | |
|--|---------------------------|
| 1. Tell him I don't want to go. | Benefits = +4: Costs = 0 |
| 2. Wouldn't go. | Benefits = +4: Costs = 0 |
| 3. Go to the party and check it out. | Benefits = +1: Costs = -2 |
| 4. Tell him "Not going, have to work". | Benefits = +4: Costs = 0 |
| 5. Make excuse, thank him, don't go. | Benefits = +3: Costs = 0 |
| 6. Go for a little walk. | Benefits = +1: Costs = -1 |
| 7. Go home, tell friend why. | Benefits = +3: Costs = 0 |
| 8. Don't know. | Benefits = +1: Costs = -1 |
| 9. Wouldn't bother me. | Benefits = +1: Costs = -1 |
| 10. Maybe go, but no alcohol. | Benefits = +2: Costs = -2 |
| 11. Check out my priorities (irrel.) | Benefits = +1: Costs = 0 |
| 12. Take a rain check. | Benefits = +1: Costs = -1 |

ADD 1 category for especially comprehensive responses
DEDUCT 1 category for minimally adequate responses
SCORE ALL DISCERNIBLE RESPONSES SEPARATELY

Situation 4

You really want to stay out of trouble, so you stay away from all the people you used to hang around with before you went to prison. You get along fine with the people at work, but you find it hard to make new friends, and lately you've been feeling all alone. Last night you felt it a lot and it kept you awake most of the night.

RESPONSE CATEGORIES AND SCORING GUIDELINES

Benefits: Optimal [+5] Good [+4] Some [+3] Little [+2] Action W/O [+1]
Costs: None [0] Minor [-1] Major [-2] Extreme [-3]

- | | |
|--|--------------------------|
| 1. Push self to make non-criminal friends. | Benefits = +4: Costs = 0 |
| 2. Find a sport or hobby to do. | Benefits = +3: Costs = 0 |
| 3. Spend more time with family. | Benefits = +3: Costs = 0 |
| 4. Get out, go places, meet people. | Benefits = +3: Costs = 0 |
| 5. No problem! I'm a loner. | Benefits = +1: Costs = 0 |
| 6. Go for a walk. Get out | Benefits = +2: Costs = 0 |
| 7. Go to an A.A. meeting with friends. | Benefits = +4: Costs = 0 |
| 8. New friends will come in time. | Benefits = +1: Costs = 0 |
| 9. Go to a bar. | Benefits = +2: Costs = 2 |
| 10. Read – or otherwise keep busy. | Benefits = +2: Costs = 0 |
| 11. Call someone & talk. | Benefits = +3: Costs = 0 |
| 12. Can't imagine self in this situation. | Benefits = +1: Costs = 0 |
| 13. Don't think about it. (irrel.) | Benefits = +1: Costs = 0 |
| 14. Wouldn't hang around with criminals. | Benefits = +1: Costs = 0 |
| 15. Look for advice on what to do. | Benefits = +2: Costs = 0 |
| 16. Get a dog. | Benefits = +3: Costs = 0 |

ADD 1 category for especially comprehensive responses
DEDUCT 1 category for minimally adequate responses
SCORE ALL DISCERNIBLE RESPONSES SEPARATELY

APPENDIX H: POST-RELEASE INTERVIEW

**RELEASE FOLLOW-UP RESEARCH PROJECT:
POST-RELEASE INTERVIEW**

[for the first follow-up:] I'm sure that you will remember the interview you had about a month ago, just before you were released. Then we asked you lots and lots of questions about your life. I won't need to repeat most of those now, but of course some things have changed. Remember, if I ask any questions that make you feel uncomfortable, please tell me, and we will just skip them.

[for second & third follow-up:] Well here I am again. By now you know the things I'm going to ask. I just want to know what's changed in your life since the last time we spoke, so mostly I just want to know about what's going on now or what's happened recently. This shouldn't take too long, so if you're ready we might as well just get started. OK?

[for fourth follow-up:] I guess you might have been expecting me to ask to talk with you again about now, so here I am. If you don't remember, the good news is that this is the last time I'll be bothering you with these questions.

[remember to keep track of problem areas for summary at end of interview; even before the interview it may be a good idea to do the file review to have an idea where the offender's problem areas are]

PART A: EMPLOYMENT

1. Are you working now, or going to school?
**[if yes], tell me about what you do/what you are taking?

IF WORKING:

2. How would your boss describe you?
 - ** Would they say you are a reliable employee?
 - **Would they say you are a hard worker?
 - **Have they ever accused you of being drunk or hung over at work/school?
 - **Have they ever complained about being late?
 - **Would they say you are the kind of person who takes pride and personal satisfaction in a job well done?
3. Do you enjoy this work?
 - **Are you presently looking for another job?
 - **Aside from the financial problems it would produce, how would you feel if you lost this job?
 - **What do you like most about the job?
 - **What do you like least about the job?

1. Does this job play an important role in your life?
 - **Why/why not?
 - **Do you believe it's important to work hard all the time, regardless of whether the boss is or isn't around?
 - **Do you get personal satisfaction out of work or is it purely a means to pay the bills?

5. Have you had any problems with your boss/co-workers/employees?
 - **Describe

IF IN SCHOOL:

6. How would your teacher describe you?
 - ** Would they say you are a good student with good grades?
 - **Would they say you are a hard worker--spend lots of time studying?
 - **Have they ever accused you of being drunk or hung over at work/school?
 - **Do you take pride and personal satisfaction when you do well on a test/assignment?

7. Do you enjoy this course/program?
 - **Why/why not?
 - **How would you feel if you didn't pass the course or were forced to withdraw for whatever reason?
 - **What do you like most about the course?
 - **What do you like least about the course?

8. Does school play an important role in your life?
 - **Why/why not?
 - **Do you believe it's important to get good grades in school or is just important to pass?
 - **Do you get personal satisfaction when you do well on a test?

9. What sort of problems have you had at school?
 - **Do you get along with your teacher/classmates?

IF UNEMPLOYED:

10. What type of work are you looking for?
 - **On average, how much time do you spend looking for work?
 - **Do you have a 'job search' plan?
 - **How many interviews have you had?
 - **How many resumes have you sent out?
 - **Have you had any promising leads?
 - **Are you on a waiting list for school?

11. What sort of problems have you had looking for work/school?
 - **Do you have any barriers to finding a job or getting into school?

12. Is it important for you to find a job/get enrolled in a program?
 - **Why/why not?
 - **Are you feeling anxious or nervous because you haven't found a job yet/been enrolled?

13. Do you think that work should play an important role in your life?

**Why/why not?

**Do you believe in the value of hard work?

PART B: FINANCES

1. What is your main source of income now?

**social assistance?

2. Do you have enough money to live on? Are you managing to get through the month?

3. Do you have any unpaid loans or debts [ask about legal and illegal]?

4. Do you have a bank account?

5. What do you usually do with your money when you get paid?

PART C: ACCOMODATIONS:

1. How many different places have you lived in since you have been released?

_____ [enter number]

2. What sort of place are you currently living in?

**Would you describe it as a classy place or a dive?

**Is it clean? For example, do you have any problems with cockroaches or mice?

3. What's your neighbourhood like?

**Would you describe it as a high crime area?

**Does it have a reputation for drug dealers or prostitutes?

**Do you have to worry about getting beaten up or broken into?

**Would you worry about your children (if you had kids) playing outside on the street?

4. Have you had any other problems with your place?

5. Who are you currently living with?

**Have you had any problems with them?

6. If you had to rate your new accommodations on a 7-point scale, ranging from 1 to 7, where 1 represents "extremely unsatisfied" and 7 means "completely satisfied", what number would you pick?

PART D: LEISURE ACTIVITIES

All right, now I am interested in what you do in your spare time, that is, when you're not working.

1. How have you been spending your spare time?
2. How much time have you been spending at home with your family/children/partner?
**On average, how many hours per week?
3. Are you spending any time with friends?
**[If yes] doing what? Particular things or just hanging out?
**How much time each week [specify hours]?
4. In the past month, what sort of problems have you had with friends?
5. Are you in any organized activities like sports/hobbies?
**[If yes] What?
**How many hours per week?
6. Do you like to plan your time or just let things happen as they may?
7. What are your short-term goals?
8. What are your long-term goals?

PART E: SOCIAL SUPPORT SCHEME (SSS)

[focus on top four; exclude children if it is obvious the child is too young to provide any type of social support to the offender]

1. In addition, to whom you have mentioned above is there anyone else you have been spending your free time with [i.e. who do you watch TV with/play sports etc]? [measures social support; don't need their whole names, just first names or initials]
2. Who has helped you out during the last month [e.g. lent you money, let you stay at their place, driven you some where]?
[measures instrumental support; material aid]
3. Who has cheered you up when you needed it? Or who have you been able to talk to about a problem you were having (e.g. bad day at work)?
[emotional support; non-material aid]
4. Who have you received information from?(e.g. get social assistance, write a resume, find a job)?
[informational support]
5. Have you had any problems with any of these people?
**Your family? Your partner?
**Any arguments?

2. On a 7-point scale where 7 = 'very satisfied' and 1 = 'not satisfied at all', how satisfied are you with this relationship?

IF SINGLE

3. Does it bother you that you're single?
**Has being single caused any problems for you?
**Do you ever get lonely?

PART H: SUPERVISION

1. What special terms were attached to your release/have there been any changes since we last spoke?
a. Are these rules hard to keep?
b. Do you cheat, just a little [**go to substance abuse section if relevant**]?
2. Who is your parole officer?
3. How often do you meet?
4. What sort of problems have you had with your supervision or parole officer?
5. On a scale of 1 to 7, how good a job do you think your parole officer is doing where 1 = not good at all and 7 = extremely well?

_____ [enter rating]

6. On a scale of 1 to 7, how satisfied do you think your parole officer is with your behaviour so far, where 1 = not satisfied at all and 7 = extremely satisfied?

_____ [enter rating]

PART I: SUBSTANCE ABUSE

[only probe if you need additional information, most likely will have been addressed in the context of supervision section]

1. Have you had any alcohol since you have been released?
a. If yes, how much do you drink on a usual drinking day?
b. If yes, how many days during the last month have you drunk your usual amount?
2. Have you gone on any binges, that is, you drank a lot on one or a few days, and then stopped for a while? [**if yes**]
**How many times?
**Once or twice?
**Several times/Regularly?

3. What about drugs? Have you used any since you have been out?

**If yes, what type?

**How many times

**Once or twice?

**Several times?

**Regularly?

4. [If offender denies any use ask:] Have you been tempted to have just a drink or two, or a toke here and there?

PART J: HEALTH

1. Currently, how are you health-wise?

2. Are you taking any kind of medication?

3. Have you been seen by a psychologist or psychiatrist?

**For what?

4. Are you currently in any kind of treatment program or on you a waiting list?

If yes,

**Is it helping/will it help?

**Why/why or not?

If no,

**Do you think treatment can help guys stay out of trouble?

**Why/why or not?

PART K: ATTITUDES

[goal: have offenders answer questions in regards to own personal experience. First in regards to the future- 'What if you started committing crime again', if they deny this possibility ask them to talk about their own past experiences', if this fails ask them to talk about offenders in general]

1. What are some of the bad things that could happen to people who commit crime?

[write answer verbatim]

[Now ask the following question for each different response provided in question 1]

2. On a scale of 1 to 10, what do you think the chances are that **[response(s) to #1]** will occur where 1 = no chance and 10 = absolutely?

Answer	Rating (1 - 10)
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

3. On a scale of 1 to 10, how bad would it be if **[response(s) to #1]** happened where 1 = not bad at all and 10=extremely bad?

Answer	Rating (1 - 10)
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

4. What are some of the good things that could happen to people who commit crime?
[write answer verbatim; cue if necessary—i.e. money, respect etc]

[Now ask the following question for each different response provided in question 4]

5. On a scale of 1 to 10, what do you think the chances are that **[response(s) to #4]** will occur Where 1 = no chance and 10 = absolutely?

Answer	Rating (1 - 10)
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

6. On a scale of 1 to 10, how good would it be if **[response(s) to #4]** occurred where 1 = not good at all and 10=extremely good.

Answer	Rating (1 - 10)
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

PART M: COPING INTERVIEW

[ask these questions for at least two problems as they arise in the interview. Try to select different types of problems-don't pick 2 interpersonal problems. In general, if all other things are equal, interpersonal, financial, substance abuse and employment problems should be given preference. Probing is very important here]

1. When _____ [first problem] occurs, what do you do?
2. What happens then?
3. What else do you do?
4. Do you ever do things to deal with how _____ [the problem] is making you feel?
**If yes, what?
5. Do you ever do something to avoid the problem, or to give yourself something else to do so **you won't think about it?**
**If yes, what?
6. Do you ever do anything to try to solve or improve the problem?
**If yes, what?
7. Is there anything else that you ever do about this problem, something that you haven't **mentioned yet?**
**If yes, what?

[SECOND PROBLEM]

1. When _____ occurs, what do you do?
2. What happens then?
3. What else do you do?
4. Do you ever do things to deal with how _____ [the problem] is making you feel?
**If yes, what?
5. Do you ever do something to avoid the problem, or to give yourself something else to do so **you won't think about it?**
**If yes, what?
6. Do you ever do anything to try to solve or improve the problem?
**If yes, what?
7. Is there anything else that you ever do about this problem, something that you haven't mentioned yet?
**If yes, what?

PART N: GENERAL QUESTIONS

I've got a couple of general questions for you.

If I asked you to rate your life in the past month on a 7-point scale, what number would you give it?
[where 7 = excellent and 1 = poor]

_____ [enter rating]

2. On a 7 point scale, now that you are out, what do you think are the chances you will be returning to prison? [where 7 = very likely and 1 = not likely at all]

_____ [enter rating]

Well, finally that's all the questions I have. I really appreciate your giving your time and your bearing with me for so many questions. Now that I've finished, you might have some questions of our own to ask me, or you might have thought of something important that I forgot to ask you about. Do you have any questions or comments before you leave now?

Thanks once again. Remember that we will see you again in a couple of months. Good luck.

Interview comments/observations

APPENDIX I: POST-RELEASE CODING MANUAL

**RELEASE FOLLOW-UP RESEARCH PROJECT:
POST-RELEASE CODING MANUAL**

This page is to be detached & stored securely after completion, along with the consent form. It is the sole means of identifying individual subjects.

Offender Research ID number _____

Offender Name _____

FPS _____

Parole Officer Research ID number _____

Parole Officer Name _____

- First Community Interview (CI)
- Second CI
- Third CI
- Fourth CI

Date offender interviewed in community _____

Date parole officer interviewed in community _____

Date of community OMS review _____

Location of community interview _____

Name of post-release interviewer _____

Post--T _____
IDNO_offender _____
IDNO_parole officer _____

Part A: Demographic & Tracking Information

1. Current community supervision agency
 1. Ottawa Area Parole Office
 2. Downtown Toronto
 3. Team Supervision Unit
 4. Peel
 5. Keele CCC
 6. Toronto East
 7. Toronto West
 8. York/Durham (Oshawa office)
 9. Other, _____

2. Current marital status
 1. legally married
 2. common law [#months _____]
 3. separated/divorced/widowed
 4. girlfriend/boyfriend [#months _____]
 5. single
 6. other, specify _____

3. Current living accommodation
 1. house or apartment (owned or rented)
 2. room in boarding house, shelter, or hostel
 4. institution or half-way house, specify, _____
 5. moving around, no permanent address
 6. other, specify _____

4. Number of difference residences *since* release _____

5. Living companions
 1. nuclear family (wife, common-law, children)
 2. family of origin (parents or other family)
 3. friends
 4. alone
 5. strangers (i.e. in a hostel or half-way house)

Part B: Offender ratings obtained during interview

1. Parole officer performance rating _____
2. Parole officer satisfaction rating _____
3. Quality of life rating _____
4. Return to prison rating _____

Part C: Problem Survey Checklist-Offender & OMS based only

[see scoring guidelines in manual]

Interpersonal Support (Marital/Family)

1. Monogamous relationship
 0. no
 1. yes
2. The partner is noncriminal.
 0. no
 1. yes (rate yes if single)
3. The offender is satisfied with current relationship situation
 0. no
 1. somewhat
 2. yes
4. Partner is supportive.
 0. no (rate no if single or partner unsupportive)
 1. somewhat
 2. yes
5. Offender is close to family.
 0. no **[if not in contact]**
 1. somewhat
 2. yes, specify family members _____
6. Family of origin is noncriminal
 0. no
 1. somewhat
 2. yes
 8. NA (no contact)

7. Family is personally supportive of the offender

0. no

1. somewhat

2. yes, specify family members _____

Employment/Education

1. Has the basic physical, intellectual, educational, and/or vocational skills to secure steady employment or attend a full time educational or vocational program.

0. no

1. somewhat

2. yes

2. Has secured full time employment or has enrolled in a full time educational or vocational program in the community.

0. no

1. somewhat

2. yes

8. not applicable [e.g., on permanent disability]

3. Well motivated toward work or education.

0. no

1. somewhat

2. yes

8. not applicable

4. Strong personal investment in work or education.

0. no

1. somewhat

2. yes

8. not applicable

5. Is generally satisfied with current job/educational program

0. no

1. somewhat

2. yes

8. not applicable

Substance Use

1. Completely abstains from alcohol use or is best described as a social drinker

0. no

1. somewhat

2. yes

2. Has a binge-drinking problem.
 0. no
 1. somewhat
 2. yes

3. There is evidence of a chronic alcohol problem.
 0. no
 1. somewhat
 2. yes

4. Completely abstains from drug use, or uses recreational drugs only.
 0. no
 1. somewhat
 2. yes

5. Has a binge drug-use problem.
 0. no
 1. somewhat
 2. yes

6. There is evidence of a chronic drug problem
 0. no
 1. somewhat
 2. yes

Accommodations

1. Has a legal mailing address
 0. no
 1. yes
 9. not known

2. Is currently living in a relatively healthy and sanitary environment.
 0. no
 1. somewhat
 2. yes

3. Is currently living in a relatively crime-free neighborhood.
 0. no
 1. somewhat
 2. yes

4. Is at least moderately satisfied with his living situation.
 0. no
 1. somewhat
 2. yes

Finances

1. Is on some form of social assistance [**OSSAP does not count as a form of social assistance**]
 0. no
 1. somewhat
 2. yes

2. Is currently experiencing financial stress.
 0. no
 1. somewhat
 2. yes

3. Evidence of poor financial management
 0. no
 1. somewhat
 2. yes

Leisure Activities/Time use

1. Leisure time includes structured activity
 0. no
 1. somewhat
 2. yes

2. Spends all or most of free time in structured socializing.
 0. no
 1. somewhat
 2. yes

3. Spends most of free time at home with immediate family.
 0. no
 1. somewhat
 2. yes

4. Plans time.
 0. no
 1. somewhat
 2. yes

Interpersonal conflict

1. Has problems in getting along with friends.
 0. no
 1. somewhat
 2. yes

2. Has problems in getting along with partner.

- 0. no
- 1. somewhat
- 2. yes
- 8. NA

3. Has problems in getting along with family members.

- 0. no
- 1. somewhat
- 2. yes
- 8. NA

4. Has problems in getting along with co-workers or supervisors.

- 0. no
- 1. somewhat
- 2. yes
- 8. NA

Supervision Compliance/Self Management

1. Appears genuinely motivated [engaged] to comply with supervision requirements

- 0. no
- 1. somewhat
- 2. yes

2. Has problems in getting along with parole supervisor

- 0. no
- 1. somewhat
- 2. yes

3. Appears manipulative.

- 0. no
- 1. somewhat
- 2. yes

4. Attends scheduled appointments regularly.

- 0. no
- 1. somewhat
- 2. yes

5. Has realistic goals/plans

- 0. no
- 1. somewhat
- 2. yes

Physical/Mental Health Needs

1. Has no physical health concerns.

- 0. no
- 1. somewhat
- 2. yes

2. Has no mental health concerns.

- 0. no
- 1. somewhat
- 2. yes

Part D: Coping Interview

[remember to score each different coping response provided by the offender, see scoring guidelines]

Situation 1: _____

1. ___ 2. ___ 3. ___ 4. ___ 5. ___ Benefit score
1. ___ 2. ___ 3. ___ 4. ___ 5. ___ Cost score

Situation 2: _____

1. ___ 2. ___ 3. ___ 4. ___ 5. ___ Benefit score
1. ___ 2. ___ 3. ___ 4. ___ 5. ___ Cost score

PART E: Expected Value of Crime

[transcribe relevant information generated from the interview here, remember to specify the consequence that the offender provided]

Negative consequence #1 (specify) _____
Probability rating: _____ Badness rating: _____

Negative consequence #2 (specify) _____
Probability rating: _____ Badness rating: _____

Negative consequence #3 (specify) _____
Probability rating: _____ Badness rating: _____

Negative consequence #4 (specify) _____
Probability rating: _____ Badness rating: _____

Negative consequence #5 (specify) _____
Probability rating: _____ Badness rating: _____

Negative consequence #6 (specify) _____
Probability rating: _____ Badness rating: _____

Negative consequence #7 (specify) _____
Probability rating: _____ Badness rating: _____

Negative consequence #8 (specify) _____
Probability rating: _____ Badness rating: _____

Negative consequence #9 (specify) _____
Probability rating: _____ Badness rating: _____

Negative consequence #10 (specify) _____
Probability rating: _____ Badness rating: _____

Positive consequence #1 (specify) _____
Probability rating: _____ Goodness rating: _____

Positive consequence #2 (specify) _____
Probability rating: _____ Goodness rating: _____

Positive consequence #3 (specify) _____
Probability rating: _____ Goodness rating: _____

Positive consequence #4 (specify) _____
Probability rating: _____ Goodness rating: _____

Positive consequence #5 (specify) _____
Probability rating: _____ Goodness rating: _____

Positive consequence #6 (specify) _____
Probability rating: _____ Goodness rating: _____

Positive consequence #7 (specify) _____
Probability rating: _____ Goodness rating: _____

Positive consequence #8 (specify) _____
Probability rating: _____ Goodness rating: _____

Positive consequence #9 (specify) _____
Probability rating: _____ Goodness rating: _____

Positive consequence #10 (specify) _____
 Probability rating: _____ Goodness rating: _____

PART F: Social Support Scheme

[For each separate individual identified in the interview record the following]

Person	Criminal	Support	Part S, #6 'Contact'	Part S, #7 'Respect'	Part S, #8 'Upset'	Part S, #9 'Comply'	Part S, #10 'Satisfaction'

Codes for Person

- 1. wife/girlfriend
- 2. family (specify)
- 3. friend
- 4. co-worker/supervisor
- 5. acquaintance
- 6. CSC staff (inc. contract)
- 7. Other service provider (specify)
- 8. Other (specify)

Codes for Criminal

- 0. prosocial
- 1. criminal

Codes for Support

- 1. social
- 2. instrumental
- 3. emotional
- 4. information

PART G: Perceived Problem Level

[enter 7 point rating obtained from interview]

- 1. ___ Family – parents or siblings
- 2. ___ Wife partner or other relationship (or lack of)
- 3. ___ Work – co-workers or boss/supervisor
- 4. ___ Work – work itself (or lack of it)
- 5. ___ Friends
- 6. ___ Accommodations – physical
- 7. ___ Accommodations – other people (co-habitants, neighbours)
- 8. ___ Money or finances
- 9. ___ Drugs or alcohol
- 10. ___ Health – physical

11. ___ Health – emotional or psychiatric
12. ___ Supervision – terms
13. ___ Supervision – supervisor
14. ___ Boredom
15. ___ Other, specify _____
16. ___ Other, specify _____

APPENDIX J: POST-RELEASE SCORING GUIDELINES

POST-RELEASE SCORING GUIDELINES

PART A: PROBLEM SURVEY CHECKLIST

- Avoid missing data as much as possible.
- Write as much as you can verbatim on the interview schedule.
- Use all available information (OMS file review and interview). When information is conflicting follow the following procedures as outlined in the PCL-R manual "occasionally there are large discrepancies between the interview and collateral information. If it is possible to determine that one source of information is more credible than the other, the greater weight is given to information from the more credible source. Otherwise, preference is given to the source most suggestive of psychopathology, on the assumption that the majority of people tend to underreport or minimize pathological behaviour" (p. 6, Hare, 1991). Ensure that the OMS information is 'new' and only pertains to the time period of interest.
- Do not include information obtained from the verbal interview conducted with the parole officer. Only use information obtained from an official progress summary report or some other CSC document that was completed by the parole officer and is available on OMS for the period of interest.

Item	Scoring Guidelines	Score
*1. In a monogamous relationship.	Must be legally married or in a common-law relationship, or be with a serious (non-cohabiting) regular sexual partner. No minimum timeframe is required, but rather evidence of a commitment to one person. Answer no for separated, divorced or single offenders. Offenders with a partner but are unfaithful are still rated yes.	<input type="checkbox"/> no <input type="checkbox"/> yes
*2. Does not have a criminal partner.	"Partner" includes a spouse as defined in item 1, or a serious (non-cohabiting) regular sexual partner. The partner should be engaged in non-criminal lifestyle, and there must be absolutely no evidence (official or nonofficial) of criminal involvement. Thus, has never been arrested, charged, or convicted. Score 'yes' if offender is currently single, divorced or separated.	<input type="checkbox"/> no <input type="checkbox"/> yes
*3. The offender is satisfied with current relationship situation.	Offenders who rate their relationship as 6 or above in the interview are scored 'yes', 2 or below are scored 'no', and between 3 and 5 are scored 'somewhat'. Offenders who are satisfied with being single are rated yes. Don't forget to rate single offenders in terms of how satisfied/dissatisfied they are with being single. Thus, no one should be rated as NA for this item.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes

<p>*4. Partner supportive.</p>	<p>Partner appears actively supportive and encouraging of offender's efforts to maintain non-criminal behaviour, giving time and material support to this end. Partner also discourages criminal values, cognitions, or associations. Score 'somewhat' if support is present but passive, or if evidence uncertain. Score 'no' if offender single. Use information from the Social Support Scheme (SSS) to supplement information obtained during marital/family section of interview.</p>	<p><input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes</p>
<p>*5. Offender is close to family.</p>	<p>Offenders who are not in touch or only irregularly in contact with family are rated 'no', if regularly in contact (at least once per week) but not involved in each other's lives. Rate 'somewhat'; rate yes if offender is in contact frequently and is involved in each other's lives (e.g. do things together, knows what's going on in each other's lives etc). Family includes family of origin AND children from current nuclear family. Make sure to specify who the family members are in the space provided even if rated 'somewhat'. Do not include the offender's partner as she/he is accounted for above in question #4. Ex-partners are not considered 'family' for this item. However, if an ex-partner is providing support they should be accounted for in the Social Support Scheme (SSS). Contact includes phone calls but it should be specified in the coding manual if the contact is only by telephone (write in beside numeric answer).</p>	<p><input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes</p>
<p>*6. Family members are noncriminal.</p>	<p>In order to be classified as criminal there must be absolutely no evidence (official or nonofficial) of criminal involvement by parents, siblings, cousins, grandparents etc or if applicable, children (must be over 18) from the nuclear family. The family members should be engaged in non-criminal lifestyle. Score NA if not in contact. It is important to rate NA if offender is currently not in contact.</p>	<p><input type="checkbox"/> no <input type="checkbox"/> yes <input type="checkbox"/> NA</p>

<p>*7. Family is personally supportive of the offender.</p>	<p>The family is currently providing living accommodations, material aid, or financial support. Score 'no' if no contact. There is at least one family member whom the offender depends on for emotional support and guidance. Family includes family of origin but could also include children from current nuclear family provided that the child is no longer a dependent (i.e. over 18 years of age). Family does NOT include current partner or ex-partner. However, if an ex-partner is providing support it should be recorded in the Social Support Scheme (SSS). Specify who the family members are in the space provided even if rated 'somewhat'.</p>	<p><input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes</p>
<p>EMERGENCY EMPLOYMENT</p>		

EMERGENCY EMPLOYMENT		
Item	Scoring	Score
<p>*1. Has the basic physical, intellectual, educational, and/or vocational skills to secure steady employment or attend a full time educational or vocational program.</p>	<p>The purpose of this item is to determine whether the offender suffers from any rudimentary barriers that prevent him/her from obtaining steady employment. Examples of potential barriers include: physical disability, poor hygiene, intellectual impairment, learning disability, absence of a marketable skill or trade, or insufficient education. It is important to note that simply possessing one or more of these criteria does <u>not</u> merit an automatic scoring of 'no'. There must be clear evidence that the barrier(s) clearly interfere with the offender's ability to secure steady employment. Offenders currently employed in a full or part time position would typically be rated 'yes'.</p>	<p><input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes</p>
<p>*2. Has secured full time employment or has enrolled in a full time educational or vocational program in the community.</p>	<p>Requires a minimum of 30 hours per week for full-time, and at least 16 hours for part-time work/half-time enrollment. Score 'somewhat' for part-time employment/enrollment. For individuals who aren't working full time nor technically working part time but rather are working somewhat sporadically (e.g. works when odd jobs become available, may be under the table jobs of short duration-'fixed my neighbor's car etc) try to get the offender to estimate on average how many days per week he has been working at these jobs. However, on the most part these individuals should be rated at least 'somewhat' unless the duration of their sporadic employment is limited, in which case they would probably be rated 'no'.</p>	<p><input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes</p>

*3. Well motivated toward work or education.	Appears to take pride and personal satisfaction for a job well done. Indications include: punctual and regular in appearing for work; rarely if ever hung over at work; described by superiors as diligent, hard working. Score based on current job or if unemployed, on degree of motivation associated with finding a job [i.e. sends out lots of resumes, spends a lot of time looking for work etc]. Also, consider how long it took him to find employment following release. If offender is both working and going to school rate which one occupies most of his time.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
*4. Strong personal investment in work or education.	Highly involved or personally invested in his work/education. Values work for it's own sake. Believes in the value of hard work, rather than just job as means to an end. For example, responses such as 'I work for a pay cheque' in the absence of additional comment would be rated 'no'. Work/school may even have played a central role in his life. Score based on current job or if unemployed, current attitude towards work in general. If offender is both working and going to school rate which one occupies most of his time.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
*5. Is generally satisfied with current job/educational program.	The offender expresses positive (and few if any negative) thoughts or feelings about current job/education program. Shows no desire to look for another job/program. If unemployed/not in school rate as NA. If offender is both working and going to school rate which one occupies most of his time. Alternatively, if offender dedicates equal amounts of time to both school and work consider both. If he likes school but not work rate as 'somewhat'.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes <input type="checkbox"/> NA
Employment	NO = 0, SOMEWHAT = 1, YES = 2	total

SUBSTANCE USE		
Item	Scoring Guidelines	Score
*1. Completely abstains from alcohol use or is best described as a social drinker.	Has no more than 4 drinks (one per hour) on any drinking occasion. Weekly consumption may not exceed more than 12 drinks. Absolutely no evidence that drinking interferes with any aspect of his life. Underline in the coding manual whether they are abstainers or social drinkers.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
2. Has a binge-drinking problem.	Heavy drinking (5 or more drinks for one or several days) followed by a period of abstinence. Although these individuals can control when a binge drinking	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes

	session will occur they are unable to control the amount they consume during a drinking episode. One binge episode merits a rating of 'somewhat'. More than one binge episode merits a rating of 'yes'.	
3. There is evidence of a chronic alcohol problem.	Uses alcohol (5 or more drinks) daily or near daily. Evidence for loss of control, increased tolerance to alcohol, repeated withdrawal symptoms, or other physical, social or psychological problems.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
*4. Completely abstains from drug use, or uses recreational drugs only.	Has not used illegal drugs, or has only used forms of cannabis, but no more than twice a week. No evidence of drug interference in any aspect of life. Abuse of medically prescribed drugs merits a rating of no. Underline whether they completely abstain or whether they use recreational drugs only, if so, specify nature and frequency of recreational drug use (e.g. pot twice a week) in the coding manual.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
5. Has a binge drug-use problem.	Heavy drug use for one or several days in a row, followed by a period of abstinence. One binge episode merits a rating of 'somewhat'. More than one binge episode is a 'yes'.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
6. There is evidence of a chronic drug problem.	Evidence of inability to abstain from drug use on a daily or near daily basis. Reported daily or near daily use of cannabis merits a yes rating. Evidence of loss of control, increased tolerance to drugs, withdrawal symptoms, or other physical, social or psychological problems.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
Substance Use		

Item	Scoring Guidelines	Score
*1. Has a legal mailing address.	Essentially, the answer will be yes for all offenders except those who are of 'no fixed address'.	<input type="checkbox"/> no <input type="checkbox"/> yes
*2. Lives in a relatively healthy and sanitary environment.	The answer is yes if the offender resides in a dwelling that is structurally safe, has hot running water, sufficient heat, is not infested, not over crowded, not overly loud, nor prone to frequent maintenance problems.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
*3. Lives in a relatively crime-free neighborhood.	Evidence of living in a relatively crime-free neighborhood includes absence of regular police patrols, drug dealers, prostitutes, absence of frequent break-ins or muggings, or the offender does not perceive the area as being particularly high in crime.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes

<p>*4. Is at least moderately satisfied with his living situation.</p>	<p>Offenders who rate their living situation as 6 or above in the interview are scored 'yes', 2 or below are scored 'no', and between 3 and 5 are scored 'somewhat'. However, must also consider all information provided by the offender during the interview. For example, if an offender complains about numerous aspects of his current living situation but provides a rating above 6 when asked to do so a rating of 'somewhat' is most likely justified.</p>	<p><input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes</p>
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Item	Scoring Guidelines	Score
<p>1. Is on some form of social assistance.</p>	<p>Social assistance includes welfare assistance, family benefits allowance, worker's compensation, unemployment insurance, disability pensions, Old Age Security, or Canadian Pension Plan. Exclude student loans or anything else that has to be paid back. If receiving CPP please make a written note in the appropriate section of the coding manual.</p>	<p><input type="checkbox"/> no <input type="checkbox"/> yes</p>
<p>2. Is experiencing financial stress.</p>	<p>Possibility of bankruptcy, bank foreclosure on any assets, or has accumulated substantial debts. Also, evidence (as indicated by the offender in most circumstances) that income is inadequate to provide basic needs. Each offender should be evaluated individually regardless of whether or not they are receiving the exact same amount of money (i.e. halfway house residents each receiving \$28.00 per week). It is the offender's perception combined with collateral information (if available) that matters. For example, an individual who has debts, has no job lined up and is worried about his current situation would be rated 'yes'. Whereas someone with no debts, good education/job lined up and not stressed would be rated no. A rating of somewhat would be assigned to someone who has some debts, has a job lined up and may or may not be worried about financial situation.</p>	<p><input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes</p>

3. Evidence of poor financial management.	Includes: inability to design and follow a budget, no current plans for money management (absence of a bank account is a likely but not sufficient indication of poor financial management). Also includes evidence of impromptu spending, likely to engender new debts as well as evidence that the offender prioritizes non-essential living expenses (e.g. entertainment, drinking etc) over essential living expenses (i.e. rent, food, bills, clothing etc). Individuals with little money (e.g. only getting the weekly stipend from the halfway house) could still be rated 'no' if they show evidence of trying to budget what little money they have. Mixed evidence merits a 'somewhat' rating.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
Finances		Total

FINANCIAL MATTERS		
Item	Scoring Guidelines	Score
*1. Leisure time includes structured activity.	The offender currently engages in at least one organized activity (part of a league, goes to the Y regularly to work out, plays hockey every Tuesday night etc), hobbies, church group. Passive activities, e.g., listening to recorded music or watching TV do not constitute structured activities. CSC-mandated treatment programs do not count. However, attendance at non-mandated programs or programs that offender attend by choice (e.g., A.A) count.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
*2. Spends all or most of free time in structured socializing.	Does not "hang around" with friends or acquaintances (usually in a large and diffuse network) without a designated purpose. Thus, when the offender gets together with friends there is usually a specific purpose (e.g., to watch or participate in sports). Thus, there should be a PURPOSE & PLAN associated with socialization patterns to obtain a 'yes' rating.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
*3. Spends most free time at home with his immediate family.	Family includes family of original as well as nuclear family (e.g. parents, spouse, children, and siblings). If the offender is spending this time with a criminal family member score this question as 'no'. Include activities that occur outside the home with the family (e.g. attending hockey games with children etc).	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes

*4. Plans time.	Does not live moment to moment with little concern for the future. A sense of aimlessness, no identifiable goals or milestones in the near or distance future should produce a 'no' rating.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes

INTERPERSONAL CONFLICT		
Item	Scoring Guidelines	Score
1. Has problems getting along with friends.	"Problems" means evidence of conflict or problems more than ordinary living irritations, or which are not dealt with effectively to mutual satisfaction. Use evidence from interview and coping interview if relevant. Any evidence of physical or aggressive confrontation <u>requires</u> a score of 'yes'. However, most often this item will be based on interview obtained from the offender during the interview.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
2. Has problems getting along with partner.	As above. Score "NA" if currently single.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes <input type="checkbox"/> NA
3. Has problems getting along with family members.	As above. Score "NA" if not in contact. Family includes family of origin as well as nuclear family. However, indicate in the coding manual which family member is problematic if applicable.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes <input type="checkbox"/> NA
4. Has problems getting along with co-workers or work supervisors.	As above. Score 'NA' is unemployed or not in school. If in school question applies to teachers and/or fellow students.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes <input type="checkbox"/> NA
Interpersonal Conflict		

SUPERVISION COMPLIANCE/SELF-MANAGEMENT		
Item	Scoring Guidelines	Score
*1. Appears genuinely motivated to comply with supervision requirements.	Score 'yes' if offender works well with supervisor and really wants to stay out of trouble while under community supervision or if parole officer rates offender's overall compliance as a 5 or 6. Score 'no' if you judge that offender is just going through the motions. Supplement with file information if available.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
3. Has problems getting along with supervisor.	As for items in previous section for offenders.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
4. Appears manipulative.	Score 'yes' if the offender has tried to manipulate you, if you have any feeling that he/she is being phony with you, if you have caught him/her in lies or contradictions, if he/she tries to 'play the system', if he/she tries to take control of the interview or tries to be 'buddy buddy' with you or attempts to focus the interview on irrelevant issues.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
*5. Attends scheduled appointments regularly.	Score 'no' if the offender does not appear promptly for appointment, only if you scheduled the appointment with him 'face-to-face' or 'over the phone' and he doesn't show without a good reason. Also, if he reports being late or not showing up at all for his regular meetings with his parole officer rate 'no'. Supplement with file information if available.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
*6. Has realistic short and long term goals.	Score 'yes' if offender's current plans are clear, definite, and feasible given all relevant circumstances.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
Supervision Compliance	NO = 0 SOMEWHAT = 1 YES = 2 (reverse by then sum (computer generated))	total

Item	Scoring Guidelines	Score
*1. Has no physical health concerns.	Examples include: dental care, personal hygiene, serious illnesses, physical disabilities. Conditions such as Hepatitis C, HIV, liver problems or any currently active life threatening illness should be rated 'yes'. Fixable/temporary medical problems, or illnesses that haven't progressed to the point where daily functioning is impaired should, in most cases be rated 'somewhat' (e.g. arthritis). Exclude addictions.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
*2. Has no mental health concerns.	Examples include: failure to comply with psychotropic medication, depression, suicide risk, psychiatric symptoms (e.g., hallucinations, disordered thought content). Thus, individuals being treated (with drugs or not) regularly by a psychologist, psychiatrist or medical doctor for a mental disorder (e.g. depression, anxiety, post traumatic stress disorder) would be rated 'yes'. Note, that not all offenders who are referred to a psychologist would necessarily be rated 'yes' for this item.	<input type="checkbox"/> no <input type="checkbox"/> somewhat <input type="checkbox"/> yes
Health		

PART B: COPING SCORING GUIDELINES

Benefits

+5 = An optimal response--"long-term and general remediation of problem situation and/or relief of emotional distress is likely"

+4 = good/generally effective--"may provide some long-term partial remediation or relief, or short-term general remediation or relief, however, could be improved"

+3 = some usefulness--"short-term and partial remediation or relief is likely, but responses have substantial limitations"

+2 = little/ineffective action--"some action is apparent; but very little remediation or relief is likely"

+1 = none--"either no action, or action is unrelated to problem and provides no likely remediation or relief"

Costs

0 = none

-1 = minor risk/cost = 'short-term exacerbation'

-2 = major risk/cost = 'short-term major exacerbation or long-term minor exacerbation'


-3 = extreme risk/cost = 'long-term and major exacerbation; catastrophic outcome likely'

- The scale rates coping efficacy: the degree to that a person can successfully alleviate distress (both short and long-term) associated with a given problem.
- Although short-term solutions generate some benefit they will rarely warrant a rating of +4 or +5
- Coping responses that have the **potential** to make the original problem **worse** merit a negative rating. As the likelihood and immediacy of the consequence increase so will the degree of the negative rating. Thus, avoidance/escape coping responses should usually merit at least a minor cost rating (-1). This is based on the assumption that the failure to deal with a problem will eventually make it worse in the long-term.

APPENDIX K: PERCEIVED STRESS SCALE

PERCEIVED STRESS SCALE (PSS)
(Cohen, Kamarck, & Mermelstein, 1983)

The questions in this scale ask you about your feelings and thoughts during the last two weeks. In each case, you will be asked to indicate how often you felt or thought a certain way. Although some of the questions are similar, there are differences between them and you should treat each one as a separate question. The best approach is to answer each question fairly quickly. That is, don't try to count up the number of times you felt a particular way, but rather indicate the alternative that seems like a reasonable estimate. For each question choose from the following alternatives:

- 
- ___ 1. How often have you been upset because of something that happened unexpectedly?
 - ___ 2. How often have you felt that you were unable to control the important things in your life?
 - ___ 3. How often have felt nervous and "stressed"?
 - ___ 4. How often have you dealt successfully with irritating life hassles?
 - ___ 5. How often have you felt that you were effectively coping with important changes that were occurring in your life?
 - ___ 6. How often have you felt confident about your ability to handle your personal problems?
 - ___ 7. How often have you felt that things were going your way?
 - ___ 8. How often have you found that you could not cope with all the things that you had to do?
 - ___ 9. How often have you been able to control irritations in your life?
 - ___ 10. How often have you felt that you were on top of things?
 - ___ 11. How often have you been angered because of things that happened that were outside of your control?
 - ___ 12. How often have you found yourself thinking about things that you have to accomplish?
 - ___ 13. How often have you been able to control the way you spend your time?
 - ___ 14. How often have you felt difficulties were piling up so high that you could not overcome them?

APPENDIX L: POSITIVE AFFECT NEGATIVE AFFECT SCHEDULE (PANAS)

**Positive Affect Negative Affect Schedule (PANAS)
(Watson & Tellegen, 1988)**

This questionnaire consists of a number of words that describe feelings and emotions. Please indicate how much you have been feeling this way during the past two weeks. The best way to do this is to answer each question quickly without much thought. If you have any questions about the meanings of any of these words please ask!

Use the following scale to describe the way you feel:

- | | | |
|-------------------------------------|---------------------------------------|------------------------------------|
| <input type="checkbox"/> interested | <input type="checkbox"/> active | <input type="checkbox"/> nervous |
| <input type="checkbox"/> up tight | <input type="checkbox"/> quiet | <input type="checkbox"/> miserable |
| <input type="checkbox"/> calm | <input type="checkbox"/> enthusiastic | <input type="checkbox"/> strong |
| <input type="checkbox"/> hopeless | <input type="checkbox"/> depressed | <input type="checkbox"/> bored |
| <input type="checkbox"/> at ease | <input type="checkbox"/> content | <input type="checkbox"/> guilty |
| <input type="checkbox"/> numb | <input type="checkbox"/> inactive | <input type="checkbox"/> sad |
| <input type="checkbox"/> angry | <input type="checkbox"/> sleepy | <input type="checkbox"/> unhappy |
| <input type="checkbox"/> alert | <input type="checkbox"/> proud | <input type="checkbox"/> relaxed |
| <input type="checkbox"/> ashamed | <input type="checkbox"/> stressed | <input type="checkbox"/> tired |
| <input type="checkbox"/> excited | <input type="checkbox"/> peaceful | <input type="checkbox"/> irritable |

Now that we've gone through the list, which of these do you think is the strongest single feeling that you've had in the last two weeks?

(fill in) _____

APPENDIX M: CRIMINAL SELF-EFFICACY SCALE

Criminal Self-efficacy Scale (CSES)
(Brown, Zamble & Nugent, 1998)

The following questions refer to your life on the outside. Circle T for true if it is correct for you when you are living on the outside. Circle F for false if it is false for you when you are living on the outside.




- | | | |
|---|---|---|
| T | F | 1. If someone I knew wanted a score done, they would probably ask for my help. |
| T | F | 2. If I needed to, I would know where to get good ID. |
| T | F | 3. I am not sure I could break into a store without setting off the alarm. |
| T | F | 4. I could get just about anything I would want on the street. |
| T | F | 5. Some types of drugs would be hard for me to find on the street. |
| T | F | 6. I know where to find guns that cannot be traced. |
| T | F | 7. If I wanted to buy a 'real cheap' TV or VCR I would know where to go. |
| T | F | 8. I do not think I am physically capable of killing a man with my bare hands. |
| T | F | 9. If I was on the run, the police would find me in no time. |
| T | F | 10. I am not a very good street fighter. |
| T | F | 11. If I stole a car, I would know where to find the nearest 'chop shop'. |
| T | F | 12. I am not sure I could rob a bank and get away with it. |
| T | F | 13. If I was ever shot or stabbed I would know where to get help without going to the hospital. |
| T | F | 14. I always have a backup plan in case a score goes bad. |
| T | F | 15. I am not a real expert when it comes to handling guns. |


APPENDIX N: BALANCED INVENTORY OF DESIRABLE RESPONDING (BIDR)

Balanced Inventory of Desirable Responding (BIDR)

(Paulhus, 1994)

Using the scale below as a guide, write a number beside each statement to indicate how much you agree with it.

- 
- _____ 1. My first impressions about people usually turn out to be right.
 - _____ 2. It would be hard for me to break any of my bad habits.
 - _____ 3. I don't care to know what other people really think of me.
 - _____ 4. I have not always been honest with myself.
 - _____ 5. I always know why I like things.
 - _____ 6. When my emotions are aroused, it biases my thinking.
 - _____ 7. Once I've made up my mind, other people can seldom change my opinion.
 - _____ 8. I am not a safe driver when I exceed the speed limit.
 - _____ 9. I am fully in control of my own fate.
 - _____ 10. It's hard for me to shut off a disturbing thought.
 - _____ 11. I never regret my decisions.
 - _____ 12. I sometimes lose out on things because I can't make up my mind soon enough.
 - _____ 13. The reason I vote is because my vote can make a difference.
 - _____ 14. My parents were not always fair when they punished me.
 - _____ 15. I am a completely rational person.
 - _____ 16. I rarely appreciate criticism.
 - _____ 17. I am very confident of my judgments.
 - _____ 18. I have sometimes doubted my ability as a lover.
 - _____ 19. It's all right with me if some people happen to dislike me.
 - _____ 20. I don't always know the reasons why I do the things I do.
 - _____ 21. I sometimes tell lies if I have to.
 - _____ 22. I never cover up my mistakes.

- 
- _____ 23. There have been occasions when I have taken advantage of someone.
- _____ 24. I never swear.
- _____ 25. I sometimes try to get even rather than forgive and forget.
- _____ 26. I always obey laws, even if I'm unlikely to get caught.
- _____ 27. I have said something bad about a friend behind his or her back.
- _____ 28. When I hear people talking privately, I avoid listening.
- _____ 29. I have received too much change from a salesperson without telling him or her.
- _____ 30. I always declare everything at customs.
- _____ 31. When I was young I sometimes stole things.
- _____ 32. I have never dropped litter on the street.
- _____ 33. I sometimes drive faster than the speed limit.
- _____ 34. I never read sexy books or magazines.
- _____ 35. I have done things that I don't tell other people about.
- _____ 36. I never take things that don't belong to me.
- _____ 37. I have taken sick-leave from work or school even though I wasn't really sick.
- _____ 38. I have never damaged a library book or store merchandise without reporting it.
- _____ 39. I have some pretty awful habits.
- _____ 40. I don't gossip about other people's business.

APPENDIX O: DEBRIEFING FORMS

RELEASE FOLLOW-UP RESEARCH PROJECT

Debriefing 1: Pre-release Version

We would like to thank you for participating in this first part of the study. We really appreciate your taking the time to speak with us about so many personal issues. The purpose of this phase of the study was to learn about how you got to prison. We were also interested in learning about your plans for your life after release.

We look forward to seeing you in about a month (estimated date: _____) at your supervising parole office or halfway house. We will contact you directly regarding the exact date and time of our next meeting, or if you agree, we will have your parole officer contact you for us. We will try to work around your schedule in setting times for interviews. We hope to schedule most interviews either just before or just after your meeting with your supervising parole officer, so that you do not have any extra travel.

Thanks once again for your participation.

If you have any questions or concerns before our next interview please contact Shelley Brown at (613) 995-1986 or ask your parole officer to get in touch with us for you.

Debriefing 2: After first community interview

Thank you for participating in the second part of the study. We really appreciate you taking the time to speak to us in the community. The purpose of this part of the study was to examine how you are doing now in the community, and to see what changes have happened in your life since we last spoke.

We look forward to seeing you in about two months from now (estimated date: _____) at your supervising parole office or halfway house. We will contact you directly regarding the exact date and time of our next meeting, or, if you agree, we will have your parole officer contact you for us. As before, we will try to work around your schedule in setting times for interviews. We hope to schedule most interviews either just before or just after your meeting with your supervising parole officer, so that you don't have any extra travel

Thank you once again for your participation.

If you have any questions or concerns before our next interview please contact Shelley Brown at (613) 995-1986 or ask your parole officer to get in touch with us for you.

Debriefing 3: After second community interview (3 month)

We would like to thank you for participating in the third part of the study. We greatly appreciate your taking the time again to speak to us in the community. The purpose of this part of the study was to examine how you are doing now in the community, and to see what changes have happened in your life since we last spoke.

We look forward to seeing you in about three months from now (estimated date: _____) at your supervising parole office or halfway house. We will contact you directly regarding the exact date and time of our next meeting, or, if you agree, we will have your parole officer contact you for us. As before, we will try to work around your schedule in setting times for interviews. We hope to schedule most interviews either just before or just after your meeting with your supervising parole officer, so that you don't have any extra travel

Thank you once again for your participation.

If you have any questions or concerns before our next interview please contact Shelley Brown at (613) 995-1986 or ask your parole officer to get in touch with us for you.

Debriefing 4: After third community interview (6 month)

We would like to thank you for participating in the fourth part of the study. We greatly appreciate your taking the time again to speak to us in the community. The purpose of this part of the study was to examine how you are doing now in the community, and to see what changes have happened in your life since we last spoke.

We look forward to seeing you in about three months from now (estimated date: _____) at your supervising parole office or halfway house. We will contact you directly regarding the exact date and time of our next meeting, or, if you agree, we will have your parole officer contact you for us. As before, we will try to work around your schedule in setting times for interviews. We hope to schedule most interviews either just before or just after your meeting with your supervising parole officer, so that you don't have any extra travel

Thank you once again for your participation.

If you have any questions or concerns before our next interview please contact Shelley Brown at (613) 995-1986 or ask your parole officer to get in touch with us for you.

APPENDIX P: PROBLEM SURVEY CHECKLIST: PRELIMINARY RELIABILITY RESULTS

PROBLEM SURVEY CHECKLIST: RELIABILITY RESULTS FOR INDIVIDUAL SUB-SCALE ITEMS

	T1		T2		T3	
	Item-total correlation	ICC	Item-total correlation	ICC	Item-total correlation	ICC
<u>Marital/family</u>						
Single	.48	.86 ^a	.34	100.0 ^b	.52	100.0 ^b
Criminal partner	-.18	100.0 ^b	-.14	100.0 ^b	-.07	100.0 ^b
Dissatisfied with relationship	-.06	.45	.11	.77	.29	.33
Single/Unsupportive partner	.37	100.0 ^b	.33	100.0 ^b	.46	100.0 ^b
Not close to family	.38	.84	.21	.85	.41	.97
Criminal family of origin	.50	.75 ^a	-.01	100.0 ^b	.05	100.0 ^b
Unsupportive family	.33	.88	.19	.91	.38	.73
<u>Employment</u>						
Has legitimate employment barriers	.55	.71	.51	.95	.52	.68
Currently unemployed	.43	.85	.65	.96	.64	100.0 ^b
Unmotivated to work	.73	.57	.83	.77	.78	.93
No personal investment	.67	.73	.72	.83	.58	.74
Dissatisfied with job/school ^c	--	.47	--	.65	--	.75
<u>Substance Abuse</u>						
Not a social drinker/does not abstain	.56	69.0 ^b	.47	.76 ^a	.50	.63 ^a
Has a binge drinking problem	.47	.64 ^a	.62	100.0 ^b	.54	87.0 ^b
Evidence of a chronic alcohol problem	.49	94.0 ^b	.40	100.0 ^b	.52	100.0 ^b
Does not abstain from drug use	.59	.47	.71	1.0	.64	1.00
Has a binge drug-use problem	.42	100.0 ^b	.48	100.0 ^b	.72	100.0 ^b
Evidence of a chronic drug problem	.57	.56	.62	1.0	.73	1.0
<u>Accommodations</u>						
No fixed address ^d	--	--	--	--	--	--

Table continued

Physically unhealthy environment	.45	.65	.48	.88	.49	1.0
High crime neighborhood	.34	.75	.38	.81	.26	.82
Dissatisfied with living arrangements	.31	.85	.56	.55	.53	.87
<u>Finances</u>						
On social assistance	.40	.85	.12	.71	.03	.78
Under financial stress	.34	.81	.19	.95	.13	.77
Poor financial management	.30	.78	.34	.76	.23	.67
<u>Leisure</u>						
No structured activity	.60	.84	.18	.86	.22	.85
No structured socializing	.78	.73	.29	.66	.31	.61
No time at home with family	.40	.68	-.09	.76	-.11	.60
Does not plan time	.46	.91	.15	.92	.05	.84
<u>Interpersonal conflict</u>						
Problem with friends	.11	.25 ^a	.16	90.0 ^b	.03	100.0 ^b
Problem with partner	.02	.63 ^a	.10	100.0 ^b	.03	85.0 ^b
Problem with family	.11	92.0 ^b	.03	.23 ^a	.31	.44 ^a
Problem with co-workers/boss	.02	100.0 ^b	.15	100.0 ^b	.34	100.0 ^b
<u>Supervision compliance</u>						
Unmotivated to comply with requirements	.63	.71	.34	.91	.53	.73
Problems with parole officer	.34	.47	.38	.84	.36	.75
Manipulative	.34	.26	.32	.92	.27	.73
Fails to attend scheduled appointments	.57	.55	.16	1.0	.45	1.0
Unrealistic release plans	.38	.71	.48	.71	.39	.78
<u>Health</u>						
Physical health problems	.37	.84	.22	.79	.39	.89
Mental health problems	.37	.83	.22	.90	.39	.88

Note. ^avariable was dichotomous therefore kappa was used as the inter-rater reliability index.

^bdue to low cell counts %agreement was used instead of kappa as the inter-reliability index.

^cthis variable was excluded from the item-total analysis given that it was rated NA for a significant proportion of offenders at each wave of data collection (e.g., if unemployed).

^dthis variable was excluded from the reliability analysis due to poor distributions (e.g., < 3 observations in any one category at any one wave).

APPENDIX Q: PROBLEM SURVEY CHECKLIST: PRELIMINARY PREDICTIVE RESULTS

PROBLEM SURVEY CHECKLIST: PREDICTIVE VALIDITY RESULTS FOR INDIVIDUAL SUB-SCALE ITEMS

Problem Survey Checklist Item	Time 1	Time Dependent Survival Analysis		
	r ^a	B ^b	χ ^{2c}	Hazard ratio ^d
<u>Marital/family</u>				
Single	.21**	.76	3.90**	2.1
Criminal Partner	-.06	.54	0.55	1.7
Dissatisfied with relationship	.10	.14	0.46	1.1
Has no partner or partner is unsupportive	.23***	.89	5.78**	2.4
Not close to family (includes no contact)	.05	-.18	0.84	0.8
Criminal family of origin	.09	-.05	0.06	1.0
Unsupportive family (includes no contact)	.04	-.36	2.86*	0.7
<u>Employment</u>				
Has legitimate employment barriers	.21**	.24	1.11	1.3
Currently unemployed	.19**	.28	2.76*	1.3
Unmotivated to work	.20**	.46	5.13**	1.6
No personal investment	.18**	.41	4.66**	1.5
Dissatisfied with job/school	.16	-.45	1.48	0.6
<u>Substance abuse</u>				
Not a social drinker or does not abstain completely	.46*****	0.81	27.1*****	2.3
Has a binge drinking problem	.29*****	0.41	5.6**	1.5
Evidence of a chronic alcohol problem	.26****	1.00	34.5*****	2.8
Does not abstain from drug use/recreational drug use	.33*****	0.80	26.5*****	2.2
Has a binge drug-use problem	.17**	0.51	7.96***	1.7
Evidence of a chronic drug problem	.46*****	1.10	42.5*****	2.9
<u>Accommodations</u>				
No fixed address	.07	NA	NA	NA
Physically unhealthy environment	-.11	.46	3.53*	1.6
High crime neighborhood	-.03	-.07	0.15	0.9
Dissatisfied with living arrangements	.14	-.15	0.49	0.9
<u>Finances</u>				
On social assistance	-.02	.41	1.52	1.5
Under financial stress	.04	-.20	0.89	0.8
Poor financial management	.00	-.27	1.51	0.8
<u>Leisure</u>				
No structured activity	.02	-.14	0.57	0.9
No structured socializing	.14	-.21	1.14	0.8
No time at home with family	.11	-.15	0.68	0.9
Does not plan time	.15*	-.08	0.15	0.9

Table continued

Interpersonal conflict

Problem with friends	.00	-.02	0.00	0.9
Problem with partner	-.07	-.13	0.08	0.9
Problem with family	.08	-.60	2.40	0.5
Problem with co-workers/boss	.03	-.86	2.20	0.4

Supervision compliance

Unmotivated to comply with supervision requirements	.22****	.35	3.33*	1.4
Problems with parole officer	.15*	.08	0.17	1.1
Manipulative	.08	.14	0.39	1.5
Fails to attend scheduled appointments	.17*	.02	0.00	1.1
Unrealistic release plans	.08	.11	0.25	1.1

Health

Physical health problems	.11	-.09	0.22	0.9
Mental health problems	.12	.07	0.07	1.1

Note. ^ar = Pearson r coefficient correlated with failure (revocations-with or without an offence). Time at risk was not partialled out due to the exploratory nature of this stage of the analysis. ^bB = unstandardized B. ^cχ² = Wald Statistic. ^dHazard ratio = indicates the degree to that the covariate influences survival time. Values equivalent to 1 indicate no influence. ^eNA = Not applicable. Analysis was not conducted due to low frequencies (i.e. less than 5 cases scored 'yes'). *p < .10. **p < .05. ***p < .01. ****p < .001. *****p < .0001.

APPENDIX R: PROBLEM SURVEY CHECKLIST: DROPPED AND/OR MODIFIED ITEMS

PROBLEM SURVEY CHECKLIST: DROPPED/MODIFIED ITEMS & CORRESPONDING RATIONALE

Item	Rationale for deletion/modification
<u>Marital/family</u>	
Single	<ul style="list-style-type: none"> • Dropped-highly correlated ($r \geq .80$) with 'unsupportive partner/no partner' at all three waves of data collection
Criminal Partner	<ul style="list-style-type: none"> • Poorly distributed at each wave (e.g., exceeded 90/10 split)
Dissatisfied with relationship	<ul style="list-style-type: none"> • Dropped-reduced alpha, not related to outcome & its inclusion negated the effects of 'unsupportive partner'
Has no partner or partner is unsupportive	<ul style="list-style-type: none"> • Retained (was highly correlated with 'being single' but was more strongly related to failure than 'being single')
Not close to family (includes no contact)	<ul style="list-style-type: none"> • Dropped-highly correlated ($r \geq .80$) with 'unsupportive family' at all three waves of data collection
Criminal family of origin	<ul style="list-style-type: none"> • Dropped-reduced alpha, not related to outcome & its inclusion negated the effects of 'unsupportive partner'
Unsupportive family (includes no contact)	<ul style="list-style-type: none"> • Dropped-not related to outcome, unsupportive partner, & its inclusion negated the effects of 'unsupportive partner'
<u>Employment</u>	
Has legitimate employment barriers	<ul style="list-style-type: none"> • Retained as is
Currently unemployed	<ul style="list-style-type: none"> • Retained as is
Unmotivated to work	<ul style="list-style-type: none"> • Retained as is
No personal investment	<ul style="list-style-type: none"> • Retained as is
Dissatisfied with job/school	<ul style="list-style-type: none"> • Dropped-when included alpha dropped substantially (e.g., Wave 1: .77 to .69) as did the scale's overall relationship with revocation
<u>Substance abuse</u>	
Not a social drinker or does not abstain completely	<ul style="list-style-type: none"> • Dichotomized-less than 3 observations in 1 category at wave 3
Has a binge drinking problem	<ul style="list-style-type: none"> • Dichotomized-less than 3 observations in 1 category at waves 2 and 3
Evidence of a chronic alcohol problem	<ul style="list-style-type: none"> • Dichotomized-less than 3 observations in 1 category at wave 3
Does not abstain from drug use/recreational drug use	<ul style="list-style-type: none"> • Dichotomized-less than 3 observations in 1 category at waves 2 and 3
Has a binge drug-use problem	<ul style="list-style-type: none"> • Dichotomized-less than 3 observations in 1 category at wave 3
Evidence of a chronic drug problem	<ul style="list-style-type: none"> • Retained as is

Table continued

Accommodations

- | | |
|---------------------------------------|--|
| No fixed address | <ul style="list-style-type: none">• Dropped-less than 3 observations in 1 category at waves 2 and 3 (virtually no one was classified as 'no fixed address' during the community phase) |
| Physically unhealthy environment | <ul style="list-style-type: none">• Retained as is |
| High crime neighborhood | <ul style="list-style-type: none">• Retained as is |
| Dissatisfied with living arrangements | <ul style="list-style-type: none">• Retained as is |

Finances

- | | |
|---------------------------|--|
| On social assistance | <ul style="list-style-type: none">• Retained as is |
| Under financial stress | <ul style="list-style-type: none">• Retained as is |
| Poor financial management | <ul style="list-style-type: none">• Retained as is |

Leisure

- | | |
|-----------------------------|--|
| No structured activity | <ul style="list-style-type: none">• Retained as is |
| No structured socializing | <ul style="list-style-type: none">• Retained as is |
| No time at home with family | <ul style="list-style-type: none">• Retained as is |
| Does not plan time | <ul style="list-style-type: none">• Retained as is |

Interpersonal conflict

- | | |
|------------------------------|---|
| Problem with friends | <ul style="list-style-type: none">• Dichotomized-less than 3 observations in 3 categories at waves 2 & 3 |
| Problem with partner | <ul style="list-style-type: none">• Dichotomized-less than 3 observations in 4 categories at waves 2 & 3 |
| Problem with family | <ul style="list-style-type: none">• Dichotomized-less than 3 observations in 1 categories at wave 1 |
| Problem with co-workers/boss | <ul style="list-style-type: none">• Dichotomized-less than 3 observations in 4 categories at waves 1, 2 & 3 |

Supervision compliance

- | | |
|---|--|
| Unmotivated to comply with supervision requirements | <ul style="list-style-type: none">• Retained as is |
| Problems with parole officer | <ul style="list-style-type: none">• Retained as is |
| Manipulative | <ul style="list-style-type: none">• Dropped-not related to outcome & poor inter-rater reliability at T1 (e.g., ICC < .40) |
| Fails to attend scheduled appointments | <ul style="list-style-type: none">• Retained as is |
| Unrealistic release plans | <ul style="list-style-type: none">• Dropped-reduced alpha slightly, not related to outcome & its inclusion reduced overall predictive potency of sub-scale |

Health

- | | |
|--------------------------|--|
| Physical health problems | <ul style="list-style-type: none">• Retained as is |
| Mental health problems | <ul style="list-style-type: none">• Retained as is |
-

APPENDIX S: SOCIAL SUPPORT SCHEME-VERSION 1: PRELIMINARY ANALYSES

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SOCIAL SUPPORT SCHEME: FREQUENCY DISTRIBUTIONS FOR EACH IDENTIFIED SOURCE OF SUPPORT

Source of Support	T1 % (n/136)	T2 % (n/89) ^a	T3 % (n/70) ^b
Wife/common-law/girlfriend	44.1 (60)	46.1 (41)	51.4 (36)
Parents	78.7 (107)	47.2 (42)	44.3 (31)
Friends	55.2 (75)	48.3 (43)	51.4 (36)
Associates/Acquaintances	0.0 (0)	6.7 (6)	11.4 (8)
Help from the system (e.g., parole/program officers, halfway house staff, psychologist/psychiatrist)	13.9 (19)	21.4 (19)	18.6 (13)
Help from non-system agents (church, medical doctor, AA, community centers)	9.6 (13)	4.5 (4)	7.1 (5)
Loner/no supporters identified	1.0 (0.7)	5.7 (5)	4.3 (3)
Siblings	72.3 (99)	47.2 (42)	34.3 (24)
Children over 18	6.6 (9)	7.9 (7)	7.2 (5)
Other family (e.g., extended & nonbiological- in-laws)	22.8 (31)	24.7 (22)	15.7 (11)

Note. ^afrequency distributions are based on available data. At this stage the mode was not substituted for missing values. Thus, although 111 offenders were still in the study as of T2, 22 of these offenders (19.8% of T2) were missing information for this variable.

^bSimilarly, although 96 offenders were still in the study as of T3, 26 of these offenders (27.1% of T3) were missing information for this variable.

SOCIAL SUPPORT SCHEME: INTER-RATER RELIABILITY INDICES FOR EACH SUPPORT TYPE

Source of Support	T1 kappa	T2 kappa	T3 kappa
Wife/common-law/girlfriend	1.00	.40	.70
Parents	1.00	.53	.47
Friends	.88	.54	.70
Associates/Acquaintances ^a	1.00	1.00	.95
Help from the system (e.g., parole/program officers, halfway house staff, psychologist/psychiatrist) ^a	.88	1.00	.95
Help from non-system agents (church, medical doctor, AA, community centers) ^a	.95	1.00	1.00
Loner/no supporters identified ^a	1.00	1.00	1.00
Siblings ^a	1.00	.90	.85
Children over 18 ^a	1.00	.95	1.00
Other family (e.g., extended & nonbiological- in-laws ^a)	.95	.90	1.00

Note. ^adue to low cell counts %agreement was used instead of kappa as the inter-reliability index.

APPENDIX T: SOCIAL SUPPORT SCHEME: PREDICTIVE VALIDITY

SOCIAL SUPPORT SCHEME: PREDICTIVE VALIDITY RESULTS FOR EACH IDENTIFIED SUPPORTER

Source of Support	Time 1	Time Dependent Survival Analysis		
	r ^a	B ^b	χ ^{2c}	Hazard ratio ^d
Wife/common-law/girlfriend	-.25***	-1.45	12.10****	0.24
Parents	.02	0.90	6.95***	2.47
Friends	-.02	0.00	0.98	1.00
Associates/Acquaintances	NA ^e	NA	NA	NA
Help from the system (e.g., parole/program officers, halfway house staff, psychologist/psychiatrist)	.00	0.01	0.00	1.01
Help from non-system agents (church, medical doctor, AA, community centers)	-.14*	NA	NA	NA
Loner/no supporters identified	NA	NA	NA	NA
Siblings	-.05	0.06	0.86	1.10
Children over 18	-.14*	-1.10	1.20	0.33
Other family (e.g., extended & nonbiological- in-laws)	.02	0.48	1.88	1.6

Note. ^ar = Pearson r coefficient correlated with failure (revocations-with or without an offence). Time at risk was not partialled out due to the exploratory nature of this stage of the analysis.

^bB = unstandardized B.

^cχ² = Wald Statistic.

^dHazard ratio = indicates the degree to that the covariate influences survival time. Values equivalent to 1 indicate no influence.

^eNA = Not applicable. Analysis was not conducted due to low frequencies (i.e. less than 5 cases scored 'yes').

*p < .10. **p < .05. ***p < .01. ****p < .001.

APPENDIX U: EXPECTED NEGATIVE VALUE OF CRIME: FREQUENCY DISTRIBUTIONS

EXPECTED VALUE OF CRIME: FREQUENCY DISTRIBUTIONS FOR EACH NEGATIVE OUTCOME

Negative Outcome	T1 % (n/136)	T2 % (n/85) ^a	T3 % (n/66) ^b
Go to prison/lose freedom	90.4 (123)	89.4 (76)	84.9 (56)
Hurt/disappoint my family (includes wife, kids, family of origin)	11.8 (16)	29.4 (25)	30.3 (20)
Separated from family (includes wife, kids, family of origin)	34.6 (47)	27.1 (23)	36.4 (24)
Reduced self-worth (e.g., lowered self-esteem, guilt, shame)	14.7 (20)	9.4 (8)	4.6 (3)
Get hurt or killed	32.4 (44)	16.5 (14)	21.2 (14)
Kill or hurt others (e.g., victim recognition)	10.3 (14)	12.9 (11)	13.6 (9)
Lose friends	8.8 (12)	4.7 (4)	6.1 (4)
Become a social outcast	3.7 (5)	3.5 (3)	1.5 (1)
Lose respect/status	2.2 (3)	2.4 (2)	0.0 (0)
Experience job-related losses	7.4 (10)	1.2 (1)	9.9 (6)
Become addicted (includes alcohol, drugs and gambling)	4.4 (6)	1.2 (1)	0.0 (0)
Become desensitized in general	0.7 (1)	0.0 (0)	0.0 (0)
Criminal record gets worse	1.5 (2)	1.2 (1)	0.0 (0)
Forced to be around more criminals	1.5 (2)	3.5 (3)	0.0 (0)
Experience global life problems (e.g., "my life ... ruined/destroyed")	6.6 (9)	10.6 (9)	4.6 (3)
Negative affect (e.g., become depressed, angry)	5.9 (8)	8.3 (7)	0.0 (0)
Money-related losses (e.g., includes material possessions)	8.8 (12)	7.1 (6)	4.6 (3)
Become institutionalized	2.9 (4)	0.0 (0)	0.0 (0)
Lose respect & trust of others in general	8.1 (11)	7.1 (6)	4.6 (3)
Experience prison-related consequences (e.g., might be raped)	2.9 (4)	0.0 (0)	0.0 (0)
Disappoint God	0.0 (0)	0.0 (0)	1.5 (1)

Note. ^afrequency distributions are based on available data. At this stage the mode was not substituted for missing values. Thus, although 111 offenders were still in the study as of T2, 26 of these offenders (23.4% of T2) were missing information for this variable.

^bSimilarly, although 96 offenders were still in the study as of T3, 30 of these offenders (31% of T3) were missing information for this variable.

APPENDIX V: EXPECTED POSITIVE VALUE OF CRIME: FREQUENCY DISTRIBUTIONS

EXPECTED VALUE OF CRIME: FREQUENCY DISTRIBUTIONS FOR EACH POSITIVE OUTCOME

Positive Outcome	T1	T2	T3
	% (n/136)	% (n/85) ^a	% (n/66) ^b
Money/wealth	38.9 (53)	56.5 (48)	59.1 (66)
Improved lifestyle	8.8 (12)	3.5 (3)	4.6 (3)
Friendship/comradery	4.4 (6)	1.2 (1)	1.5 (1)
"Get away with it"	4.4 (6)	1.2(1)	0.0 (1)
Gain respect/status	2.2 (3)	9.4 (8)	9.1 (6)
Thrill/rush	3.7 (5)	5.9 (5)	3.0 (2)
Enhances self-esteem	1.5 (2)	0.0 (0)	0.0 (0)
Improves access to women	0.7 (1)	1.2 (1)	0.0 (0)
Don't have to pursue a conventional lifestyle	1.5 (2)	1.2 (1)	0.0 (0)
Revenge	0.7 (1)	0.0 (0)	1.5 (1)
Provide support to loved ones	1.5 (2)	0.0 (0)	0.0 (0)
Get immediate satisfaction	0.0 (0)	1.2 (0)	0.0 (0)
Avoid stress (e.g., can relax in prison, no debts etc)	0.0 (0)	3.5 (3)	0.0 (0)

Note. ^afrequency distributions are based on available data. At this stage, the mode was not substituted for missing values. Thus, although 111 offenders were still in the study as of T2, 26 of these offenders (23.4% of T2) were missing information for this variable.

^bSimilarly, although 96 offenders were still in the study as of T3, 30 of these offenders (31% of T3) were missing information for this variable.

APPENDIX W: EXPECTED NEGATIVE VALUE OF CRIME: INTER-RATER RELIABILITY

EXPECTED VALUE OF CRIME: INTER-RATER RELIABILITY RESULTS FOR EACH NEGATIVE OUTCOMES

Negative Outcome	T1 % agreement	T2 % agreement	T3 % agreement
Go to prison/lose freedom	100.0	62.5	87.7
Hurt/disappoint my family (includes wife, kids, family of origin)	87.5	68.8	93.4
Separated from family (includes wife, kids, family of origin)	87.5	68.8	93.4
Reduced self-worth (e.g., lowered self-esteem, guilt, shame)	81.3	81.3	93.4
Get hurt or killed	93.4	81.3	93.3
Kill or hurt others (e.g., victim recognition)	100.0	93.4	100.0
Lose friends	93.4	93.4	93.4
Become a social outcast	100.0	100.0	100.0
Lose respect/status	100.0	100.0	100.0
Experience job-related losses	100.0	100.0	100.0
Become addicted (includes alcohol, drugs and gambling)	100.0	100.0	100.0
Become desensitized in general	93.4	100.0	100.0
Criminal record gets worse	100.0	100.0	100.0
Forced to be around more criminals	100.0	100.0	100.0
Experience global life problems (e.g., "my life- ruined/destroyed")	100.0	100.0	100.0
Negative affect (e.g., become depressed, angry)	88.0	93.5	100.0
Money-related loses (e.g., includes material possessions)	100.0	93.5	100.0
Become institutionalized	100.0	100.0	100.0
Lose respect & trust of others in general	100.0	100.0	100.0
Experience prison-related consequences (e.g., might be raped)	100.0	100.0	100.0
Disappoint God	100.0	100.0	100.0

Note. %agreement was used instead of kappa given that the majority of variables had less than 5 hits at any one wave.

APPENDIX X: EXPECTED POSITIVE VALUE OF CRIME: INTER-RATER RELIABILITY

EXPECTED VALUE OF CRIME: INTER-RATER RELIABILITY RESULTS FOR EACH POSITIVE OUTCOME

Positive Outcome	T1 % agreement	T2 % agreement	T3 % agreement
Money/wealth	93.4	87.5	86.7
Improved lifestyle	87.5	100.0	100.0
Friendship/comradery	100.0	100.0	100.0
"Get away with it"	100.0	100.0	100.0
Gain respect/status	100.0	100.0	100.0
Thrill/rush	100.0	100.0	100.0
Enhances self-esteem	100.0	100.0	100.0
Improves access to women	100.0	100.0	100.0
Don't have to pursue a conventional lifestyle	100.0	100.0	100.0
Revenge	93.4	100.0	100.0
Provide support to loved ones	100.0	100.0	100.0
Get immediate satisfaction	100.0	100.0	100.0
Avoid stress (e.g., can relax in prison, no debts)	100.0	100.0	100.0

Note. %agreement was used instead of kappa given that the majority of variables had less than 5 hits at any one wave.

APPENDIX Y: EXPECTED NEGATIVE VALUE OF CRIME: PREDICTIVE VALIDITY

EXPECTED VALUE OF CRIME: PREDICTIVE VALIDITY RESULTS FOR EACH NEGATIVE OUTCOME

Negative Outcome	Time 1	Time Dependent Survival Analysis		
	r ^a	B ^b	χ ^{2c}	Hazard ratio ^d
Go to prison/lose freedom	-.06	.46	0.81	1.60
Hurt/disappoint my family (includes wife, kids, family of origin)	.05	-.45	1.31	0.64
Separated from family (includes wife, kids, family of origin)	-.04	-.17	0.26	0.84
Reduced self-worth (e.g., lowered self-esteem, guilt, shame)	.11	NA ^e	NA	NA
Get hurt or killed	-.07	-.10	0.07	0.90
Kill or hurt others (e.g., victim recognition)	.14*	.02	0.00	1.01
Lose friends	-.02	NA	NA	NA
Become a social outcast	.01	NA	NA	NA
Lose respect/status	NA	NA	NA	NA
Experience job-related losses	.02	NA	NA	NA
Become addicted (includes alcohol, drugs and gambling)	-.09	NA	NA	NA
Become desensitized in general	NA	NA	NA	NA
Criminal record gets worse	NA	NA	NA	NA
Forced to be around more criminals	NA	NA	NA	NA
Experience global life problems (e.g., "my life ... ruined/destroyed")	.10	NA	NA	NA
Negative affect (e.g., become depressed, angry)	.00	NA	NA	NA
Money-related losses (e.g., includes material possessions)	.03	NA	NA	NA
Become institutionalized	NA	NA	NA	NA
Lose respect & trust of others in general	.11	NA	NA	NA
Experience prison-related consequences (e.g., might be raped)	NA	NA	NA	NA
Disappoint God	NA	NA	NA	NA

Note. ^ar = Pearson r coefficient correlated with failure (revocations-with or without an offence). Time at risk was not partialled out due to the exploratory nature of this stage of the analysis. ^bB = unstandardized B. ^cχ² = Wald Statistic. ^dHazard ratio = indicates the degree to that the covariate influences survival time. Values equivalent to 1 indicate no influence. ^eNA = Not applicable. Analysis was not conducted due to low frequencies (i.e. less than 5 cases scored 'yes'). *p < .10.

APPENDIX Z: EXPECTED POSITIVE VALUE OF CRIME: PREDICTIVE VALIDITY

EXPECTED VALUE OF CRIME: PREDICTIVE VALIDITY RESULTS FOR EACH POSITIVE OUTCOME

Positive Outcome	Time 1	Time Dependent Survival Analysis		
	r ^a	B ^b	χ ^{2c}	Hazard ratio ^d
Money/wealth	.05	-.56	3.1*	0.57
Improved lifestyle	-.02	NA	NA	NA
Friendship/comradery	-.16*	NA	NA	NA
"Get away with it"	.13	NA	NA	NA
Gain respect/status	NA ^e	NA	NA	NA
Thrill/rush	-.07	NA	NA	NA
Enhances self-esteem	NA	NA	NA	NA
Improves access to women	NA	NA	NA	NA
Don't have to pursue a conventional lifestyle	NA	NA	NA	NA
Revenge	NA	NA	NA	NA
Provide support to loved ones	NA	NA	NA	NA
Get immediate satisfaction	NA	NA	NA	NA
Avoid stress (e.g., can relax in prison, no debts)	NA	NA	NA	NA

Note. ^ar = Pearson r coefficient correlated with failure (revocations-with or without an offence). Time at risk was not partialled out due to the exploratory nature of this stage of the analysis.

^bB = unstandardized B.

^cχ² = Wald Statistic.

^dHazard ratio = indicates the degree to that the covariate influences survival time. Values equivalent to 1 indicate no influence.

^eNA = Not applicable. Analysis was not conducted due to low frequencies (i.e. less than 5 cases scored 'yes').

*p < .10.

APPENDIX AA: PERCEIVED PROBLEM INDEX: PREDICTIVE VALIDITY

PERCEIVED PROBLEM INDEX: PREDICTIVE VALIDITY RESULTS FOR EACH INDIVIDUAL SUB-SCALE ITEM

Item	Time 1 (<u>N</u> = 136)	Time Dependent Survival Analysis (<u>N</u> = 105)		
	<u>r</u> ^a	<u>B</u> ^b	χ^2 ^c	Hazard ratio ^d
Problem with family (parents/siblings)	.15*	-.01	0.02	0.98
Problem with partner/lack of	.09	.04	0.17	1.04
Problem with work (co-workers/supervisor)	.03 ^e	.09	0.23	1.09
Problem with work itself/lack there of	.05 ^f	.17	5.08*	1.20
Problem with friends	.22***	.25	7.19**	1.29
Problem with accommodations (physical)	.12	-.04	0.15	0.96
Problem with accommodations (other people)	-.00	.06	0.55	1.06
Problem with money	.16*	.05	0.52	1.06
Problem with drugs/alcohol	.29****	.41	36.16***	1.51
Problem with health-physical	-.01	.01	0.01	1.01
Problem with health-emotional or psychiatric	.26***	.28	13.55***	1.32
Problem with supervision-terms	.27****	.20	9.67**	1.22
Problem with supervision-supervisor	.30****	.20	4.48*	1.22
Problem with boredom	.27****	.32	20.43***	1.37
Other	-.07	-.22	0.13	0.80

Note. ^ar = Pearson r coefficient correlated with failure (revocations-with or without an offence). Time at risk was not partialled out due to the exploratory nature of this stage of the analysis.

^bB = unstandardized B.

^c χ^2 = Wald Statistic.

^dHazard ratio = indicates the degree to that the covariate influences survival time. Values equivalent to 1 indicate no influence. It represents the percent change in the hazard rate for every 1-point increase in the raw score of the variable.

^eN = 134 for this item given that 2 individuals were retired and consequently were rated not applicable.

^fN = 134 for this item given that 2 individuals were retired and consequently were rated not applicable.

*p < .10. **p < .05. ***p < .01. ****p < .001.

APPENDIX BB: DATA TRANSFORMATIONS

NOTE TO USERS

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DESCRIPTION OF DATA TRANSFORMATIONS

Variable	N ^a	Violation	Original \bar{M} (SD) & range ^b	Correction	Revised \bar{M} (SD) & range
<u>Static measures</u>					
Age	T1 ^c = 136	None	33.1 (9.9) [19-65]	NA	NA
SIR-R1	T1 = 136	None	-0.7 (11.1) [-21-+25]	NA	NA
PCL-R	T1 = 136	None	19.6 (7.5) [3.2-36]	NA	NA
CAT	T1 = 136	None	6.5 (4.2) [0-16]	NA	NA
Prison Misconducts	T1 = 136	Skew (+) kurtosis(+) 3 outliers	1.6 (2.8) [0-17]	Truncated high range of variable (i.e., recoded values ≥ 4 to 4)	1.2 (1.5) [0 - 4]
<u>Dynamic trigger measures</u>					
Single/Unsupportive partner	T1 = 136 T2 ^d = 89 T3 ^e = 72	None	T1: yes = 55.1% T2: yes = 56.2% T3: yes = 50.0%	NA	NA
Employment problems	T1 = 134 T2 = 87 T3 = 68	T1: none T2: kurtosis (-) T3: skew (+)	T1: 2.6 (2.3) [0-8] T2: 2.9 (2.9) [0-8] T3: 1.6 (2.2) [0-8]	Truncated upper range of variable (i.e., recoded values ≥ 6 to 6)	T1: 2.5 (2.1) [0-6] T2: 2.7 (2.4) [0-6] T3: 1.5 (2.1) [0-6]
Accommodation problems	T1 = 124 T2 = 87 T3 = 70	None	T1: 2.1 (1.5) [0-6] T2: 1.7 (1.7) [0-6] T3: 2.0 (1.7) [0-5]	NA	NA
Financial problems	T1 = 136 T2 = 85 T3 = 70	T1: none T2: none T3: one outlier	T1: 1.4 (1.3) [0-5] T2: 1.8 (1.5) [0-5] T3: 1.5 (1.3) [0-6]	Changed value of T3 outlier from 6 to 5	T1: NA T2: NA T3: 1.4 (1.2) [0-5]

Table continued

Leisure problems	T1 = 135 T2 = 88 T3 = 69	T1 = none T2 = none T3 = none	T1: 3.4 (2.3) [0-8] T2: 4.8 (1.8) [0-8] T3: 4.7 (1.8) [0.8]	NA	NA
Interpersonal conflict	T1 = 136 T2 = 86 T3 = 70	T1 = one outlier T2 & T3 = skew (+); kurtosis (+) 3 outliers	T1: 0.8 (0.9) [0-4] T2: 0.6 (1.0) [0-5] T3: 0.6 (1.0) [0-4]	Truncated upper range of variable (i.e., recoded values ≥ 2 to 2)	T1: 0.7 (0.8) [0-2] T2: 0.5 (0.7) [0-2] T3: 0.6 (0.7) [0-2]
Health problems	T1 = 136 T2 = 88 T3 = 71	T1,T2&T3: skew (+), kurtotic (+), & outliers (T1:4; T2:3; T3:2)	T1: 0.6 (1.0) [0-4] T2: 0.6 (1.0) [0-4] T3: 0.6 (1.0) [0-4]	Truncated upper range of variable (i.e. recoded values ≥ 2 to 2)	T1: 0.5 (0.8) [0-2] T2: 0.4 (0.8) [0-2] T3: 0.4 (0.7) [0-2]
<u>Dynamic appraisal measures</u>					
Perceived global stress	T1 = 127 T2 = 82 T3 = 56	T1 = none T2 = one outlier T3 = 2 outliers	T1: 21.9 (7.1) [5-40] T2: 18.4 (7.4) [4-44] T3: 17.3 (6.3) [4-33]	Truncated outlier values to the next closest score that brought them within +3 standard deviations of the z score (i.e., T2: recoded '44' to '34'; T3: recoded '32' to '31' and '33' to '31')	T1: NA T2: 18.2 (7.0) [4-34] T3: 17.2 (6.1) [4-31]
Perceived problem index	T1 = 136 T2 = 87 T3 = 69	T1 = 2 outliers, slight skew (+) & kurtosis (+) T2 = none T3 = 1 outlier, slight skew (+), & kurtosis (+)	T1: 27.4 (12.6) [14-78.6] T2: 28.6 (10.0) [14-53.8] T3: 24.6 (8.1) [14-50.0]	Truncated upper range of variable (i.e. recoded values ≥ 49 to 49) & truncated outlier values to the next closest score that brought them within +3 standard deviations of the z score (i.e., T1: recoded 79's to 63's, T3: recoded 56 to 43)	T1: 26.7 (10.8) [14-49] T2: NA T3: 24.6 (8.1) [14-49]

Table continued

Negative affect	T1 = 123 T2 = 76 T3 = 57	T1 = 1 outlier T2 = 2 outliers T3 = 3 outliers, slight skew (+) & kurtosis (+)	T1: 32.8 (11.0) [16-66] T2: 28.5 (10.0) [16-58] T3: 25.5 (8.2) [16-55]	Truncated outlier values to the next closest score that brought them within +3 standard deviations of the z score (i.e., T1: recoded '66' to '64'; T2: recoded '58's' to '48's'; T3: '53' to '39', '46's' to '39's'.	T1: 32.8 (10.9) [16-64] T2: 28.2 (9.3) [16-48] T3: 24.9 (6.8) [16-39]
Positive affect	T1 = 119 T2 = 73 T3 = 58	T1 = none T2 = none T3 = 4 outliers, kurtosis (+)	T1: 46.8 (8.9) [25-65] T2: 46.8 (8.2) [29-61] T3: 48.4 (8.1) [25-62]	Truncated outlier values to the next closest score that brought them within +3 standard deviations of the z score (i.e., T3: recoded '25' to '38', '27' to '38', '28' to '38' and '30' to '38'	T1: NA T2: NA T3: 49.1 (6.5) [38-62]
Dynamic response measures					
Strong social support	T1 = 136 T2 = 89 T3 = 69	T1 = one outlier T2 = 5 outliers T3 = 3 outliers	T1: 129.9 (52.6) [0- 257.6] T2: 141.4 (59.8) [0- 276.7] T3: 156.6 (54.6) [0- 272.0]	Truncated outlier values to the next lowest score in the distribution.	T1: 130.9 (51.5) [11- 257.6] T2: 149.8 (50.1) [24- 276.7] T3: 163.8 (50.1) [80- 272.0]
Criminal associates	T1 = 136 T2 = 89 T3 = 70	T1, T2 & T3 = heavy skew (+) & kurtosis (+)	T1: 0.6 (1.0) [0-4] T2: 0.4 (0.7) [0-4] T3: 0.4 (0.8) [0-4]	Dichotomized variable at each wave	T1: 36.8% rated yes T2: 33.7% rated yes T3: 24.3% rated yes
Positive coping ability	T1 = 136 T2 = 83 T3 = 71	T1: none T2: none T3: none	T1: 9.8 (2.5) [2.1-15.0] T2: 10.5 (4.5) [1.0-20.0] T3: 11.9 (4.3) [2.3-20.0]	NA	T1: NA T2: NA T3: NA
Supervision Compliance	T1 = 136 T2 = 88 T3 = 70	T1: skew (+) T2: skew (+) T3: skew (+)	T1: 1.1 (1.5) [0-6] T2: 0.8 (1.1) [0-4] T3: 0.9 (1.3) [0-5]	Truncated upper range of variable for all three waves (i.e. recoded values ≥ 3 to 3)	T1: 0.9 (1.2) [0-3] T2: 0.8 (1.1) [0-3] T3: 0.9 (1.1) [0-3]

Table continued

Substance abuse	T1 = 136 T2 = 89 T3 = 71	T1, T2, & T3: skew (+) T2 & T3: kurtosis (+)	T1: 2.4 (3.2) [0-12] T2: 0.9 (2.2) [0-10] T3: 0.9 (2.3) [0-10]	Dichotomized variable at each wave	T1: 50.7% rated yes T2: 20.2% rated yes T3: 19.7% rated yes
Criminal self-efficacy	T1 = 111 T2 = 76 T3 = 56	T1: none T2: none T3: 2 outliers	T1: 5.3 (4.0) [0-14] T2: 5.3 (4.6) [0-15] T3: 4.3 (4.3) [0-15]	Truncated outlier values to the next lowest score in the distribution (i.e., '15's' recoded to '13's').	T1: NA T2: NA T3: 4.7 (3.2) [0-13]
Expected negative value of crime	T1 = 136 T2 = 85 T3 = 66	T1, T2, & T3 = skew (-)	T1: 7.0 (2.2) [0-9] T2: 7.2 (2.3) [1-9] T3: 7.5 (2.0) [1-9]	Truncated lower range of variable: (i.e., (0, 1, 2, 3, 4, 5) = 1; (6) = 2; (7) = 3; (8) = 4; (9) = 5).	T1: 3.4 (1.6) [1-5] T2: 3.5 (1.4) [1-5] T3: 3.8 (1.4) [1-5]
Expected positive value of crime	T1 = 136 T2 = 88 T3 = 69	T1: skew (+) T2: kurtosis (-) T3: kurtosis (-)	T1: 1.9 (2.8) [0-9] T2: 4.3 (4.1) [0-9] T3: 4.2 (4.1) [0-9]	Truncated middle and upper range of variable: (i.e., (0) = 1; (1, 2, 3, 4, 5, 6) = 2; (7, 8, 9) = 3).	T1: 1.5 (0.6) [1-3] T2: 1.9 (0.8) [1-3] T3: 1.9 (0.8) [1-3]

Note. In total, 136 offenders comprised TIME 1, 111 offenders were still at risk to fail as of Time 2 and 96 offenders were still at risk to fail as of Time 3. N fluctuates as the result of missing data due largely to attrition. ^aFor dichotomous variables the percentage scored 'yes' is presented. ^cT1 = Time 1; ^dT2 = Time 2; ^eT3 = Time 3.

APPENDIX CC: INTER-CORRELATION MATRIX BETWEEN PREDICTOR VARIABLES

Predictor variables assessed at Time 1: Inter-correlation matrix

Var.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1.	—											
2.	.33 ^c	—										
3.	-.49 ^c	-.59 ^c	—									
4.	-.21 ^c	-.57 ^c	.58 ^c	—								
5.	-.31 ^c	-.33 ^c	.41 ^c	.36 ^c	—							
6.	-.07	-.34 ^c	.21 ^b	.34 ^c	.25 ^b	—						
7.	-.22 ^b	-.34 ^c	.36 ^c	.46 ^c	.37 ^c	.24 ^b	—					
8.	.06	.01	.03	-.03	-.23 ^b	-.01	-.07	—				
9.	-.05	-.13	.15	.08	.03	.00	.32 ^c	.05	—			
10.	-.24 ^b	-.23 ^b	.31 ^c	.36 ^c	.16	.33 ^c	.56 ^c	.13	.38 ^c	—		
11.	-.27 ^c	-.09	.07	-.02	.05	-.22 ^b	.04	.05	.08	-.07	—	
12.	.32 ^c	-.01	.10	.08	-.16	.11	.13	.12	.15	.08	-.00	—
13.	-.23 ^b	-.41 ^c	.31 ^c	.15	.16	.04	.29 ^c	.01	.14	.17 ^a	.25 ^b	.08
14.	-.14	-.21 ^b	.24 ^b	.19 ^a	.12	.01	.21 ^b	.03	.22 ^b	.19 ^a	.19 ^a	.20 ^a
15.	.16	.23 ^b	-.16	-.22 ^b	-.04	-.01	-.21 ^b	-.08	-.06	-.26 ^b	-.12	-.06
16.	-.16	-.42 ^c	.39 ^c	.35 ^c	.17	.16	.39 ^c	.21 ^a	.27 ^b	.31 ^c	.26 ^b	.24 ^b
17.	-.02	.27 ^b	-.26 ^b	-.26 ^b	-.08	-.29 ^c	-.34 ^c	-.12	.29 ^c	-.51 ^c	.18 ^a	-.21 ^b
18.	-.28 ^c	-.20 ^b	.39 ^c	.40 ^c	.24 ^b	.04	.11	.03	-.14	.15	.17 ^a	-.04
19.	-.06	-.43 ^c	.24 ^b	.36 ^c	.26 ^b	.29 ^c	.28 ^c	.04	.13	.23 ^b	-.13	.11
20.	-.07	-.22 ^b	.30 ^c	.37 ^c	.23 ^b	.16	.47 ^c	.07	.19	.43 ^c	.02	.11
21.	.15	.04	-.08	-.08	-.13	-.11	-.29 ^c	-.08	-.29 ^c	-.28 ^c	-.02	-.03
22.	-.18 ^a	-.10	.29 ^c	.27 ^b	.22 ^b	.05	.25 ^b	-.06	.17 ^a	.23 ^b	.14	-.10
23.	-.20 ^b	-.24 ^b	.40 ^c	.26 ^b	.34 ^c	.11	.29 ^c	-.02	.24 ^b	.25 ^b	.13	-.06
24.	.24 ^b	.13	-.22 ^b	-.33 ^c	-.17 ^a	-.12	-.43 ^c	-.17 ^a	-.23 ^b	-.36 ^c	-.18 ^a	.03
25.	.24 ^b	.37 ^c	-.39 ^c	-.33 ^c	-.17 ^a	-.19 ^a	-.31	-.18 ^a	-.26 ^b	-.30 ^c	-.25 ^b	-.09

Note. ^ap < .05. ^bp < .01. ^cp < .001.

- | | |
|--|--|
| 1. age at pre-release | 13. perceived global stress |
| 2. Statistical Information of Recidivism Scale total score (SIR-R1) | 14. negative affect |
| 3. Childhood Adolescent Taxon Scale: Self Report total score (CAT) | 15. positive affect |
| 4. Hare Revised Psychopathy Checklist total score (PCL-R) | 16. perceived problem level |
| 5. # of convictions for prison misconducts incurred during the last year | 17. positive social support |
| 6. single/unsupportive partner | 18. criminal associates |
| 7. employment problems | 19. substance abuse problems |
| 8. accommodations problems | 20. poor supervision compliance |
| 9. money problems | 21. expected negative value of crime |
| 10. leisure problems | 22. expected positive value of crime |
| 11. interpersonal conflict | 23. criminal self-efficacy scale (total score) |
| 12. health problems | 24. positive coping ability |
| | 25. impression management |

Table continued

Predictor variables assessed at Time 1: Inter-correlation matrix

Var.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.
1.													
2.													
3.													
4.													
5.													
6.													
7.													
8.													
9.													
10.													
11.													
12.													
13.	---												
14.	.54 ^c	---											
15.	-.45 ^c	-.41 ^c	---										
16.	.44 ^c	.34 ^c	-.30 ^c	---									
17.	-.13	-.20 ^a	.19 ^a	-.26 ^b	---								
18.	.20 ^a	.20	-.18 ^a	.14	.24 ^b	---							
19.	.18 ^a	-.00	-.13	.30 ^c	-.20 ^a	.14	---						
20.	.10	.15	-.20 ^a	.42 ^c	-.22 ^b	.20 ^a	.23 ^b	---					
21.	-.15	-.12	.19 ^a	-.16	.19 ^a	.05	-.07	-.13	---				
22.	.02	-.04	-.12	.10	-.18 ^a	.18 ^a	.06	.35 ^c	-.32 ^c	---			
23.	.27	.23 ^b	-.14	.34 ^c	-.18 ^a	.31 ^c	.14	.36 ^c	.27 ^c	.38 ^c	---		
24.	-.15	-.11	.23 ^b	-.36 ^c	.16	-.15	-.07	-.38 ^c	.40 ^c	-.29 ^c	-.34 ^c	---	
25.	-.33 ^c	-.27 ^b	.35 ^c	-.44 ^c	.26 ^b	-.17 ^a	-.28 ^c	-.33 ^c	.22 ^b	-.28 ^c	-.43 ^c	.30 ^c	---

Note. ^ap < .05. ^bp < .01. ^cp < .001.

- | | |
|--|--|
| 1. age at pre-release | 13. perceived global stress |
| 2. Statistical Information of Recidivism Scale total score (SIR-R1) | 14. negative affect |
| 3. Childhood Adolescent Taxon Scale: Self Report total score (CAT) | 15. positive affect |
| 4. Hare Revised Psychopathy Checklist total score (PCL-R) | 16. perceived problem level |
| 5. # of convictions for prison misconducts incurred during the last year | 17. positive social support |
| 6. single/unsupportive partner | 18. criminal associates |
| 7. employment problems | 19. substance abuse problems |
| 8. accommodations problems | 20. poor supervision compliance |
| 9. money problems | 21. expected negative value of crime |
| 10. leisure problems | 22. expected positive value of crime |
| 11. interpersonal conflict | 23. criminal self-efficacy scale (total score) |
| 12. health problems | 24. positive coping ability |
| | 25. impression management |

Predictor variables assessed at Time 2: Inter-correlation matrix

Var.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1.	—											
2.		—										
3.			—									
4.				—								
5.					—							
6.	-.13	-.28 ^b	.09	.23 ^a	.21 ^a	—						
7.	-.06	-.27 ^b	.26 ^b	.24 ^a	.25 ^b	.16	—					
8.	-.01	.12	-.01	-.06	-.19 ^a	-.06	-.04	—				
9.	-.16	-.27 ^b	.29 ^b	.26 ^b	.15	.11	.52 ^c	-.13	—			
10.	-.20 ^a	-.28 ^b	.21 ^a	.33 ^c	.25 ^b	.20 ^a	.27 ^b	.07	.21 ^a	—		
11.	-.01	-.23 ^a	.20 ^a	.14	-.10	-.10	-.01	.06	.30 ^b	-.05	—	
12.	.44 ^c	.07	-.04	.05	-.08	-.17	.23 ^b	.05	.02	-.04	.09	—
13.	-.01	-.11	.13	-.06	-.02	.02	.12	.12	.20 ^a	-.02	.37 ^c	.25 ^b
14.	-.02	-.13	.18	.03	.09	.02	.15	.07	.27 ^b	.07	.37 ^c	.25 ^b
15.	.19 ^a	.14	-.18	-.09	-.15	-.06	-.03	-.11	-.26 ^b	-.35 ^c	-.36 ^c	-.08
16.	-.10	-.27 ^b	.34 ^c	.21 ^a	.15	.08	.35 ^c	.17	.26 ^b	.25 ^b	.26 ^b	.28 ^b
17.	.13	.21 ^a	-.04	-.26 ^b	-.09	-.14	-.08	-.14	-.23 ^b	-.22 ^a	-.24 ^b	-.01
18.	.03	-.17	.11	.16	.03	-.02	.21 ^a	-.05	.27 ^b	.28 ^b	.27 ^b	.21
19.	-.16	-.15	.09	.16	.24 ^a	.17	.13	-.02	.18	.31 ^c	.18	.02
20.	-.11	-.21 ^a	.14	.35 ^c	.06	.25 ^b	.16	.27 ^b	.06	.31 ^c	.13	.02
21.	.14	-.28 ^b	-.16	-.28 ^b	-.24 ^b	-.20 ^a	-.06	-.05	-.16	-.20 ^a	-.12	.11
22.	-.15	.09	.07	.12	.08	-.06	.00	-.02	.11	.04	.01	-.16
23.	-.38 ^c	-.26 ^b	.37 ^c	.27 ^b	.30 ^c	.28 ^b	.27 ^b	.06	.26 ^b	.33 ^c	.13	-.16
24.	.24 ^b	.23 ^a	-.27 ^b	-.43 ^c	-.25 ^b	-.22 ^a	-.16 ^a	-.10	-.22 ^a	-.30 ^b	-.23 ^a	.07
25.	.24 ^b	.37 ^c	-.39 ^c	-.33 ^c	-.17 ^a	-.10	-.23 ^a	-.04	-.29 ^b	-.27 ^b	-.03	.19 ^a

Note. ^ap < .05. ^bp < .01. ^cp < .001.

- | | |
|--|--|
| 1. age at pre-release | 13. perceived global stress |
| 2. Statistical Information of Recidivism Scale total score (SIR-R1) | 14. negative affect |
| 3. Childhood Adolescent Taxon Scale: Self Report total score (CAT) | 15. positive affect |
| 4. Hare Revised Psychopathy Checklist total score (PCL-R) | 16. perceived problem level |
| 5. # of convictions for prison misconducts incurred during the last year | 17. positive social support |
| 6. single/unsupportive partner | 18. criminal associates |
| 7. employment problems | 19. substance abuse problems |
| 8. accommodations problems | 20. poor supervision compliance |
| 9. money problems | 21. expected negative value of crime |
| 10. leisure problems | 22. expected positive value of crime |
| 11. interpersonal conflict | 23. criminal self-efficacy scale (total score) |
| 12. health problems | 24. positive coping ability |
| | 25. impression management |

Table continued

Predictor variables assessed at Time 2: Inter-correlation matrix

Var.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.
1.													
2.													
3.													
4.													
5.													
6.													
7.													
8.													
9.													
10.													
11.													
12.													
13.	---												
14.	.70 ^c	---											
15.	-.50 ^c	-.46 ^c	---										
16.	.42 ^c	.44 ^c	-.40 ^c	---									
17.	-.06	-.10	.14	-.16	---								
18.	.14	.03	-.13	.33 ^c	-.27 ^b	---							
19.	.15	.13	-.30 ^c	.22 ^a	-.14	.28 ^b	---						
20.	.19 ^a	.17	-.13	.33 ^c	-.29 ^b	.23 ^a	.43 ^c	---					
21.	-.11	.00	.19 ^a	-.20 ^a	.33 ^c	-.03	-.21 ^a	-.24 ^a	---				
22.	-.17	-.07	-.19 ^a	-.07	.03	-.01	.13	.08	-.21 ^a	---			
23.	.07	.13	-.18	.23 ^a	-.12	.03	.17	.18	-.39 ^c	.22 ^a	---		
24.	-.20 ^a	-.36 ^c	.19 ^a	-.28 ^b	.29 ^b	-.13	-.25 ^b	-.49 ^c	.31 ^c	-.07	-.37 ^c	---	
25.	-.04	-.12	.19	-.21 ^b	.10	.02	-.07	-.08	.18	-.17	-.40 ^c	.08	---

Note. ^ap < .05. ^bp < .01. ^cp < .001.

- | | |
|--|--|
| 1. age at pre-release | 13. perceived global stress |
| 2. Statistical Information of Recidivism Scale total score (SIR-R1) | 14. negative affect |
| 3. Childhood Adolescent Taxon Scale: Self Report total score (CAT) | 15. positive affect |
| 4. Hare Revised Psychopathy Checklist total score (PCL-R) | 16. perceived problem level |
| 5. # of convictions for prison misconducts incurred during the last year | 17. positive social support |
| 6. single/unsupportive partner | 18. criminal associates |
| 7. employment problems | 19. substance abuse problems |
| 8. accommodations problems | 20. poor supervision compliance |
| 9. money problems | 21. expected negative value of crime |
| 10. leisure problems | 22. expected positive value of crime |
| 11. interpersonal conflict | 23. criminal self-efficacy scale (total score) |
| 12. health problems | 24. positive coping ability |
| | 25. impression management |

Predictor variables assessed at Time 3: Inter-correlation matrix

Var.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1.	---											
2.	.33 ^c	---										
3.	-.49 ^c	-.59 ^c	---									
4.	.21 ^a	-.57 ^c	.58 ^c	---								
5.	-.31 ^c	-.33 ^c	.41 ^a	.36 ^c	---							
6.	.01	-.16	.12	.26 ^b	.02	---						
7.	.03	-.11	.11	.06	.06	.14	---					
8.	.21 ^a	.18	-.10	.05	-.12	.06	-.08	---				
9.	.03	-.19	.10	-.03	.01	.09	.30 ^b	-.20 ^a	---			
10.	-.32 ^c	-.00	.04	-.02	.06	.29 ^b	.19	.03	-.07	---		
11.	.06	-.25 ^b	.12	.22 ^a	.12	-.06	.08	-.03	.12	-.15	---	
12.	.23 ^a	-.03	-.03	-.01	-.15	-.12	.30 ^b	-.09	.34 ^c	-.07	.06	---
13.	-.19	-.00	.20 ^a	.04	.11	.12	.15	-.23	.12	.10	-.08	.10
14.	-.14	-.01	.19	.05	.07	.12	.06	-.08	.15	-.00	-.04	.21 ^a
15.	.16	-.07	-.11	-.06	-.08	-.07	-.05	-.08	-.01	-.34 ^c	.02	.12
16.	.07	-.18	.22 ^a	.15	.06	.16	.32 ^b	.02	.39 ^c	.05	.26 ^b	.46 ^c
17.	-.05	.19	-.09	-.26 ^b	-.10	-.22 ^a	-.01	-.18	.02	-.20	-.05	.03
18.	.04	-.14	.17	.16	.05	-.03	.04	.04	.14	-.07	.42 ^c	.16
19.	-.13	-.35 ^c	.28 ^b	.29 ^b	.28 ^b	.12	.13	-.04	.15	.12	.37 ^c	.14
20.	-.08	-.29 ^b	.29 ^b	.31 ^c	.22 ^a	.15	.16	-.05	.25 ^a	.08	.37 ^c	-.01
21.	.26 ^b	.20 ^a	-.30 ^b	-.29 ^b	-.40 ^a	-.17	-.03	-.01	-.08	-.13	-.11	.07
22.	-.20 ^a	.12	.09	-.04	.05	.12	.03	-.02	-.09	.16	-.09	-.19
23.	-.20 ^a	-.10	.22 ^a	.06	.13	.18	.11	-.09	-.09	.20 ^a	-.14	-.08
24.	.14	.15	-.14	-.21	-.18	-.31 ^b	-.13	-.06	-.03	-.28 ^b	-.07	.23 ^a
25.	.24 ^b	.37 ^c	-.39 ^c	-.33 ^c	-.17 ^b	-.18	-.12	.01	-.13	-.03	-.10	.04

Note. ^a*p* < .05. ^b*p* < .01. ^c*p* < .001.

- | | |
|--|--|
| 1. age at pre-release | 13. perceived global stress |
| 2. Statistical Information of Recidivism Scale total score (SIR-R1) | 14. negative affect |
| 3. Childhood Adolescent Taxon Scale: Self Report total score (CAT) | 15. positive affect |
| 4. Hare Revised Psychopathy Checklist total score (PCL-R) | 16. perceived problem level |
| 5. # of convictions for prison misconducts incurred during the last year | 17. positive social support |
| 6. single/unsupportive partner | 18. criminal associates |
| 7. employment problems | 19. substance abuse problems |
| 8. accommodations problems | 20. poor supervision compliance |
| 9. money problems | 21. expected negative value of crime |
| 10. leisure problems | 22. expected positive value of crime |
| 11. interpersonal conflict | 23. criminal self-efficacy scale (total score) |
| 12. health problems | 24. positive coping ability |
| | 25. impression management |

Table continued

Predictor variables assessed at Time 3: Inter-correlation matrix

Var.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.
1.													
2.													
3.													
4.													
5.													
6.													
7.													
8.													
9.													
10.													
11.													
12.													
13.	---												
14.	.66 ^c	---											
15.	-.53 ^c	-.44 ^c	---										
16.	.28 ^b	.40 ^c	-.19	---									
17.	.15	.22 ^a	-.18	.01	---								
18.	.24 ^a	.15	-.11	.26 ^b	.08	---							
19.	.15	.15	-.11	.39 ^c	-.29 ^b	.19	---						
20.	.17	.23 ^a	-.17	.47 ^c	-.09	.32 ^c	.46 ^c	---					
21.	-.22 ^a	-.10	.16	-.20	.09	-.27 ^b	-.41 ^c	-.41 ^c	---				
22.	-.08	-.04	-.05	-.17	.20 ^a	-.04	-.05	-.18	.03	---			
23.	.22 ^a	.09	-.15	.17	.10	-.01	.17	.18	-.29 ^b	.17	---		
24.	.00	.13	.11	-.19	.20 ^a	.06	-.30 ^b	-.46 ^c	.38 ^c	-.15	-.35 ^c	---	
25.	-.19	-.15	.21 ^a	-.27 ^b	.08	-.04	-.30 ^b	-.24 ^a	.28 ^b	-.05	-.28 ^b	.23 ^a	---

Note. ^ap < .05. ^bp < .01. ^cp < .001.

- | | |
|--|--|
| 1. age at pre-release | 13. perceived global stress |
| 2. Statistical Information of Recidivism Scale total score (SIR-R1) | 14. negative affect |
| 3. Childhood Adolescent Taxon Scale: Self Report total score (CAT) | 15. positive affect |
| 4. Hare Revised Psychopathy Checklist total score (PCL-R) | 16. perceived problem level |
| 5. # of convictions for prison misconducts incurred during the last year | 17. positive social support |
| 6. single/unsupportive partner | 18. criminal associates |
| 7. employment problems | 19. substance abuse problems |
| 8. accommodations problems | 20. poor supervision compliance |
| 9. money problems | 21. expected negative value of crime |
| 10. leisure problems | 22. expected positive value of crime |
| 11. interpersonal conflict | 23. criminal self-efficacy scale (total score) |
| 12. health problems | 24. positive coping ability |
| | 25. impression management |

APPENDIX DD: COX REGRESSION RESULTS: REVOCATION WITH A NEW OFFENCE(S)

Static Measures: Univariate Cox Regression Survival Analysis Results (Revocation - new offence)

Static measure	Survival Statistics (N = 136)						
	-2 Log L ^a (with variable)	χ^{2b}	<u>b</u> ^c	<u>SE b</u>	% change in hazard rate ^d (unstandardized)	<u>B</u> ^e	% change in hazard rate (standardized) ^f
Pre-release age	217.63	0.48	-.02	.02	-1.5	-.19	20.9
SIR-R1 ^g	194.76	16.20****	-.12	.03	-10.9	-1.3	266.9
PCL-R ^h	215.88	2.20	.04	.03	4.3	0.3	34.9
CATS-SR ⁱ	216.28	1.86	.07	.05	7.0	0.2	22.1
Prison misconducts	215.80	2.48	.19	.12	21.5	0.3	34.9

Note. df = 1 per analysis.

^a-2 Log L (without variable) = 218.13; -2 Log L = -2 multiplied by the log likelihood value.

^b χ^2 = Wald Statistic.

^cunstandardized b, represents the degree to that the baseline survival function increases or decreases as a function of a unit change in the variable.

^dthis value represents the percentage change in the hazard rate for each one-unit increase in the variable.

^estandardized B.

^fthis value represents the percentage change in the hazard rate for each one-standard deviation increase in the variable.

^gSIR-R1 = Statistical Information on Recidivism Scale - Revised.

^hPCL-R = Hare Psychopathy Checklist Revised.

ⁱCATS-SR = Childhood Adolescent Taxon Scale - Self-Report Version.

*p < .10. **p < .05. ***p < .01. ****p < .001.

Best Static Subset: Summary of Cox [stepwise] Regression Survival Analysis Results (Revocation-new offence)

Static Measure	$-2 \text{ Log } L^a$ (with variable(s))	b^b	$SE\ b$	χ^2c	% change in hazard rate (unstandardized) ^d	B^e	% change in hazard rate (standardized) ^f	Incremental r^2 (X'Beta ^g)
Step 1 SIR-R1 ^h	194.76	-.12	.03	19.86****	-10.9	-1.3	266.9	.15****

Note. Final $R^2 = .28$. Adjusted $R^2 = .28$. No other variables met the .10 significance level for entry into the model.

^a-2 Log L (without variable) = 454.10; -2 Log L = -2 multiplied by the log likelihood value.

^bunstandardized b . It represents the degree to that the baseline survival function increases or decreases as a function of a unit change in the variable.

^c χ^2 = Score Statistic.

^dthis value represents the percentage change in the hazard rate for each one-unit increase in the variable while holding all other variables in the model constant.

^estandardized B .

^fthis value represents the percentage change in the hazard rate for each one-standard deviation increase in the variable while holding all other variables in the model constant.

^gX'Beta is a standardized score that represents the predicted survival function for each subject or alternatively, the best linear combination of predictor variables. It is analogous to the standardized predicted value obtained in regular linear regression representing the best linear combination of predictor variables.

^hSIR-R1 = Statistical Information on Recidivism Scale - Revised.

* $p < .10$. ** $p < .05$. *** $p < .01$. **** $p < .001$.

Time 1 Dynamic Measures: Univariate Cox Regression Survival Analysis Results (Revocation - new offence)

Time 1 Dynamic Measure	-2 Log L ^a (with variable)	χ^{2b}	<u>b</u> ^c	<u>SE b</u>	% change in hazard rate ^d (unstandardized)	B ^e	% change in hazard rate ^f (standardized)
<u>Trigger</u>							
Single/unsupportive partner	215.41	2.53	.72	.45	2.1 ^g	.68	97.4
Employment problems	214.87	3.20*	.18	.10	19.9	.38	46.2
Accommodation problems	218.12	0.01	-.02	.15	-1.5	-.03	-2.9
Financial problems ^h	216.96	1.28	.00	.00	0.0	.00	0.0
Leisure problems	216.20	1.94	.13	.09	13.3	.29	22.6
Health problems	215.62	2.69*	.39	.24	47.9	.31	36.3
<u>Appraisal</u>							
Perceived global stress	208.52	10.02***	.09	.03	9.8	.61	84.0
Perceived problem index	207.13	11.45****	.06	.02	6.2	.65	91.6
Negative affect	214.86	3.60*	.03	.02	3.4	.31	36.3
Positive affect	218.02	0.12	-.01	.03	-0.1	-.08	-7.7

Table continued

Response Mechanisms

Strong social support	214.89	3.23*	-.01	.00	-0.7	-.52	-40.5
Criminal associates	216.67	1.34	.55	.48	0.6 ^g	.27	30.9
Positive coping ability	218.13	0.00	.00	.09	0.1	.00	0.0
Criminal self-efficacy	217.85	0.28	-.03	.06	-3.1	-.11	-10.4
Expected negative value of crime	217.98	0.15	.05	.13	5.2	.80	122.6
Expected positive value of crime	215.56	0.13	-.57	.38	-0.6	-.34	-28.8
Poor supervision compliance	217.44	0.71	.15	.72	15.8	.18	19.7
Substance abuse	209.62	6.97***	1.30	.51	3.8 ^g	.65	91.6
Impression management	211.38	5.51**	-.17	.07	-15.6	-.68	-49.3

Note. df = 1 per analysis.

^a-2 Log L (without variable) = 218.13; -2 Log L = -2 multiplied by the log likelihood value.

^b χ^2 = Wald Statistic.

^cunstandardized b. It represents the degree to that the baseline survival function increases or decreases as a function of a unit change in the variable.

^dthis value represents the percentage change in the hazard rate for each one-unit increase in the variable.

^estandardized B.

^fthis value represents the percentage change in the hazard rate for each one-standard deviation increase in the variable.

^gGiven that these variables are dichotomous these values represents relative risk rather than % change in hazard rate (i.e. single individuals are 2.4 times more likely to be revoked than individuals with a supportive partner).

^hthis variable violated the proportional hazard assumption. Thus, the interaction between time and financial problems (time*finance) was used instead as a predictor variable.

*p < .10. **p < .05. ***p < .01. ****p < .001.

Time 1 Dynamic subset: Summary of Cox [stepwise] regression survival analysis results (Revocation - new offence)

Dynamic Measure	$-2 \text{ Log } L^a$ (with variable(s))	b^b	$SE\ b$	χ^2c	% change in hazard rate (unstandardized) ^d	B^e	% change in hazard rate (standardized) ^f	Incremental r^2 (X'Beta θ)
<u>Trigger & Response Mechanism</u>								
Step 1 Substance abuse problems	209.62	1.30	.51	6.97***	3.8 ^h	.65	91.6	.07***
Step 2 Substance abuse problems Impression management	206.01	1.12 -0.13	.52 .07	4.57** 3.13*	3.0 ^h -12.1	.56 -.28	75.1 -24.4	NA ⁱ
<u>Appraisal</u>								
Step 1 Perceived problem index	207.13	.06	.02	11.45*****	6.2	.65	91.6	.09*****
Step 2 Perceived problem index Perceived global stress	203.88	0.04 0.06	.02 .03	4.70* 3.35*	4.4 6.5	.65 .20	91.6 22.1	.11*

Table continued

Note. Trigger & Response subset: Final $R^2 = .08$. Adjusted $R^2 = .07$. Appraisal subset: Final $R^2 = .11$. Adjusted $R^2 = .10$. No other variables met the .10 significance level for entry into the model.

^a-2 Log L (without variable) = 218.13; -2 Log L = -2 multiplied by the log likelihood value.

^bunstandardized b . It represents the degree to that the baseline survival function increases or decreases as a function of a unit change in the variable.

^c χ^2 = Score Statistic.

^dthis value represents the percentage change in the hazard rate for each one-unit increase in the variable while holding all other variables in the model constant.

^estandardized B .

^fthis value represents the percentage change in the hazard rate for each one-standard deviation increase in the variable while holding all other variables in the model constant.

^gX'Beta is a standardized score that represents the predicted survival function for each subject or alternatively, the best linear combination of predictor variables. It is analogous to the standardized predicted value obtained in regular linear regression representing the best linear combination of predictor variables.

^hGiven that these variables are dichotomous these values represents relative risk rather than % change in hazard rate (i.e. single individuals are 2 times more likely to be revoked than individuals with a supportive partner).

ⁱAlthough impression management did enter the survival analysis equation it did not retain its significance in the regular regression ($p = .11$).

* $p < .10$. ** $p < .05$. *** $p < .01$. **** $p < .001$.

Time Dependent Dynamic Measures: Univariate Cox Regression Survival Analysis Results (Revocation - New offence)

Time Dependent Dynamic Measure	-2 Log L ^a (with variable)	χ^{2b}	<u>b</u> ^c	<u>SE b</u>	% change in hazard rate ^d (unstandardized)	B ^e	% change in hazard rate ^f (standardized)
<u>Trigger</u>							
Single/unsupportive partner	208.64	6.67***	1.60	.62	4.9 ^g	1.03	180.1
Employment problems	206.05	12.23****	.33	.10	39.6	.65	91.6
Accommodation problems	218.12	0.02	.02	.15	2.0	.03	3.1
Financial problems ^h	218.12	0.01	.02	.18	2.2	.02	2.0
Leisure problems	218.09	0.04	.03	.13	2.5	.05	5.1
Health problems	217.50	0.67	.21	.25	22.8	.16	17.4
<u>Appraisal</u>							
Perceived global stress	214.37	4.15**	.07	.03	6.8	.41	50.7
Perceived problem index	209.08	10.17****	.07	.02	6.8	.61	84.0
Negative affect	209.50	11.45****	.06	.02	6.0	.47	59.9
Positive affect	217.85	0.28	-.02	.03	-1.7	-.13	-72.7

Table continued

Response Mechanisms

Strong social support	201.52	17.82****	-.02	.00	-1.6	-.95	-61.3
Criminal associates	216.61	1.29	-.70	.62	0.5 ^g	-.31	-26.7
Positive coping ability	216.61	1.55	-.07	.05	-6.3	-.24	-21.3
Criminal self-efficacy	217.89	0.25	.03	.06	3.0	.11	11.6
Expected negative value of crime	218.09	0.05	-.02	.14	-2.9	-.03	-2.9
Expected positive value of crime	206.56	9.24***	-1.08	.35	-65.9	-.79	-54.6
Poor supervision compliance	218.10	0.03	-.04	.20	-3.5	-.04	-3.9
Substance abuse	213.75	4.58**	.89	.42	2.4 ^g	.36	43.3
Impression management ^l	---	---	---	---	---	---	---

Note. df = 1 per analysis.

^a-2 Log L (without variable) = 218.13; -2 Log L = -2 multiplied by the log likelihood value.

^b χ^2 = Wald Statistic.

^cunstandardized b. It represents the degree to that the baseline survival function increases or decreases as a function of a unit change in the variable.

^dthis value represents the percentage change in the hazard rate for each one-unit increase in the variable.

^estandardized B.

^fthis value represents the percentage change in the hazard rate for each one-standard deviation increase in the variable.

^gGiven that these variables are dichotomous these values represents relative risk rather than % change in hazard rate (i.e. single individuals are 2.4 times more likely to be revoked than individuals with a supportive partner).

^hthis variable violated the proportional hazard assumption. Thus, the interaction between time and financial problems (time*finance) was used instead as a predictor variable.

^lInformation on this variable was not collected post-release.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Time Dependent Dynamic subset: Summary of Cox [stepwise] regression survival analysis results (Revocation - New offence)

Dynamic Measure	-2 Log L ^a (with variable(s))	b ^b	SE b	χ^{2c}	% change in hazard rate (unstandardized) ^d	B ^e	% change in hazard rate (standardized) ^f	Incremental r ² (X'Beta ^g)
Trigger & Response Mechanism								
Step 1	201.52							
Social Support		-0.02	.00	17.82****	-1.6	-.95	-61.33	.12****
Step 2	190.26							
Social Support		-0.02	.00	15.93****	-1.8	-.95	-61.33	
Positive Consequences		-1.10	.37	8.88***	-66.6	-.80	-55.07	.19****
Step 3	183.92							
Social Support		-0.01	.00	10.57****	-1.4	-.48	-38.12	
Positive Consequences		-1.15	.38	9.05***	-68.3	-.84	-56.84	
Employment		0.26	.10	6.47***	29.3	.51	66.53	.23**
Step 4	180.17							
Social Support		-0.01	.10	7.78****	-1.2	-.48	-38.12	
Positive Consequences		-1.17	.00	10.13****	-69.0	-.85	-57.25	
Employment		0.23	.10	6.82***	26.0	.45	56.83	
Single/Unsupportive partner		1.11	.61	3.32*	3.0	.55	73.35	.24*

Table continued

Appraisal

Step 1

Negative affect 209.50 .06 .02 11.45**** 6.0 .47 59.9 .07***

Note. Trigger & Response subset: Final $R^2 = .24$. Adjusted $R^2 = .23$. Appraisal subset: Final $R^2 = .07$. Adjusted $R^2 = .06$. No other variables met the .10 significance level for entry into the model.

^a-2 Log L (without variable) = 218.13; -2 Log L = -2 multiplied by the log likelihood value.

^bUnstandardized b . It represents the degree to that the baseline survival function increases or decreases as a function of a unit change in the variable.

^c χ^2 = Score Statistic.

^dThis value represents the percentage change in the hazard rate for each one-unit increase in the variable while holding all other variables in the model constant.

^eStandardized B .

^fThis value represents the percentage change in the hazard rate for each one-standard deviation increase in the variable while holding all other variables in the model constant.

^g X Beta is a standardized score that represents the predicted survival function for each subject or alternatively, the best linear combination of predictor variables. It is analogous to the standardized predicted value obtained in regular linear regression representing the best linear combination of predictor variables.

^hGiven that these variables are dichotomous these values represents relative risk rather than % change in hazard rate (i.e. single individuals are 2 times more likely to be revoked than individuals with a supportive partner).

* $p < .10$. ** $p < .05$. *** $p < .01$. **** $p < .001$.