The Utility of the Psychopathy Checklist- Screening Version for Predicting Serious Violent Recidivism in a New Zealand Offender Sample

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Abstract

This study set out to evaluate the ability of the Psychopathy Checklist: Screening Version (PCL: SV) to predict criminal reoffending by New Zealand offenders convicted of previous serious violent offences. Psychopathy has been identified in a large number of overseas studies as a significant risk factor for general reoffending and in particular for violent reoffending. Using a retrospective-prospective design, a representative sample (N = 199; 48% of Māori descent) was selected from a database of male offenders serving sentences of seven years or more, the majority for violent crimes, who had been released into the community for a minimum of five years.

Inmate institutional file information up to the time of their release was used to score the PCL: SV. Current offender criminal records were then accessed to establish if recidivism had occurred since release, and if so, the type of sentence imposed and the seriousness of the reoffending. In addition, PCL: SV scores were compared to two static actuarial measures of recidivism in use by the New Zealand Department of Corrections. The PCL: SV total, Factor 1, and Factor 2 scores correlated .50, .37, and .53, respectively with reconviction, and .49, .40, and .47 respectively with reimprisonment. Both discriminant function analysis (Wilkes Lambda = .79) and Receiver Operator Curve analysis (AUC = .80) confirmed the overall predictive accuracy of the PCL: SV for serious violent reoffending and its ability to add support to actuarial instruments based solely on static risk predictors.

The unique nature of this contribution was supported by regression analysis identifying that PCL: SV Factor 1 scores, regarded as measuring core psychopathic traits, had a high negative correlation (r = -.41) with time to reimprisonment for violent offences. The final part of the study involved an investigation into the 'false positive' group (N = 32). Men with PCL: SV scores of 16 or greater but no further offending resulting in reimprisonment within five years of release. The study of this group was carried out to establish if indeed they were low risk, and to explore the strategies they used to reduce their risk. A number were found to have died or to have committed serious offending that was not originally detected (n = 5) reducing the false positive rate to 24% (sensitivity 76% and specificity of 24%).

A structured interview was administered focused on post-release problems and strategies that also included a psychometric battery measuring static and dynamic risk variables, anger, personality pathology, and interpersonal and affective deficits. The results from those agreeing to be interviewed (n = 14) found the majority continued to experience regular thoughts about potential criminal acts and were still assessed at high recidivism risk, but the majority used strategies such as increased control over substance abuse, avoidance of criminal friends and family, and geographic isolation to reduce engaging in serious crime. In addition, ill health and the debilitating effects from their high-risk criminal lifestyle (accidents, substance abuse, and long sentences of imprisonment) had reduced their ability to engage in violent criminal activity.

It was concluded that the PCL: SV has a high level of predictive validity in predicting serious reoffending for a New Zealand male offender population. The

research has been successful in adding to the growing body of knowledge on the ability of the PCL: SV and the concept of psychopathy to predict serious recidivism by criminal populations. Evidence was found of a strong relation between PCL: SV Factor 1 scores and speed of violent reoffending supporting the special ability of the psychopathic personality construct to predict violent behaviour. The follow-up of the false positive group helped to account for part of the false positive decision error rate and has provided further support for the predictive accuracy of the PCL: SV and its inclusion in comprehensive risk assessment. In addition, insights into the beliefs and lifestyles of this parole group were gained that will assist in the development of effective correctional re-integrative initiatives and accurate parole decision-making.

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Finally, I want to acknowledge the study participants, especially those who agreed to participate in the false positive study interviews. It is hoped that their openness about their lives since release from prison has enabled me to contribute something of value to the study of recidivism.

Dedicated with love to my wife, Chellie

and my children, Connor and Alice

Ethical approval for the two studies was granted on condition that the identity of the participants would be kept anonymous. Anonymity was also assured for all participants in the interviews carried out for the false positive study. Therefore, details, which would enable the identification of individual participants, have been altered.

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CHAPTER ONE

Risk Assessment and Psychopathy

The mind is its own place, and in it self

Can make a Heav'n of hell, a Hell of Heav'n.

Here we may reign secure, and in my choice

To reign is worth ambition through to hell:

Better to reign in hell, than serve in heav'n.

Milton, *Paradise Lost,* bk. I, 1.254; 261

My interest in serious chronic antisocial behaviour began at 19 years of age when I became a policeman. Up until then my experience of criminals and indeed life had been relatively limited and coloured by the media rather than reality. This all changed however in my work as a police constable. I was lucky (or unlucky!) in the three years as a policeman to attend to a number of serious violent crimes committed by a variety of offenders. Some offenders were often very personable and ordinary with their innocuous presentation being in marked contrast to the atrocious nature of the crimes they had committed. For some colleagues this provided evidence for such apparent out-of-character behaviour to be viewed as 'evil' or 'crazy'. However, I found such explanations were not convincing and reflected that for most of us such behaviour was contrary to a general understanding of people.

My education into the nature of those who commit antisocial acts continued in the five years I worked in a large New Zealand nightclub. Such venues typically attract those who in Milton's words seek to make a "Heav'n of Hell", or put another way, are totally focused on their own pleasure above all else. I had personal experience of violence and diverse antisocial behaviour, and in dealing with a number of gangs, the structures that maintain and protect those who display chronic antisocial behaviour. All these experiences meant that the study of clinical psychology at university was a natural progression.

I was able to further my academic knowledge of chronic antisocial behaviour in my Master's research topic. This research involved me looking at the phenomenon of reward dominance and its relationship to chronic antisocial behaviour in a large sample of six-and seven-year-old boys (Wilson, 1996; Wilson & Evans, 2002). After completing my postgraduate clinical training I accepted a position as a clinical psychologist with the Department of Corrections Psychological Service. My work in the assessment and treatment of criminal behaviour with a wide range of offenders increased my knowledge about the diversity of internal motivations for antisocial acts. It also brought me into contact with those who appeared resistant to change and with no apparent remorse for their actions. Such offenders tended to reoffend shortly after release from prison and to commit acts of extreme violence. However, this chronic recidivist group is a small proportion of the offender population.

It does not take long when one is working in the Criminal Justice area to come to the conclusion that the prediction of serious criminal behaviour is one of the most

pivotal aspects to making the system 'work' (Andrews & Bonta, 1998). Being able to predict those who will reoffend provides guidance for decision-making by parole boards, as well as in sentencing when indeterminate sentencing options are under consideration. In addition, the application of the risk/needs principles, whereby those at high risk also are viewed as having high criminogenic needs, enables effective targeting of treatment resources (Andrews, Bonta, & Hodge, 1990; Simoud & Hoge, 2000).

The Theoretical Basis to Risk Assessment

The major assumption that is made when considering risk prediction is that certain individual characteristics are actually related to future criminal behaviour (Quinsey, Harris, Rice, & Cormier, 1998). This assumption is strongly supported by a long history of research into the prediction of recidivism for those with previous histories of criminal behaviour (Andrews & Bonta, 1998). While most criminal behaviour is minor in nature, serious antisocial behaviour such as murder, armed robbery, sexual assault, and arson is of real concern to the public (Bakker, O'Malley, & Riley, 1998). A number of theoretical approaches have been used to study criminal conduct to establish why it occurs and how to treat it, with these orientations providing guidance into "best practice" in terms of risk assessment.

Criminology actually began with a biological determinism perspective on deviance. Lombroso's *Criminal Man* (1876) was the first attempt to present an evolutionary theory of criminal behaviour, arguing that some individuals were "born"

criminals, presenting as Neanderthal throwbacks unable to deal with current social constraints (Newbold, 1992). His theory, as summarised by Andrews and Bonta (1998), was based on the presence in chronic criminals of atavistic traits and characteristics that were assessed through the identification of physical attributes indicative of prehistoric man. These physical attributes included large jaw and cheekbones; eye defects, unusual ears, nose shape (flattened = thief; beak = murderer), large and protruding lips, long or receding chin, long arms, and deviation in head size and shape. While this biological approach to the assessment of criminal behaviour fitted the fascination of the 19th Century with biological factors, its development tended to stay in the area of fiction, such as in Robert Louis Stevenson's *Dr Jekyll and Mr Hyde* (1886). Mr Hyde was described in terms of a deformed appearance and ape like behaviour with the transformation occurring due to biological change from a drug that changed identity.

The rise of sociological and psychological theories of criminality in the 20th Century has provided the major approaches recognised today, each having a particular evidence base that can be examined in terms of its effectiveness in predicting criminal behaviour.

Sociological Criminology

In part due to a scientific vacuum in the study of criminal behaviour left by the focus of psychiatry and psychology on other forms of deviant behaviour, sociological perspectives became the dominant theoretical explanation of crime (Andrews & Bonta,

1998). Thus, the primary causal factors for crime were sought in social, political, and economic conditions with criminal behaviour occurring due to the position that disadvantaged people hold in a society. Two major assumptions were made in the sociological perspective: firstly, that broad-based social, political and economic factors explain social behaviour; and secondly, that the major causes of crime are not found in the individual (Newbold, 1992).

An example of this assumption in practice is "Opportunity Theory" in which people are socialised to strive for certain universal goals (e.g., money, material wealth, prestige, and power), with inequalities blocking opportunity and motivating the powerless and disadvantaged to use illegitimate ways of achieving these goals (Andrews & Bonta, 1998; Newbold, 1992).

Another, approach is "Labelling Theory" in which individuals are singled out as deviant, thus, altering how society regards them and how they view themselves. Lemert, (1951) a major labelling theorist, believed that the change in self perception by those engaging in deviant acts was likely to be sudden due to a severe reaction from society. This severe reaction from society typically occurs when delinquent youth transition to young adulthood, deviant behaviour that was regarded as 'pranks' and 'mischief' becomes criminal with judicial sanctions. Individuals who change their self-perception move towards regarding himself or herself as criminal for life.

"Differential Association Theory" (Sutherland & Cressey, 1978) and "Neutralization Theory" (Matza, 1968) move from explaining deviant behaviour in terms of societies reaction and structures to the learning processes involved in

antisocial behaviour. Differential association describes how people acquire criminal behaviour in a similar process to prosocial behaviour patterns. Individuals through association with others learn norms, beliefs, and values that are both favourable and unfavourable to the violation of laws. Individuals' deciding on what is favourable or unfavourable to law violation depending on the person-situation complex that is present. Matza (1968) in Neutralization Theory deals with the content of what is learned and rationalised through association. He suggests that delinquents are essentially committed to society's values and norms and, therefore, must neutralize the guilt their antisocial act elicits to persist in their deviant behaviour. This argument again supports that the individual is not delinquent due to an all-pervasive deviant value-norm system, but rather comes from an adaptation to association with antisocial others.

Therefore, any assessment under sociological criminology focuses on socio-economic status, race, ethnicity, social position, and association, factors that are not easily changed. In reality, treatment from a sociological orientation means that society must change to reduce recidivism risk in the individual. The research base for the relationship between social factors and crime provides only low correlations between social status and the prediction of criminal conduct. A major meta-analysis by Gendreau, Little, and Goggin (1996) found that social status had a small correlation coefficient ($r = .06$) with risk of reoffending that had not changed in studies covering a 25 year period. In summary, the sociological approach to explaining crime does not

appear to place enough emphasis on individual differences or personal variables as significant correlates of criminal conduct.

Clinical Criminology

In clinical criminology the focus is on the individual rather than societal factors. In general, this perspective suggests criminal behaviour is either a result of psychopathology in an individual (Personal Distress Theory), a psychological deficit (Mental Disorder Theory), or that this behaviour results from people not living up to their full psychological potential (Existentialist Theory). These theories have received wide acceptance in the past from professionals and para-professionals involved in the assessment and treatment of antisocial behaviour (Andrews & Bonta, 1998).

In Personal Distress Theory, symptoms/conditions such as anxiety, self-esteem, depression, alienation, and loneliness are assessed, with intervention typically being focused on the provision of relaxation and social skills, self-improvement, and cognitive therapy for dysfunctional beliefs (Andrews & Bonta, 1999). However, the actual correlation between the behaviours related to personal distress and reoffending was found to be low at $r = .08$ in a review of 225 studies (Gendreau et al., 1996).

In Mental Disorder Theory, the focus is on mental disorder as a casual factor in violent antisocial behaviour, mental disorder being defined in this case as the individual having a DSM-IV Axis 1 disorder (Andrews & Bonta, 1998). The media have been a major influence in shaping the perception by the general public that mentally disordered offenders are common and highly likely to offend violently

(Monahan et al., 2001). In fact, early studies into the prediction of violence in the late 1960s and early 1970s were carried out with individuals diagnosed as suffering from mental disorder (Monahan, 1981; Webster, Harris, Rice, Cormier, & Quinsey, 1994). The early studies into prediction drew attention to high decision error rates and the barrier to accuracy presented by low base rates for violent crimes in this population (Webster et al., 1994). The low base rate bias was related, however, to the general mental health population and was not as relevant when only criminal populations were examined (Quinsey et al., 1998). In addition to the base rate bias there is the error involved with the variability in prevalence of mental disorders with studies reporting from 58% to 100% of inmates having a mental disorder. The prevalence variability comes from studies that report mental disorder without indicating whether this is a clinically serious form of mental disorder. The prevalence of serious mental health disorders among offenders is not high for disorders such as schizophrenia (less than 7%) or manic-depression (2-3%) (Andrews & Bonta, 1998). A recent comprehensive study of psychiatric morbidity in New Zealand male prison inmates found similar low rates with 6% meeting the diagnostic criteria for schizophrenia, and 2.2% for manic-depression (Simpson, Brinded, Laidlaw, Fairley, & Malcolm, 1999)

Research studies reveal that, putting aside the low prevalence of serious mental health disorders, the presence of these disorders was not a good predictor of criminal behaviour. The most famous study in this area was Steadman and Cocozza's (1974) evaluation of the "Baxtrom patients". This study arose when inmate Johnnie Baxtrom, who had a diagnosis of mental disorder, took a case to the United States Supreme

Court (*Baxstrom v. Herold*) to challenge his continued incarceration in a mental hospital without any evidence of continued dangerousness being presented. His argument was if he was not dangerous he should be released and the court agreed. The decision released a large number of psychiatric patients that were incarcerated in institutions because of concerns that most would commit further serious violent acts if they were free in the community. While a high base rate of violent reoffending (14.3%) was found when this group was followed up this was still far lower than the institutions original assessment that the majority would commit further violent acts. This finding of a relatively low violent reoffending by individuals diagnosed with mental disorder has been confirmed in a number of later studies (Andrews & Bonta, 1998).

A recent meta-analysis by Bonta, Law, and Hanson (1998) found a negative relationship in the prediction of recidivism when offenders with a mental health disorder were compared with non-disordered offenders (General offending r = - .19; Violent offence r = -.10). The only mental health variable that appeared to be predictive of violence was the presence of delusions of "threat/control-override". These delusions were related to beliefs that others are either trying to harm or control the individual (Link & Steuve, 1994). However, the recent comprehensive MacArthur study of mental disorder and violence, the largest study to date in this area, was not able to confirm the predictive link to such delusions (Monahan et al., 2001). However, it should be pointed out that attribution beliefs relating to threat/control-

override are predictive of violence for both patient and non-patient populations, indicating that it may be antisocial beliefs that are the key predictors.

Social Learning Theory

Monahan (1981) summarised both the difficulties in risk prediction, as well as the need for clinicians to evaluate dangerousness. He also identified that besides criminal history, cognitive and affective predispositions to violence, and demographic characteristics could be issues in the prediction of violent recidivism. The social learning approach to understanding criminal behaviour emphasises that it is a learned behaviour in which the learning follows the same principles as other behaviour in an interaction with both personal and environment factors (Andrews & Bonta, 1998).

What causes one individual to decide to behave in a criminal fashion and another to decide not to engage in such behaviour? Using the social learning approach the variability in antisocial behaviour is accounted for by: characteristics of the immediate environment; the attitudes, values, beliefs and rationalisations held by the person in regard to antisocial behaviour; social support for the antisocial behaviour; a history of engagement in antisocial behaviour; and the presence of the traits associated with antisocial personality (impulsivity, poor social competency, and interpersonal and affective deficits) (Andrews & Bonta, 1998; Blackburn, 1993).

While acknowledging static factors, this model also allows the assessment of dynamic risk factors that are potential targets for prosocial change. It is this approach that has allowed the strongest correlates and predictors of individual criminal

behaviour to be identified (Bonta, 2002; Brown, 2002). Meta-analysis of recidivism predictors has established that the best predictors for a wide variety of samples (i.e., psychiatric, prison inmate, young and old, male and female) are *antisocial cognitions, antisocial associates, a history of antisocial behaviour,* and a collection of trait-based indicators called *antisocial personality* (Bonta et al., 1998).

These predicative variables and the others discussed in the review of theoretical approaches listed below are in order of predictive ability (see Table 1.1) using the results from meta-analyses carried out by Gendreau et al. (1996) and Bonta et al. (1998).

Table 1.1

Predictors of General Recidivism

Risk Factors	(*r*)
Antisocial Support (Social Learning)	.21
Antisocial Personality (Social Learning)	.18
Antisocial Cognitions (Social Learning)	.18
Criminal History (Social Learning)	.16
Social Achievement (Clinical Criminology)	.13
Family Factors (Social Learning)	.10
Substance Abuse (Social Learning)	.10
Intelligence (Clinical Criminology)	.07
Lower Class Origins (Sociological Criminology)	.05
Personal Distress (Clinical Criminology)	.05

'Big Four' Predictors of Criminal Behaviour

Antisocial cognitions. In looking at antisocial cognitions (e.g., my rights are more important than those of others) it is important to point out that such beliefs are not necessarily 'global' (Andrews & Bonta, 1998). Many people will endorse a position that it is acceptable to steal or inflict pain on someone, but only in a particular situation rather than anytime, anywhere (Sykes & Matza, 1957). Such rationalisations are the verbal behaviour often used prior to antisocial behaviour, and thus are considered causal. They may also be used after the event to justify criminal behaviour by deflecting blame or in managing guilty feelings. Typically, the verbal behaviour by which guilt is neutralised includes; denial of responsibility, denial of injury; denial of a victim, condemnation of the 'system' as corrupt or biased, and appeal to higher loyalties (Andrews & Bonta, 1998). Thus, these procriminal beliefs determine the direction of personally mediated control, deciding the antisocial behaviour as well as the intensity and frequency with which it will be displayed.

Antisocial associates. This predictive variable is made up of family, peers and others in the immediate environment who are able to influence through modelling the choice of antisocial or prosocial behaviour and of the rules by which rewards and punishments are delivered. In addition, these associates can help to form and maintain antisocial attitudes that serve to personally mediate control by an offender (Andrews & Bonta, 1998; Blackburn, 1993). Table 1.1 clearly shows that the moderate correlation between this factor and criminal behaviour was the highest found in the meta-analyses. This relation is explained by criminal behaviour being learned from associations with

procriminal and anti-criminal groups with the focus on intimate communication as the principle learning contingency. The learning and reinforcement of antisocial beliefs is developmental, with the association with delinquent peers an established 'stage' for chronic antisocial behaviour, a result of the need to seek out others with similar beliefs and social competency deficits (Patterson, Reid, & Dishion, 1992; Reid, Patterson, & Snyder, 2002). An early study by Robins (1966) into delinquency found that those with conduct disorder were more likely to belong to a gang, although long-term follow-up confirmed that it was the early onset of antisocial behaviour that best predicted serious adult antisocial behaviour.

History of antisocial behaviour. The first systematic study of recidivism was carried out in 1920s using the criminal records from 3,000 men paroled from an Illinois penitentiary, and found a positive relationship between past criminality and reoffending (Burgess, 1928). A younger age at first conviction has been linked to an increased risk for violent recidivism (Loeber & Stouthamer-Loeber, 1996; Moffitt, 1997). Generally, offenders who begin their criminal careers earlier and are introduced to the justice system at a young age are more likely to commit further acts of violence and criminality than those who become criminally active later in life. A large number of studies confirm the link between early onset and chronic criminal behaviour, including the Dunedin longitudinal study, which established persistent antisocial behaviour prior to age 13 as a key risk indicator (Moffit, 1993). In another long-term study of criminal behaviour using a sample of 282 male aboriginal offenders, Bonta, Lipinski, and Martin (1992) found that criminal recidivists had a

significantly younger mean age at first conviction (17.8 years) than non-recidivists (19.5 years). Moreover, in a sample of 322 male inmates followed-up from 1973, Martinez (1997) found that an offender's age at his first arrest was predictive of future criminal activity. Finally, Lattimore, Visher, and Linster (1995) further identified age at first arrest as being a significant risk predictor for future violent crime, using multivariate competing hazards analysis to identify salient risk predictors for violent recidivism among young offenders.

The more extensive an individual's criminal history (i.e., greater number of prior arrests and convictions), the greater is his or her potential for future acts of violence. In a sample of 120 inmates released from a maximum-security psychiatric institution, Villeneuve and Quinsey (1995) found that repeat violent offenders had a substantially greater history of serious juvenile delinquency than non-recidivists. In addition, Bonta et al.'s (1998) meta-analysis revealed that juvenile delinquency correlated strongly (r = .27) with violent recidivism. Gendreau et al. (1996) also found that a history of pre-adult antisocial behavior was predictive (mean weighted r = .16) of general recidivism. Further documentation of the importance of early behaviour to later offending comes from Rice and Harris (1996) who examined several predictors of violent recidivism in a sample of 243 mentally disordered fire setters. They found several variables reflecting childhood antisocial behavior that were a significant predictor of violent recidivism.

Antisocial/psychopathic personality. Antisocial personality has long been linked to a higher risk of criminal behaviour (Andrews & Bonta, 1998) and has been

included in the DSM since the second edition of the manual (APA, 1968). However, a distinction needs to be made between those meeting the diagnostic criteria for criminal psychopathy and the population of manifestly similar individuals labelled as antisocial personality using the diagnostic criteria listed in the DSM (APA, 1994). Descriptors such as psychopathy, antisocial personality disorder, sociopath, or dyssocial personality disorder are often used interchangeably (Hare, Hart, & Harpur, 1991). They are all intended to refer to the same personality construct, with those identified as meeting the criteria for psychopathy usually fitting that for antisocial personality disorder (Lykken, 1995). In fact, it is estimated that 80% of those in prison usually meet the criteria for antisocial personality disorder while only a small proportion of these would meet the criteria for psychopathy (Andrews & Bonta, 1998).

The difficulty is that the DSM-IV criteria for antisocial personality disorder are based largely on deviant behavioural descriptors without any recognition of the range of motivations for such antisocial acts. As such the antisocial personality disorder criteria fail to identify those at higher risk of reoffending violently because interpersonal and affective deficits such as grandiosity, lack of remorse, and callousness, are not included (Shipley & Arrigo, 2001). Therefore, distinction should be made on the basis of the origins of the antisocial behaviour. Individuals whose antisocial behaviour can be traced to neurotic motivations or sociological forces are not considered psychopathic as they lack the primary affective deficits, and often have insight into the need to change (Reise & Oliver, 1994).

It can be argued, therefore, that the link between antisocial personality and recidivism is in reality a link between criminal psychopathy and reoffending (Andrews & Bonta, 1998). When the focus is specifically on offenders who met the criteria for psychopathy the correlation to recidivism is higher. A summary of criminal reoffending prediction literature by Salekin, Rogers, and Sewell (1996) looked at 29 studies that had included psychopathy as a risk variable and for sexual recidivism found an *r* of .27 for general recidivism and for violent recidivism an *r* of .32.

In summary, the evidence is that the big four recidivism variables are the best predictors of criminal behaviour. However, the next questions are how do you use this knowledge in assessing risk? and do you use the variables to support clinical judgement, or are they more effective when they are incorporated into actuarial assessment?

The Move from Clinical Judgements of Risk to Actuarial Assessment

Bonta (1996) reviewed the literature on offender risk assessment and identified that, while this had relied on clinical judgement up until the 1980s, such subjective approaches had never been empirically validated. In fact, clinicians were found to be susceptible to judgement errors, stereotypical biases, and cognitive heuristics in making decisions about risk. Grove and Meehl's (1996) meta-analysis found that clinical judgement outperformed actuarial approaches (summation of factors that related to recidivism) in only 6% of their sample of 136 studies. A further study by Bonta et al. (1998) found for violent recidivism that clinical judgement had a low

correlation with recidivism compared to actuarial risk measures (clinical, $r = .09$; actuarial, $r = .30$). It is noted that the majority of actuarial measures are heavily weighted for static predictors such as prior criminal history rather than dynamic predictors such as employment or marital status (Andrews & Bonta, 1998).

One of the best predictors of recidivism, and in particular, of serious violent reoffending is criminal psychopathy (Serin, 1991; 1996), yet this concept is classified as a dynamic predictor and not assessed by instruments that focus on the static predictors (Andrews & Bonta, 1998). Therefore, it is necessary to understand the concept and establish if valid and reliable assessment of this important predictor is possible as part of improving our ability to assess risk.

What is Psychopathy?

Historical concepts. Historical sources have often reported individuals who have committed acts of extreme antisocial behaviour seemingly without remorse or guilt (Hare, 1970). In fact an early description of the features we associate with antisocial personality was provided by Theophrastus, a student of Aristotle who wrote about the 'Unscrupulous Man'. The Unscrupulous Man was said to go and borrow money from a creditor he had never paid and when shopping to distract the butcher by reminding him of some service he had performed for him in the past while manipulating the scales with his hand. If he succeeded, so much the better, if not, he would snatch a piece of tripe and go off laughing (cited in Millon, Simonsen, & Birket-Smith, 1998). However, while society prior to the 19th Century labelled their

behaviour as "evil", there was no clinical tradition of research into the psychological characteristics that might be present in these individuals. For many years criminologists dismissed the concept of psychopathy as a mythical entity until Cleckley and then Hare provided an assessment framework (Hart & Hare, 1996).

Moral insanity. It was only at the end of the 18th Century with the return to philosophical arguments about free will and whether those who transgress moral norms understand the consequences of their actions that insanity, without delirium as a concept, became accepted by theorists. It was Philippe Pinel (1801/1962) who observed that some of his patients engaged in impulsive and self-damaging acts while having no deficit in reasoning or lack of insight into the irrational nature of their behaviour. This was the first clear evidence that challenged the universally held precept that all mental disorders were disorders of the mind. Thus, individuals were not regarded as insane if they were able to reason and no confusion of mind was present. Later, Prichard (1835) added the word 'moral' to classify the actions as signifying a socially reprehensible deficit in character (cited in Millon et al., 1998). Such a broad classification, including all disorders as moral insanity except mental retardation and schizophrenia means the origin of the category is sociological rather than clinical. In 1904 Kraepelin (1915) began to identify the individuals we would classify today as having antisocial personalities. He further refined his original four category typology (morbid liars and swindlers; criminals by impulse; professional criminals; and morbid vagabonds) into lack of deep emotional reactions of sympathy

and affection; early antisocial behaviour, and pervasive criminality) (cited in Millon et al., 1998).

Sociopathy. The 20th Century saw a move away from a deterministic explanation of psychopathy as based on predisposition and heredity in an attempt to explain the large numbers of delinquents who were not morally defective or constitutionally inclined to criminality. Birnbaum (1909) is reported to be the first to suggest the term "sociopath" as a more apt designation for those previously identified as psychopathic (cited in Millon et al., 1998). He believed that inherent immoral traits were rare as causes of criminal behaviour with the operation of societal forces promoting deviant behaviour being the more likely causal feature. However, again the difficulty in identification came about by the term sociopath being applied to those we would diagnose as schizoid, or borderline personality disordered (Millon et al., 1998). The confusion over the term psychopath continued in the years before World War II, when it was linked to a range of antisocial behaviour, with the deviancy of the behaviour determining the diagnosis (e.g., explosive violence or sexually perverted).

The increasing promise of principles of learning and social conditioning (Bandura, 1986) in the period following WWII provided further support for different developmental pathways to antisocial behaviour while acknowledging the impact of temperament in conditioning (Eysenck, 1957). In an attempt to bring clarity to the personality theory of psychopathy, firstly Eysenck (1965), then Blackburn (1993), argued for a distinction between "primary" psychopaths (related to Pinel and Kraepelin's descriptions) and "secondary" psychopath (those who feel guilt and are

more hysterical). However, Hare (1970; 1996), in keeping with Cleckley's (1941/1988) original descriptive criteria, argued against this classification, which was based on the premise that some psychopaths feel guilt and anxiety and thus have insight into the need to change their behaviour. In part, the attractiveness of secondary psychopathy or even sociopathy as a classification is the notion of treatability (Benveniste, 1996). Hare's classification is based on psychopathy being a distinct personality construct in which a lack of guilt or concern for others is central to the diagnosis.

Clinical identification of psychopathy. Cleckley's *The Mask of Sanity* (1941/1988) was the first attempt to operationalise the concept of psychopathy (Hare, 1970). Cleckley noted in the fifth edition of *The Mask of Sanity* that he had been astonished at the lack of material and research into individuals displaying psychopathic behaviour prior to his own investigations. From his extensive clinical observations of patients committed to psychiatric hospitals, Cleckley identified 16 factors that he considered constituted the main features of psychopathy:

> Superficial charm and good intelligence; absence of delusions and other signs of irrational thinking; absence of "nervousness" or psychoneurotic manifestations; unreliability; untruthfulness and insincerity, lack of remorse or shame; inadequately motivated antisocial behaviour; poor judgement and failure to learn from experience, pathological egocentricity and incapacity for love; general poverty in major affective reactions; specific loss of insight; unresponsiveness in general interpersonal relations; fantastic and uninviting behaviour with alcohol (and sometimes without); suicide rarely carried out; sex life impersonal, trivial, and poorly integrated; and failure to follow any life plan (Cleckley, 1941:1988, p.337-338).

However, because few in Cleckley's research population were criminal his criteria tended to identify the "con artist" and hedonist rather than those with extreme or violent antisocial behaviour. If fact, Cleckley commented that only a small proportion of typical psychopathic individuals were likely to be found in penal institutions as they did not tend to commit major offences and had the ability in the main to escape legal punishments and restraints. Therefore, his observations, while valuable, did not indicate a theory to explain the behaviour, or a valid and reliable assessment approach for those of most concern, criminals meeting the criteria for psychopathy who commit extreme acts of violence.

Theories Relating to Psychopathy

The theories around psychopathic personality have tended to come out of a psychoanalytic approach focused on deep characterological pathology (Matthews & Deary, 1998). Psychopathic character has typically been viewed as a variant of narcissistic personality disorder with the psychopath classified as a 'malignant narcissist' displaying aggression and sadistic behaviour not associated with the more benign narcissistic disorder (Meloy, 1998). It is the defensive nature of narcissism that is believed to distort the psychopath's perceptions, emotions, and ability to inhibit antisocial behaviour.

Eysenck's work. Behavioural approaches have been criticised as being too much on the surface level (only observational) (Arntz, 1999). However, this fails to acknowledge behavioural theorists such as Eysenck and his work on identifying the

major personality dimensions. He employed factor analysis to identify three dimensions of personality, neuroticism, extraversion, and psychoticism in explaining individual differences in response to similar situations (Eysenck, 1957; 1960). Eysenck found that when explaining criminal behaviour psychoticism was always involved; extraversion was more involved in younger samples, and neuroticism, was only involved in older individuals. He described psychopathy with reference to high levels of emotional instability, namely, extraversion due to inherent deficits in conditioning to punishment contingencies while being focused on immediate rewards (Eysenck, 1965). The lack of conditionability to punishment contingencies was used to explain poor arousal by high-psychoticism and high-extraversion persons when exposed to negative punishment. The pathway described here has been used to explain the lack of conscience in psychopaths as a deficit in acquiring a Pavlovian conditioned response (CR) when subject to punishment by parents, peers, etc, for socially deviant acts (Eysenck, 1977).

Eysenck identified that there were biological factors, as well as environmental contingencies in the development of personality traits (1960; 1965). Gray (1982; 1990) extended Eysenck's work on biological factors and their link to chronic antisocial behaviour, postulating that the differences in ability to learn were due to frontal lobe differences. Gray postulated that two systems existed, a behavioural inhibition system (BIS: processing novel cues from the environment, or cues from past punishment), and a behavioural activation system (BAS: processing all internal and external cues relating to reward). The activation of these two systems relating to

inhibitory and excitatory neurotransmitters. These differences in neurobiology have been used to explain psychopathic behaviour in delinquents and adults using an information processing perspective (an inability to respond inappropriately, lacking the associational framework that sustains, moderates, and initiates regulation of behaviour) (Newman, 1998; Newman & Wallace, 1993).

Recent neurological studies into psychopathy and violence using brain imaging (positron emission tomography [PET] scans) provides support for the theory that frontal and temporal lobe differences are present in those we would regard as violent psychopaths (Golden, Jackson, Peterson-Rohne, & Gontkovsky, 1996; Raine, 2001). The prefrontal cortex has been shown to have poorer functioning (low glucose metabolism) resulting in a loss of inhibition on older subcortical structures such as the amygdala (related to emotional control). Further evidence of structural differences came from studies into volumetric assessments of prefrontal grey (neurons) and white (nerve fibres) matter.

A study by Raine and colleagues found that individuals assessed as high on psychopathy had significantly lower prefrontal grey volumes while not differing on white matter volumes (Raine, Lencz, Bihrle, LaCasse, & Colletti, 2000). Such low prefrontal grey matter volumes are linked to poor anticipatory autonomic responses to choice options that are risky, contributing to impulsive, rule breaking, reckless, irresponsible behaviour. Also linked to poor learning from punishment contingencies (fear and stress stimuli) (Patrick, 2001) and the theorised deficient conscience development (Raine, 1993). However, while brain dysfunction is a confirmed

predisposing factor, psychological and social factors are required to enhance or reduce the display of antisocial behaviour (Raine, 2001).

Eysenck's three-factor model of personality was expanded in Costa and McCrae's five-factor model ('Big Five") that included neuroticism and extraversion but also added openness, agreeableness, and conscientiousness as factors (Matthews & Deary, 1998). The Five-Factor model of personality has been used to understand the concept of psychopathy (Miller, Lynam, Widiger, & Leukefeld, 2001). The model consists of five broad dimensions of personality functioning; *neuroticism*; *extraversion* vs *introversion*; *openness* vs *closedness to experience*; *antagonism* vs *agreeableness*; and *conscientiousness* vs *psychoticism* (Widiger & Lynam, 1998). The Five Factor model has been compared on an item-by-item basis with the PCL-R, for example, grandiosity (PCL-R item 2) linked to low modesty (Five Factor model factor, agreeableness). The facets of agreeableness and conscientiousness were the most well represented Five Factor model facets on the PCL-R. The use of the Five Factor model in explaining the personality structure of psychopathy is believed to resolve a number of issues such as the PCL factor structure, the range of psychopathic deficits, and comorbidity with other personality disorders.

The use of the Five Factor Model appears to provide a more precise description of the psychopathic personality structure for a particular individual offender. In addition, it also provides a dimensional approach to the assessment of the trait rather than as a taxon, providing an explanation of psychopathy as a maladaptive variant of common personality traits (Widiger & Lynam, 1998).

Staats' unifying theory. The work by Staats (1996) on psychological behaviourism provides a unifying theory that enables classical and operant principles, biological variables, and personality concepts to aid in explaining abnormal psychology. Psychological behaviourism uses a multilevel approach to identify Basic Behavioural (personality) Repertoires. Three Basic Behavioural Repertoires are assessed, 1. Emotional-Motivational Repertoire, 2. Language-Cognitive repertoire, and 3. Instrumental Repertoire. Symptoms associated with each repertoire are classified as either deficit or inappropriate behaviour. This approach avoids the lack of a conceptual bridge that approaches such as radical behaviourism provide to concepts such as personality (Staats, 1999).

Staats (1996) utilises the Basic Behavioural Repertoires and symptom classification as deficit or inappropriate to explain how behaviour disorders such as psychopathy develop and are maintained. For example with psychopathy, an *emotional-motivational repertoire deficit* would be lack of anxiety, and an inappropriate behaviour, sadistic pleasures; *language-cognitive repertoire* a deficit would be verbal-motor (self-control) and inappropriate behaviour, pathological lying; *instrumental repertoire*, a deficit would be lack of observational skills and a deficit, violent social behaviour (rape, assault).

It has been postulated that functional analysis of behaviour provides a way to assess personality variables. Functional analysis being defined as an approach that seeks to explain the function of the presenting problem behaviour in terms of present and past environments (Repp & Horner, 1999). However, this approach does not

appear to provide an understanding of principles to explain patterns of behaviour, rather it is grounded in behaviour being situation specific (Nelson-Gray & Farmer, 1999a). Nelson-Gray and Farmer (1999b) believe that functional analysis approaches identify the maintaining factors for personality disorders and have put forward an approach that 'melds' behaviour analysis and the DSM syndromal classification. This allows the identification of 'keystone' behaviours that change behaviour in other response areas. However, Staats has criticised the melding of what he regards as two incongruent approaches as this does not provide unification and thus fails to provide a coherent theoretical framework to understand behaviour (Staats, 1999). Farmer and Nelson-Gray (1999b) have pointed out that while Staats has presented psychological behaviourism as a unifying theory, he has not applied this to explain the development of specific personality disorders.

Criminal Psychopathy

Hare (1970) in working with a criminal population described individuals who had most of the factors identified by Cleckley (1941/1988). However, he also identified that those who were incarcerated rather than placed in a mental hospital were characterised by aggressive-predatory behaviour and lower intelligence. This lower cognitive functioning was inferred from the poor planning of offences and high rate of detection and conviction. Hare found that traditional assessment procedures relied on clinical judgement and self-report measures, both lacking reliability and validity (Hare, 1970; 1991). His initial efforts to operationalise his structured assessment approaches

resulted in a 22-item research scale, the Psychopathy Checklist (PCL) (Hare, 1980). This research instrument was later published as the Psychopathy Checklist-Revised (PCL-R) after a number of studies confirmed its reliability and validity in assessing criminal psychopathy (Hare, 1991). Hare referred to individuals who scored high on his instrument as "criminal psychopaths", a label I have used during this chapter on occasion. However, I would like to point out that I endorse a more behavioural description relating to the individual displaying behaviour consistent with the concept of psychopathy.

Assessment of Criminal Psychopathy

Psychopathy Checklist. Hare's published psychometric instruments, the PCL-R, (Hare, 1991) and the later short screen, the Psychopathy Checklist: Screening Version (PCL: SV) (Hart, Cox, & Hare, 1995), contain the essence of Cleckley's 16 characteristics with the addition of criminal behaviour features. The core feature identified in both Cleckley's and Hare's criteria for psychopathy, is a deficient affective response in interactions with others (Hare, 1980).

Hare (1970) identified the difficulties faced in the assessment of individuals meeting the criteria for psychopathy using unstructured clinical interview or self-report inventories. The PCL instruments are considered superior to self-report inventories, as they allow the assessment of interpersonal/affective characteristics of psychopathy and are not reliant on co-operation from clients (Edens, Buffington, Tomicic, & Riley, 2001; Hare, 1985). They incorporate criteria from DSM-IV antisocial personality

disorder and ICD-10 dyssocial personality disorder (Hare, Hart, & Harpur, 1991). The 20 item (scored on an ordinal scale, 0, 1, or 2) PCL-R has a two factor structure (Factor 1 = interpersonal and affective deficits; Factor 2 = social deviance), a score range of 0-40 with a scores of 30 or more identified in the manual as indicating criminal psychopathy (Standard Error of Measurement is 3.25 for forensic populations) (Hare, 1991). The PCL-R has been extensively tested and has adequate internal consistency (alpha coefficient for pooled prison samples = .87), as well as high inter rater (prison clients, average for two raters r = .91), and test-retest (r = .94), reliability (Cooke & Michie, 1997; Harris, Rice, & Quinsey, 1994). It has also been found to be effective with female criminal populations. A recent study of 528 non-psychotic female inmates found that the PCL-R was able to identify a small group of offenders who met the criteria for psychopathy and who also had the predicted high recidivism risk associated with the personality construct (Vitale, Smith, Brinkley, & Newman, 2002).

The psychometric properties of the PCL instruments appear to be stable across cultures (Hare, 1985). However, some cultural differences have been found for PCL Factor 1 items that assess superficiality and grandiosity (Cooke, 1998a). Why these differences occurred requires further study to be carried out to determine if this is a rater bias or a true cultural difference. Cooke also speculated that cultural factors may influence the prevalence of psychopathy. These cultural factors include crime being socially constructed, the individualism-collectivistic dimension, and that in some societies antisocial behaviour was adaptive (Raine, 1993). To date no New Zealand

cultural norms have been produced for either the PCL-R or the PCL: SV. However, a further study by Cooke and colleagues that compared PCL-R ratings from 359 Caucasian and 356 African American participants found no cross group differences in factor structure indicating that the structure of psychopathy was the same for both groups (Cooke, Kosson, & Michie, 2001). While this study also found small but significant differences in the performance of five of the 20 items between the groups, these items differences cancelled each other out when the test functioning was examined, thus providing support that the PCL-R can be used in an unbiased way with African American participants.

The PCL instruments all have a two-factor design (Harpur, Hakstian, & Hare, 1988). Factor 1 reflects interpersonal and affective symptoms while Factor 2 relates to the display of socially deviant behaviour, and is similar to the criteria for antisocial personality disorder (Hare et al., 1991). Factor 2 closely matches the DSM-IV criteria for antisocial personality disorder (APA, 1994) and reflects an impulsive, nomadic, irresponsible lifestyle with a persistent display of overt antisocial behaviour and is a measure of the socially deviant components of psychopathy. Limited taxometric analyses have supported the view that the concept of psychopathy as measured by the PCL identifies a taxon (non-arbitory class) rather than reflecting a dimension (Harris et al., 1994).

Incidence of psychopathy on criminal populations. It is not possible to estimate the number of individual's meeting the criteria for criminal psychopathy accurately due to differences in cultural tolerance for antisocial behaviour and differing

diagnostic criteria. Official statistics range from 7% to 30% of all incarcerated criminals (McCord, 1982), depending on the type of institution, type of crime, and criteria used to diagnose. While a rough and conservative estimate of 10% appears justified, this overlooks the activities of the more intelligent psychopaths who evade detection, and "non-criminal" psychopaths who do not attract punishment for their behaviour (Hare, 1996; McCord, 1982).

The three forensic/non-psychiatric validation samples for the PCL: SV based on Canadian Federal and Provincial male and female inmate populations found an average base rate of 29.8% (N = 149) with scores equal to or over 18 (cut-off indicating high correlation with PCL-R diagnosis) (Hart et al., 1995). It is noted that only 1-2% of the general population in the community are believed to be psychopathic (Cooke, 1998b) explaining the focus on those who are imprisoned. The concept of 'sub-clinical' psychopathy has been used to explain the low rate of psychopathy in the general population. This approach suggests that criminal psychopathy is an extreme expression of normally distributed traits that can remain undetected as long as environmental contingencies do not change and increase stress in the individual (Lilienfeld & Andrews, 1996). Self-report measures, such as the Aberrant Self-Promotion (ASP) questionnaire, have been used to detect sub-clinical psychopathy, finding approximately 10% of student samples matched the indicative profile (high narcissism and low socialisation) (Pethman & Erlandsson, 2002).

Poor response to treatment. The literature in regard to the use of therapy to change the antisocial behaviour associated with criminal psychopathy tends to paint a

gloomy picture with most studies recommending excluding such individuals from treatment (Salekin, 2002). A study by Ogloff and colleagues evaluated the progress of 80 male forensic patients being treated in a therapeutic community programme (Ogloff, Wong, & Greenwood, 1990). They found that programme participants with high scores on the PCL-R ($\geq$ 27) showed less motivation, effort, and improvement in treatment than non-psychopaths. Individuals identified as psychopathic are said to also more likely to disrupt group unity (Hobson, Shine, & Roberts, 2000), endanger security, (Buffington-Vollum, Edens, Johnson, & Johnson, 2002), and to terminate treatment without warning (Rice, 1997). In fact, there is some evidence that intensive therapeutic therapy may actually increase the risk the recidivism rate of psychopaths.

The Oak Ridge programme (Harris, Rice, & Cormier, 1991) found a general recidivism rate of 87% for treated participants with high psychopathy ratings versus 90% for an untreated group with similar ratings. This difference was not significant. However, when the recidivism variable was violent reoffending the difference was significant, with the treated rate being 77% versus 55% for the untreated group. Many in the corrections field have taken the results of this study to mean that treatment will make those identified as psychopathic worse. However, this was not the conclusion of the study authors who felt that the results pointed to the need for specialist programmes to address the responsivity issues particular to individuals with high ratings of psychopathy. The treatment programme used in the study is also viewed as controversial due the focus on group therapy and insight orientation and use of participants in leadership roles to effect change in antisocial behaviour. In addition,

the study used only a small sample, 46 subjects in each of the treated and untreated psychopath groups.

A recent study into recidivism by English offenders with high scores on the PCL-R found similar results for those exposed to treatment to those found in the Oak Ridge study when Factor 1 scores were used as the measure of psychopathy (Hare, Clarke, Grann, & Thorton, 2000). The most common programmes offered to inmates in Her Majesty's Prison Service were short-term treatment initiatives focused on anger management and social skills. When variables such as age at release and previous criminal history were controlled for, those with high scores on Factor 1 had an 85.7% violent recidivism rate versus 58.7% for those with low scores. Hare (1993), proposed in explaining the increased recidivism by psychopaths, that those that are involved in therapeutic group treatment learn how to appear more empathetic, but use this information to increase their ability to manipulate and deceive others. An increased but unstable self-image may also explain the increase in aggressive recidivism by psychopaths after treatment that was designed to bolster self-esteem (Baumeister, Smart, & Boden, 1996).

There has been some limited success reported in achieving short-term management/ treatment goals using cognitive behavioural treatment focused on specific aspects of behaviour or attitude. However, these approaches are believed unlikely to effect changes in personality-disordered clients (Dolan & Coid, 1993). Therefore, from the limited research into cognitive behavioural approaches, it would appear that there is a reduction of specific maladaptive and disruptive behaviour (such

as aggression or poor social skills) in the short-term that may have great value in the management of psychopaths in institutions or prisons (Losel, 1998).

The therapeutic pessimism is, however, based on studies that do not agree on the defining characteristics of psychopathy, thus assessment criteria differ. In addition, the confusion over the etiology of the disorder means that treatment targets vary across programmes and may not address the maintaining factors for antisocial behaviour. Finally, few of the studies into the effectiveness of treatment with those identified as psychopathic have made efforts to provide long term follow up data (Salekin, 2002). Therefore, the area of treatment or management of psychopathic behaviour is one that is yet to receive rigorous study. Thus, the exclusion of individuals meeting the diagnostic criteria from appropriate therapy is in my opinion not justified at this stage.

Psychopathy and criminal careers. Criminal psychopaths have been described as typically making an early start to their criminal careers (Lynam, 1996; 1998) with an apparent reduction in offending after the age of 40 (Hare, McPherson, & Forth, 1988). Several authors propose that psychopaths eventually 'burn out' or stop offending sometime between 25 to 30 years of age (Hare, 1993). However, this phenomenon appears to reflect a loss of physical strength (or disability from engagement in high risk activities), long incarceration, the long-term effects of chronic substance abuse, and mental illness from co-morbid disorders (Dolan & Coid, 1993).

Hare and colleagues (1988) speculated that the age-related reduction in offending reflected developmental or maturational changes in the psychopath and that the psychological wear and tear associated with persistent offending caused a change

in their behaviour. However, further research on age as a factor in the reduction of offending in psychopaths found that there was no reduction in the display of Factor 1, the cluster of affective and interpersonal traits central to psychopathy. There was, however, a decline in Factor 2 scores that describe the behaviours associated with an unstable, unsocialised lifestyle, or social deviance (Harpur & Hare, 1994). Therefore, the basic personality trait does not appear to change. The expression of this trait, however, may be subject to change. In colourful terms, psychopaths may lack the ability to engage in overt physical antisocial behaviour and instead become "nasty old men" (Moffitt, 1993), or has been shown in the study by Vitale et al. (2002), women who are lifelong recidivists.

Dolan and Coid (1993) report on the higher rates of death from unnatural causes associated with severe personality disorders. This higher mortality rate makes sense when related to the psychopathic individual's inability to recognise when the pursuit of a reward should be abandoned in the face of a competing, possibly dangerous punishment. Individuals we would classify as psychopathic with chronic offending would therefore be expected to engage in high-risk activities such as driving too fast, and experimentation with 'A' and 'B' classified illegal substances (Moffitt, 1993).

PCL instruments prediction of violence. Hare and McPherson (1984) reported that psychopaths were more likely than non-psychopaths to commit armed robbery, assault, and possess and use a weapon. However, they differed in having lower rates for murder. Williamson, Hare, and Wong (1987) explained this difference

in terms of motivation. They found that psychopaths committed violent crime for material gain, whereas non-psychopaths were motivated by strong emotional arousal. They also found that psychopaths differed from non-psychopaths in that their victims tended to be strangers. This use of instrumental aggression for goal-orientated purposes was confirmed in a study by Cornell et al. (1996). This study found that instrumental offenders could be reliably distinguished from reactive offenders on the basis of level of psychopathy.

Serin (1991) conducted a study that confirmed the strong relation between violent behaviour and psychopathy. When he compared violent psychopaths and violent non-psychopaths he found that psychopaths had a greater likelihood of using instrumental aggression, threats, and weapons. Psychopaths were found to attribute hostile intent to others either in the community or in prison more and had criminal and institutional misconduct histories that featured impulsive, predatory, and varied violent crimes (Hare, 1991; 2001).

A further study by Serin (1996) followed up a sample of 18-59 yr old offenders (N = 81) assessed with the PCL-R and a number of actuarial risk measures based on static predictors for an average of 30 months. The recommittal or general recidivism rate for the entire sample was 57%, and the violent recidivism rate was 10%. While all instruments were significantly correlated with general recidivism, the PCL-R was the best predictor of violent recidivism. Compared to the actuarial scales, the PCL-R had a higher predictive efficiency (Relative Improvement Over Chance) and yielded fewer decision errors. Most importantly, Factor 1 of the PCL-R was a better predictor of

violent recidivism than Factor 2, suggesting that the trait construct of psychopathy makes a unique contribution to the prediction of violent recidivism.

PCL instruments prediction of sexual crime. Psychopathy has also been found to assist in the prediction of sexual violence. Psychopathic men may often obtain sexual gratification opportunistically regardless of whether it involves their preferred mode of sexual activity or whether it is legal (Quinsey, Rice, & Harris, 1995). Quinsey and colleagues in a follow-up of 178 treated rapists and child sex offenders concluded that psychopathy is a good general predictor of both sexual and violent recidivism. Another study has found that rapists had higher psychopathy ratings than child molesters (Serin, Malcolm, Khana, & Barbaree, 1994). Dorr (1998) stated that the majority of paedophiles are psychopathic, or manifest to a significant degree the psychological characteristics of psychopathy. There appears to be a high rate of comorbidity between the two forms of behavioural disorder. The primary aims of the paedophile and the psychopath being viewed as the same, to dominate, to use, and to subjugate another person to seek a personal reward.

A recent review of the prediction of sexual recidivism looked at the effectiveness of five actuarial measures (Violence Risk Appraisal Guide; Sex Offender Risk Appraisal Guide, Rapid Risk Assessment of Sexual Recidivism; Static-99; Minnesota Sex Offender Screening Tool-Revised) and the PCL-R in predicting risk for adult sex offenders (rapists and child sexual offenders) (Barbaree, Seto, Langton, & Peacock, 2001). It is noted that the PCL-R is an item in the 14-item Sex Offender Risk Appraisal Guide and the 12-item Violence Risk Appraisal Guide. The single item

PCL-R score has been shown to account for the majority of the predictive power of the Sex Offender Risk Appraisal Guide (Seto & Lalumiere, 2000). A recent review of recognised actuarial sexual risk prediction instruments by Barbaree et al. (2001) found that the PCL-R score on its own was a moderate predictor of general recidivism (*AUC* = .71) for a population of sex offenders who had participated in treatment but was poor for sexual recidivism (*AUC* = .61). The best actuarial measure in predicting sexual recidivism for this sample was the Rapid Risk Assessment of Sexual Recidivism (*AUC* = .73) based on four static criminal history items.

Hare (2003) argued that criminal psychopaths are generalised offenders with a pervasive disregard for the rights of others and a history of versatile offending. Therefore, such offenders are unlikely to specialise in one form of offending. This factor coupled with the low base rate for sexual recidivism and judicial authorities often modifying charges to violence in response to plea-bargaining could explain why the PCL-R is only a low-moderate predictor of sexual recidivism.

Use of the PCL: SV to predict violent recidivism. Most of the literature about psychopathy and risk of recidivism and violence comes from studies involving the PCL-R (Serin & Brown, 2000). However, there is rapidly accumulating evidence of the ability of the PCL: SV to predict aggression and violence in forensic populations (Hart, 1998). Hill, Rodgers, and Bickford (1996) found that scores on the PCL: SV correlated .69 with aggressive behaviour after release and individuals with high scores had a higher mean number of institutional incidents. A further study found that a

PCL: SV group classified as psychopathic were 9.9 times more likely to be arrested for a violent crime than a non-psychopathic group (Douglas, Ogloff, & Nicholls, 1997). The PCL: SV is also an item in the Historical, Clinical, and Risk management violence risk assessment scheme (HCR-20) again responsible for the majority of the predictive power of the instrument (S. Hart, personal communication, November 8, 2001). Individuals scoring above the medium score on the HCR-20 were 6-13 times more likely to be violent (Douglas, Ogloff, Nicholls, & Grant, 1999). An article generated from the MacArthur Violence Risk Assessment Study (N = 1,136) confirmed that the PCL: SV was a relatively strong predictor of violence (individuals with scores of over 12 were four times more likely to commit a violent act) although the predictive power was substantially reduced after controlling covariate antisocial behaviour and comorbid personality disorders (Skeem & Mulvey, 2001).

False Prediction of Recidivism

The last ten years have seen dramatic advances in risk prediction as a result of the availability of computerised statistical packages and actuarial instruments (Andrews & Bonta, 1998; Hare, 1996). Such objective approaches to risk assessment while vastly improving the accuracy of risk assessment, mean that a series of policy and value-based decisions are required around false identification of risk. This is necessary to avoid where possible missing those at risk of further criminal behaviour or including those who do not go on to reoffend (Jones, 1996; Mossman, 1994). The importance of the decisions made about the balance between these two error rates

should not be left to default options from a particular computer package or psychometric manual. Risk prediction using these new measures results in actions that restrict the liberty of individuals and the safety of the public (Szmukler, 2001).

PCL-R error rates. Freedman (2001) acknowledged that the PCL-R was a strong predictive tool in assessing future dangerousness. However, he believed that the high false positive error rate meant that it was by no means a reliable and valid tool and should not be used where life and liberty decisions were at stake. The error rate referred to is the traditional way of looking at success and failure in risk prediction, failure being false positive or false negative (misses), success true positive and true negative (hits) (Webster et al., 1994). The false negative rate percentage represents subsequent offenders who have not been identified as high risk based on a cut-off score and the false positive offenders those wrongly included in the high-risk group. This error rate is exacerbated by applying the PCL instruments to populations with low base rates of psychopathy (Freeman, 2001) and low base rate violent recidivism. However, the prevalence rates for violent acts committed by chronic New Zealand offenders is high with many of these meeting the criteria for criminal psychopathy (Bakker & Riley, 1998).

In calculating the best balance between these two error categories there is a need to accept a degree of false positive error to achieve a low false negative error. The issue of natural justice points to the need to prevent the continued incarceration of offenders who, while identified by the PCL-R or PCL: SV as high risk would not actually reoffend seriously. However, we know that psychopaths as a group reoffend

violently at a high rate (Hemphill, Templeman, Wong, & Hare, 1998) therefore it is usually recommended that a moderate rate of false positives is acceptable for the purpose of risk assessment. Risk assessment is all about a social/legal judgement on the acceptability of a risk of a particular antisocial behaviour occurring for a community. Raising the cut-off and reducing the false positive rate will result in an increase in the false negative rate. A high rate of false negative prediction raises the spectre of falsely viewing a number of offenders as at low risk of recidivism. Such an error can result in offenders not being regarded as in need of treatment for criminogenic factors denying them appropriate treatment or may influence parole authorities to release them when they still pose an undue risk to the public.

It is necessary in validating any decision criteria to look at the category of false positive error (Anastasi, 1988). It is recommended that in certain circumstances in which negative error has extremely undesirable consequences it is necessary to set a cut-off that first of all concentrates on reducing this error, thus accepting a higher rate of false positives. However, all possible steps should be taken to reduce the false positive error.

Dolan and Coid (1993) recommended that naturalistic research occur with psychopathic/high risk groups to establish the features associated with good outcome and to eliminate those falsely assessed as high risk. They pointed out the difficulties in such research when the potential subjects have been in the community for some time but assert that even small sample sizes are of value in improving our knowledge of change variables. Hare (1996) acknowledged the need to apply the same vigorous

research attention to examining resilience variables for those assessed as criminal psychopaths as had been paid to improvements in assessment. Therefore, there is a need to look at resilience variables related to criminal recidivism to see if these variables also predict reduced risk and possible treatability for those identified criminal psychopaths.

Possible Rehabilitative Factors for Criminal Recidivism

What distinguishes those who will or will not reoffend? Zamble and Quinsey (1997) in a recent large recidivism study reported on the problems and coping strategies of offenders who had been released from prison and then did not go on to re-offend. These authors used a comparison of Level of Service Inventory – Revised (Andrews & Bonta, 1995) scores for offenders released from prison. Most of the sample went on to reoffend, however, a small group did not. The study had a large enough sample to allow statistical comparisons. However, the non-recidivist group was relatively small ($N = 30$) compared to the recidivist group ($N = 311$).

The study identified a number of variables that have been considered to be associated with recidivism. These consisted of a number of static and dynamic factors such as age, highest school grade, problems at school, substance abuse, relationship to other family members and crime, length of employment, length of heterosexual relationship, number of prior convictions, history of psychological problems and treatment. When these personal and criminal history measures were examined a number of significant differences were found (see Table 1.2).

Table 1.2 shows that recidivists when compared to non-recidivists on personal measures were: younger, had poorer achievement at school, less residential, employment and relationship stability, less substance abuse, and a lower percentage

Table 1.2

Significant Differences between Recidivists and Non-recidivists on Personal History Measures (Zamble & Quinsey, 1997)

Measure	Recidivist	Non-recidivist
Personal Factors		
Age	29.5	42.3*
Highest grade at school	9.5	10.3**
Residential stability (months)	27.2	62.6*
Employment stability (months)	26.4	63.6*
Longest stable intimate relationship (months)	37.2	87.8*
Ever had substance abuse problem	80%	41.7%*
Had considered suicide	25.5%	40.3%**
Criminal History Factors		
Total prior convictions	25.0	14.8**
Violent prior convictions	3.5	1.4**
Age at first trouble with the law	14.6	20.8*
LSI score	28.2	19.2*
Speed of prev recidivism (months)	7.5	29.1*

* $p < .05$

** $p < .01$

indicating suicidal thoughts. On measures of criminal history recidivists had a larger number of previous convictions, many for violent criminal acts and they had begun their criminal careers at a far earlier age, usually as adolescents, and had a higher speed of recidivism than non-recidivists. These finding were similar to other studies into the criminal careers of criminal psychopaths and chronic high-risk offenders (Hare et al., 1988; Moffitt, 1993).

Zamble and Quinsey (1997) also made comparisons on general behaviour and lifestyle outside of prison. For the recidivist group the period of time measured was the pre-offence period, and for the non-recidivist group the period of measurement covered a period of comparable length pre-interview. The non-recidivist group were significantly more likely to be employed and living as a parent in a nuclear family, and their lives seemed to be more conventional. Differences were also stated in the way each group spent their time. The offender group reported more time spent in casual unstructured activities with acquaintances.

In relation to perceived problems after release, the recidivist group were judged to have twice as many problems as the non-recidivist group. However, the offender group did not rate unemployment as a frequent problem even though there were a higher proportion of unemployed people in this group. Several measures were used to indicate problem areas. The areas that were most differentiated between the groups were interpersonal conflict and substance abuse.

Emotional states represent another area that is considered to differentiate re-offenders and non re-offenders. Questionnaire measures found more long-standing

anger, anxiety, and depression among recidivists. The non-recidivists in Zamble and Quinsey's (1997) study reported times when they might have re-offended. In fact, 35% of the non-recidivists in this study reported that there had been times in the previous three months where they had thoughts of possibly re-offending. The difference for the recidivists who acted on these thoughts of offending appeared to be due to the way thoughts about offending were dealt with. Non-recidivists said that they ignored the thoughts or just did nothing. Seventy five percent of the non-recidivists said that they had thought about the negative consequences of acting on antisocial impulses. When asked what stopped them from re-offending, 41% reported fear of returning to prison; 34% specified other negative consequences for family and self; 6% stated that it was the lack of positive gains from the offence. Hence, differentiation between groups can be categorised in terms of fear of negative consequences.

Does recidivism depend on the index offence? Zamble and Quinsey's (1997) study included a wide range of offenders with the selection criteria being that they must have a history of recidivism and have been sentenced to two years or more for their last conviction. When they categorised the sample by index offence they found three main groups, assaulters, robbers, and property offenders. They found that assaulters showed least problems with chronic depression or anxiety but had the greatest problem with interpersonal (relationship) conflicts after release. Their coping strategies were predominantly escape /avoidance and to increase already high levels of substance abuse. They tended to avoid the negative affect resulting from anxiety or

depression through the use of cognitions that resulted in the more reinforcing emotion of anger that was conditioned to violent behavioural expression. Thus, their use of violence was viewed as reactive rather than instrumental and triggered by high levels of hostile cognitive rumination.

In contrast, robbery offenders seemed to have greater difficulty adjusting to life in the community and experienced high levels of negative mood states. In addition, they tended to have significant drug abuse problems that exacerbated financial problems. Robbery appeared to occur as a misconceived solution to chronic difficulties. While a degree of planning and consideration of both negative and positive consequences occurred for this group of offenders, this was still minimal and focused on short-term sequelae.

Property offenders exhibited characteristics that were somewhat between the other two groups. They had an awareness of financial problems like the robbers but were similar to the assaulters in that they considered themselves to act impulsively. Property offenders appear to almost passively return to crime due to habitual processes - for them crime was part of a pervasive antisocial lifestyle. They reported greater difficulty in adjusting to life outside of prison because of employment difficulties and perhaps as a reflection of a general day to day existence. They had a passive approach to problems, resorting to substance abuse to avoid negative emotional states.

While Zamble and Quinsey (1997) found that non-recidivist offenders in their study had undergone a process of maturation in which they had developed increased social competency to provide prosocial strategies to deal with everyday situational

stressors, their sample did appear to contain high-risk violent offenders. A recent Swedish qualitative study looked at one such high-risk cohort, who had appeared to exhibit unexpected positive rehabilitative outcomes, to establish the process these individuals had used to desist from crime (Haggard, Gumpert, & Grann, 2001). The authors of this study point out that there was a lack of psychological study into the process of giving up crime, especially for high-risk violent career criminal cohorts. While the sample interviewed by Haggard et al. (2001) involved only four individuals! this sample size reflected both the difficulties in identifying non-recidivist high-risk offenders but also in locating them and gaining permission for interview. The study found that their sample relied on the process of avoidance that involved social and geographic isolation with an orientation towards partners rather than previous antisocial associates. Haggard et al. (2001) also found a high level of physical disability among the sample, low levels of employment, and that half admitted that they had continued to offend but had not been detected by judicial authorities.

New Zealand research into the process of recidivism. Research was undertaken in the early 1990's in New Zealand looking at why offenders gave up crime (Leibrich, 1993). This research used a case study approach that gathered data from 50 offenders serving sentences of supervision. While it was intended that all in the sample should not have continued to offend it was found that some were offending but at a less severe level. This random sample of offenders (58% men, 42% women) had an average age of 28.7 years, however, at least 14 were less than 20 years of age. They tended to have drug and dishonesty index offences and of those convicted of

violence offences (N = 11) these were less severe (Male Assault Female, Assault Police). None had convictions for robbery, rape, child sexual offending, or murder or serious wounding. Therefore, as a group their offending would be regarded as low/moderate in terms of severity. The interview process focused on why they decided to 'go straight'. Leibrich (1993) found that a sense of shame was the most frequently cited reason for giving up crime. Participant's behavioural changes used to achieve a crime free life included: not avoiding personal problems; using support where helpful; and becoming better at resisting the influence of antisocial associates. Finally, 54% of the participants were unemployed and 50% described suffering from at least one health problem.

Insight into False Positives Error?

Despite the value of the research carried out by Zamble and Quinsey there are limitations to its utility. First, their study, while having a large recidivist group used only a very small control group of non-re-offenders. Only 30 non-recidivist offenders could be found from whom to obtain data for comparative purposes. Given the varied nature of those in the total sample it is unlikely that this group was representative of the serious offenders included in the current PCL: SV study, all of whom had imprisonment sentences of 7 years or more, usually for violent offences (87%). Secondly, while Zamble and Quinsey's non-recidivist group had not committed any further offences, the PCL: SV study false positive group had virtually all been reconvicted, although not reimprisoned. Thus, these offenders were not a 'pure' non-

recidivist group. However, some would argue that the reduction in severity of offending, especially for violent crimes means that the false positive group from the current study are very worthy of study.

Not withstanding its limitations, the work of Zamble and Quinsey highlights why prediction based on historical factors will be limited - they do not take into account the situational determinants and proximal factors that are precursors to serious recidivism. Rather they are based on enduring, well-established sequences of behaviour and do account for the many ways in which breaks in the patterns of offending, through changes in the environment of offenders or maturational processes, may occur. Given the serious nature of the reoffending carried out by those released after sentences of imprisonment in New Zealand within a relatively short time after release (Spier, 2002), there is a need to investigate such dynamic factors.

Conclusion

The area of risk assessment is dominated by a focus on static and dynamic risk factors with social learning theory offering the most robust explanation of how these initiate and maintain criminal behaviour. The most predictive factors are the 'Big Four'; antisocial associates, antisocial personality, antisocial cognitions, and antisocial history. The application of these to the assessment of risk has primarily focused on static actuarial measures to overcome the limitations of self-report. In part, the focus on easily assessed variables has been due to the controversy and confusion over the concept of psychopathy: a concept that has had a long history but until the later part of

the 20th Century, little clinical development. However, the recent development of a structured approach to the assessment of criminal psychopathy, using the PCL-R and PCL: SV instruments has provided clinicians with a valuable risk assessment tool. While many argue with the concept, the PCL instruments have been able to improve the accuracy of risk prediction, especially in the area of violent recidivism.

The need to use such instruments in risk prediction provides the support for this study into the validity and reliability of the PCL: SV in predicting serious recidivism risk for New Zealand prison inmates. In doing so there is also an ethical need to investigate more about the false positive group to reduce predictive error and to enable the identification of possible resilience variables that may mitigate assessed risk.

CHAPTER TWO

Criminal Recidivism and Parole Decision Making in New Zealand

Now that the case for actuarial assessment of risk has been established, as well as the importance of addressing false positive error, the utility of such instruments, in particular the PCL: SV in New Zealand to assist in risk prediction needs to be established. In this chapter, therefore, I will examine criminal recidivism and the role of our statutory parole authority in assessing risk as part of their procedures for deciding parole eligibility and the legal support and challenge to the use of the PCL: SV to aid risk prediction. Reviewing these issues provides information on the need for the PCL: SV to be validated for use as part of a comprehensive approach to the assessment of the risk of recidivism to assist judicial authorities in deciding on sentencing and parole decision making.

Serious Offending in New Zealand

The need for effective approaches to the prediction of recidivism risk for New Zealand offender populations has become of increasing importance with the apparent rise in serious (violent/sexual) reoffending over the last decade (MacLeod, 2002). The high number of offenders who reoffend, often within a short period following release has provided the motivation for a more rigorous approach to risk prediction (Spier, 2002). In 1990, 31,985 offenders were reconvicted (71%). Of these 4,787 had received sentences of imprisonment that were managed by the Department of

Corrections, and of these, 84.3% were later reconvicted after release. An examination of reconviction base rates for this offender cohort found that 71% of those imprisoned for serious violence offending were later reconvicted (the vast majority within one year of release, when many were still under the management of the Community Probation Service) with 53% of the new offences resulting in reimprisonment (Bakker & Riley, 1998). For the majority the reimprisonment offence was for a further violent offence (Bakker, O'Malley, & Riley, 1998).

In fact, reported violence offences in New Zealand have been shown to have more than doubled between 1986 and 1995, with serious assaults increasing by over 300% (Bakker et al., 1998). This consistent increase in violent offending has continued to this day with the latest Police statistics on crime rates indicting that violent offending continues its rise. The Police reported that in 2001 there were 44, 024 violent crimes, a 5.9 percent increase from 41,573 in 2000 (MacLeod, 2002). It is of note that this increase in violent offending was in contrast to overall recorded crime falling to its lowest level for 13 years. This upward trend has continued over 2002 with a further 2.1% rise in violent crime (Horwood, 2003).

However, this apparent increase in violent crime should be viewed in relation to population increase, with the level of violent offending per 10,000 people in the population dropping from 1274 in 1996 to 1112 in 2002. The New Zealand Herald headline for the latest article on crime rates was however, *Speed use, murder on the increase* with the text indicating that there were 66 murders in 2002, a 24.5% increase over the 53 killings committed in 2001 (Horwood, 2003). Yet no mention was made

in this article of the average murder rate for the previous 14 year period being 58 (with a high of 73 in 1992) and that there is no discernable trend in statistics with the homicide rate remaining approximately 2.5 % per 100,000 people (Spier, 2002).

This fall in total recorded crime and the presence of a stable homicide rate has not been matched by an increase in the public's perception of safety. The media in part appears to be responsible for this as they focus on high profile examples of parole failure and apparent increases in violent crime. A computer database review I carried out of articles using the keyword 'parole' published by New Zealand's largest daily newspaper, the New Zealand Herald for the last four years found a total of 699 articles. A review of articles year by year found that 37% of the total number of articles over this period had been published in the last year (March 2002-March 2003). An examination of the last six months of this year indicated that there was an average of twenty articles a month that had contained mention of parole.

The focus by the media on parole failures in recent times began with the high profile rape and murder of Auckland journalist, Kylie Jones by convicted serial rapist Taffy Hotene in 2000, two months after his release from prison (Wall, 2000). The extensive coverage of this case focused on an implied failure in the Probation Service management of Taffy Hotene. The article by Wall contained statements such as "Hotene's sister told the Herald that when she went to the service's Tamaki office to get him a probation officer, it did not have a file on him" and later "another area of concern was the poor information on inmates given to parole boards". The Hotene case also highlighted the need for parole authorities to regularly consider the use of

Section 105 of the 1985 Criminal Justice Act to retain high risk offenders in prison but that such consideration required a high threshold in regard to risk prediction. The coverage of parole failure since 2000 has been maintained by the claims of public interest groups focused on truth in sentencing options leading up to the last General Election and the passing of new sentencing and parole legislation in July 2002 (McConnochie, 2002; Mold, 2002).

The recent conviction of triple murderer William Bell in February 2003 has again directly focused on poor parole management of offenders (Gower, 2003). It was interesting to note that no mention was made of the release of William Bell by the parole authority, rather the focus remained on parole management with a further article in the same edition of the New Zealand Herald titled "*Parole breaches common*" (Wycherley, 2003).

Implications of violent reoffending. Violent offenders are far more likely than those convicted of non-violent offences, such as dishonesty, drug, or driving to be sentenced to imprisonment, (Rich, 2000) with such sentences reflecting society's desire both for retribution, as well as to be protected from further violence (Newbold, 1992). The focus of succeeding amendments to New Zealand criminal law has been to increase sentence length for serious violent/sexual offending and to limit parole for those convicted of such offences. This trend of increased periods of incarceration is the basis of the Sentencing Act 2002 and the Parole Act 2002. These two acts came into effect in New Zealand from 1 July 2002. The area of risk prediction is of relevance to the functioning of both acts. With respect to the Sentencing Act 2002,

psychologists, rather than as was previously stipulated only psychiatrists (Criminal Justice Act 1985 Section 121), are now able at the High Court's request to carry out assessments of risk (likelihood of serious sexual or violent recidivism) to aid decisions on the possible imposition of a sentence of preventive detention (Section 88). However, it is the Parole Act 2002 and its requirement of a high level of risk assessment as part of New Zealand parole authority's decision-making processes with respect to possible prisoner parole that provides the most demand for validated actuarial risk assessment.

New Zealand National Parole Board Decision Making

A review of parole decision making by the National Parole Board was carried out by Justice Thorpe (1994). A former Chairperson of the National Parole Board, Justice Thorpe, considered that the trend in overseas parole decision making had moved away from the clinical decision making the National Parole Board had used, towards more "consistent and reasoned determinations" based on properly prepared guidelines. Justice Thorpe reported that the major advantages of adopting a Structured Decision Making process was that decisions would be:

a) more systematic;

b) more accountable;

c) more amenable to critical examination and evaluation;

d) A further advantage was envisaged to be improvement in the overall quality of decision making and the ability to record accurately the National Parole Board decision process (Thorpe, 1994).

The benefits to the National Parole Board of actuarial risk assessment were also seen to be that it would help confirm which inmates seeking parole could be regarded as presenting a minimal risk to the public. A further benefit seen by Justice Thorpe in his review in 1994 to the use of validated actuarial measures was in the risk assessment of very difficult cases (demanding clear conditional risk statements) such as those for Criminal Justice Act 1985 (Section 105) applications (this section is now replaced by Section 107 Parole Act 2002). These were special applications made by the Public Prison Service for offenders with specified serious offences asking the board to retain an offender beyond their final release date due to concerns over recidivism risk. Such applications were rare prior to the Taffy Hotene case and granted only if evidence is presented that the offender represents a high risk of committing a further specified offence within the time period left of their sentence. A high standard of proof was expected for such applications to protect the rights of the offender. The retention of such inmates to the end of their sentence was in effect a further judicial punishment, as this extension of time served was not considered by the Judge at the time of sentencing.

The National Parole Board utilised the review by Justice Thorpe to provide a transparent Structured Decision Making process to decide on parole in 1996 that was published in a manual (National Parole Board, 1996). This manual, which was made

available to offenders appearing for parole, stated that the Structured Decision Making process was a tool to assist the Board in making decisions on whether or not to release an offender. The manual outlined the process for presenting information that was relevant to this task in a structured way. This included information about the offender from before he or she entered prison through to the time of release, including criminal history, age at release, type of offence and sentence, conduct and treatment while in custody, alcohol and substance abuse, and the level of support available in the community. This information provided a means of estimating the offender's risk of reoffending on release, and of reviewing that estimate during the offender's sentence to take account of changes in his or her behaviour and other relevant changes. It also assisted in identifying areas where the offender was particularly vulnerable, so that the Board could recommend interventions or impose special conditions on release where appropriate.

The Structured Decision Making process operated by allocating offenders to risk categories by way of its assessment procedures and policy guidelines. The decision in each case resting with the Parole Board, however, and in exercising discretion and professional judgment Board members could choose a course of action other than that indicated by the decision making process. The Structured Decision Making process used a number of assessment instruments, each of which was based on a different method of information gathering and analysis to provide information on static and dynamic risk factors. One of these assessment instruments was the Psychopathy Checklist with this instrument being applied to offenders who were

viewed as at high risk of recidivism based on high scores from other actuarial risk measures or because of aggravating features of their crime.

New Zealand Use of PCL Instruments in Risk Prediction

The National Parole Board, in its Structured Decision Making process, stated in its 1996 handbook for managing offenders that the PCL: SV would be used to assess risk of serious recidivism. It is of note that the handbook stated:

> "Although there is no treatment which has been demonstrated to be effective in cases of psychopathy, an accurate diagnosis is valuable as research has repeatedly indicated that a person with this disorder has a substantially increased risk of reoffending in a violent or otherwise serious manner. This assessment will enable the Parole Board to take that into account when requesting particular interventions, either prior to, or as a condition of, release" (p. 14, National Parole Board, 1996).

The National Parole Board handbook also stated that offenders with an initial risk rating of D (High) or E (very High) would be assessed as part of the initial phase of the Structured Decision Making process, using the PCL: SV. This instrument was to be administered by suitably qualified and trained practitioners, drawing information about the individual from departmental files and interview, and appraising that information in the light of the diagnostic criteria set out in the PCL: SV manual (Hart et al., 1995).

The Board manual set out that the PCL: SV score would be graded using the following score ranges:

Score	**Grade**
0 - 12	Low
13 - 17	Medium
18 - 24	High

Those with a "High" grade were to have their initial risk rating increased by one level, where applicable. However, these cut-off scores were based on the PCL: SV Manual's diagnostic score guidelines rather than the applied purpose of assessment of risk of serious reoffending. A review of 'best practice' guidelines for the use of the PCL-R in risk assessment clearly outlines the need to validate the PCL instruments for the population of interest to the parole authority and for the behaviour of concern (i.e., violence and or sexual offending, and general recidivism) (Serin & Brown, 2000). Such validation should ensure that the population is representative of the individual offender being assessed and that the cut-off score decision error rates are known for the predicted behaviour. Parole authorities in England and Canada have recognised the need to validate any actuarial measures to ensure that they are able to withstand legal challenge and to provide board members with confidence in the accuracy of the prediction of risk (Hood & Shute, 2000; National Parole Board Canada, 1999). The Parole Act 2002 provides clear guidance in New Zealand that designated parole authority need to consider risk and all relevant indicators of risk in deciding on parole. I was involved in consulting on the draft revisions to the parole

and sentencing legislation. During this consultation I was left in no doubt that this focus on risk was in direct response to the advances in actuarial risk assessment and also reflected a desire to ensure that parole authorities attend to the essential 'anchor' role that such measures provided.

New Zealand Parole Act 2002

Public protection focus. This statute clearly emphasises that consideration for parole once an offender becomes eligible is to be decided principally on the basis of the safety of the community. When the Board members are required to consider whether an offender "poses an undue risk" (Section 8), they have to consider the likelihood of further serious offending, as well as the nature and seriousness of any recidivism. In terms of seriousness of offending this has been interpreted by the New Zealand Parole Board members as meaning violent and or sexual reoffending but could also include offences that would place the public at risk such as drug dealing (Judge Bruce Buckton, *personal communication*, November 2002). The statute also requires Board members to consider risk on the basis of all relevant information available to them at the time. Such information includes relevant actuarial measures of risk.

Offenders sentenced under the Sentencing Act 2002 are eligible to parole after a third of their sentence, but can be held until three months before the end (unless subject to an indeterminate sentence of non-parole period). While inmates sentenced prior to the new Sentencing Act cannot be subject to these new parole provisions, those sentenced for sexual or violent offending punishable by seven years imprisonment or more can be retained in prison until the end of their sentence. The

decision on retaining such inmates is based on Section 107 of the Parole Act 2002. Consequently, risk and the assessment of any change in the prediction of serious offending is of great importance to the public and the individual offender. Psychological assessment of risk is usually required to aid the Board in deciding on whether an inmate, if released, is likely (risk is above average) to commit a specified offence between the date of their release (parole eligibility date) and the applicable release date (end of sentence).

The parole authority structure that decides on who should be paroled has also been reformed and reconstituted. The Parole Act removed the previous seventeen District Prison Boards that operated without a structured approach to decision making, and one National Parole Board that had used a Structured Decision Making process, and instead created one board called the New Zealand Parole Board (Section 108). This board is an independent statutory body consisting of members appointed by the Governor-General on the recommendation of the Attorney-General. Board members are selected on the basis of previous knowledge of the criminal justice area, decision-making ability, and sensitivity to culture and the impact of crime on victims. Board members are paid and appointed for renewable terms of up to three years. The New Zealand Parole Board has approximately 24 members with this group consisting of one Chair who is a former High Court Judge, a number of District Court judges who act as board convenors, with the remainder being non-judicial members. The Board is based in Christchurch, Wellington, and Auckland, and reviews all inmates sentenced to imprisonment of two years or more. The Corrections Department was also mandated

by the Parole Act to provide the administrative and training support necessary for Board members to perform their functions efficiently and effectively. To this end, I was asked in late 2001 to develop a revised Structured Decision Making Process to guide decision making with a focus on risk, and to then train the Board members in this process prior to the implementation of the Parole Act. This training workshop followed the Canadian parole authority training schedule, whereby members were taught about risk assessment including actuarial assessment and the error rates associated with clinical versus actuarial assessment (National Parole Board Canada, 1999). The revised Structured Decision Making process I designed for the Board incorporated the actuarial measures currently in use by the Corrections Department, including the PCL: SV.

Revised structured decision making. Prior to the introduction of the revised Structured Decision Making process the National Parole Board had used two risk measures in establishing an offenders risk of recidivism. The Risk Assessment Instrument using static risk predictors (Lake, 1996) and for those suspected of being of high risk of recidivism, the PCL: SV or PCL-R. The main actuarial measure of choice was the Risk Assessment Instrument with the use of the PCL instruments limited by a lack of Corrections Department Psychological Service staff competent in its use. When the PCL was used it was the PCL: SV that tended to be administered for the purpose of assessment of risk of serious recidivism.

The accuracy of objective actuarial measures of risk in New Zealand had improved markedly over the last seven years since Justice Thorpe's review (Bakker et

al., 1998; Bakker et al., 1999). The assessment of risk had been found to be best addressed by use of a computer generated risk score based on criminal history variables (RoC*RoI[1]), specialist application of the PCL: SV, and the assessment of dynamic risk predictors (Department of Corrections, 2000). However, the area of assessing change in the assessment of risk was not as clearly defined. In general, guidelines were similar to those published by the England and Wales Parole Board:

> "(b) whether the prisoner has shown by his attitude and behaviour in custody that he is willing to address his offending behaviour by understanding its causes and consequences for the victims concerned, and has made positive effort and progress in doing so".
>
> (p. 3, Hood & Shute, 2000)

With best professional practice increasing our ability to assess risk (Bonta, 2002), such broad guidelines did not provide the guidance needed to keep faith with the primary directive contained within the Parole Act 2002, namely, that effective administration of sentences differentiates between less serious offenders with a low risk of reoffending and those offenders who present the greatest risk to society. Of particular interest is the assessment of change in key criminogenic areas relating to the offender's particular offence pattern. Such improvements highlight the need for a structured approach to the assessment of change in dynamic criminogenic risk factors, and the support systems and reintegration factors needed for a viable release plan

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[1] The RoC*RoI measure was developed for the Department of Corrections to assist in the accurate prediction of an offender's risk of conviction and likelihood of reimprisonment. The computer generated measure is based on static predictors (factors unchangeable by individual effort) from criminal history information.

(Department of Corrections, 2000). Extensive use was made in my 2002 revision of 1996 Structured Decision Making process of the procedures used by the Canadian parole authority (National Parole Board Canada, 1999). The Canadian National Parole Board was found to have a similar parole board structure and parolee population to that proposed for the New Zealand Parole Board in administering the Parole Act 2002.

Any revision of the Structured Decision Making process also had to take into account the legislative requirements of the Parole Act 2002 legislation and the need for the Board decision to be able to stand up to review and legal challenge. The Board needed to be viewed as independent and their decisions and process were required to be transparent and robust.

An example of the requirement for assessment procedures and actuarial instruments needing to withstand legal challenge has been the increased involvement of Corrections Psychological Service staff in assisting the Crown Solicitor's Office in defending the National Parole Board's use of the PCL instrument as an appropriate risk measure. The Crown Solicitor's Office commented that if the Department of Corrections Psychological Service staff had continued with clinical judgement of risk rather than including actuarial risk assessment in their reports to the parole board, then legal challenge was unlikely to have occurred (*personal communication*). It was the National Parole Board's consideration of actuarial measure of risk rather than clinical professional judgement that had produced the above mentioned challenge in the High Court. The use of actuarial measures while believed to produce a higher rate of legal challenge because they clearly lay out the assessment areas and error rates, also

provided clear statements of risk, thus becoming the target of legal challenge for inmates who have had their parole declined.

Legal implications in risk prediction. The use of the PCL-R in risk assessment by parole authorities is regarded as the single biggest applied function of the instrument (Ogloff & Lyon, 1998; Serin & Brown, 2000). This applied focus has resulted in a number of dilemmas for clinical (forensic) psychologists when the instrument's ability to predict serious antisocial behaviour provides the justification to treat inmates differently. This differential treatment is decided in the main from high scores on the PCL-R and PCL: SV instruments, and results in such individuals serving longer in prison by virtue of longer sentences, denial of parole, and the imposition of preventive detention. The applied use of the PCL instruments in risk prediction by parole authorities means that psychological nomenclature, such as psychopathy, is now used in a judicial setting as a legal construct related to risk (Ogloff & Lyon, 1998).

The use of actuarial prediction of recidivism risk by parole authorities creates a certain degree of conflict between the rights of individuals and the importance of relating their assessment to a normative group. The focus on group data in understanding individual behaviour derives from psychological traditions relating individual clinical practice to the scientific study of general human behaviour, with significant implications for ensuring adequate representativeness of the normative research samples. To counter this perceived bias by an individual offender's legal representative, psychological risk prediction should use multimethod assessment strategies to ensure convergence among risk factors, and that individual characteristics

relating to their offending are also included in assessment (Serin & Brown, 2000). However, with the intercorrelation between risk measures, multimethod assessment may not increase accuracy; rather, evidence of convergence should be used to provide stability to the assessment of risk.

The assessing clinician should also be aware of the base-rates for the particular behaviour in question, the applicability of the normative sample to the individual in question, as well as the limits of prediction for an actuarial measure. False positive error rates are the main target of defence lawyers, who in attempting to overturn an assessment, will attempt to prove their client has been falsely placed in the high risk category. However, the consideration of all these limitations should not be used to avoid heeding statistical estimations of risk. The prediction of risk should be 'anchored' by the actuarial assessment of risk with the consideration of other factors relating to an individual's risk balanced against the statistical estimate (Bonta, 2002; Serin & Brown, 2000).

In relating the assessment of risk to the individual, limits and conditions should be set (i.e., time, specific outcome, and risk factors) (Serin & Brown, 2000). Predictions should not include broad statements such as "Mr Brown is at high risk of reoffending". No one is at risk of everything, 24 hours a day, no matter what the environment. Instead, risk parameter statements should be used that incorporate information from the actuarial measures, an *aide-mémoire* of noted risk factors, and functional assessment of the offending behaviour (Ogloff, 1995).

In referring to functional assessment, this introduces a construct or principle that describes how the offending behaviour is related to, and thus controlled by, the offender personal and interpersonal factors, as well as environmental stimuli (Blackburn, 1993). Such factors may have developed or maintained the antisocial acts. Functional properties of offending behaviour could involve social avoidance, biological reinforcement, and operant and respondent conditioning factors (Mazur, 1994). Contextual factors (i.e., presence or absence of specific individuals) and biological factors (drug induced arousal or psychosis) could also be a factor in explaining the functional aspects of the criminal behaviour (Andrews & Bonta, 1998).

Andrews and Bonta (1998) used the principles of functional analysis in producing their Personal, Interpersonal and Community-Reinforcement (PIC-R) perspective on criminal behaviour. This theoretical approach to assessment incorporates factors that actively encourage and discourage deviant behaviour at the personal, interpersonal, and community levels, relating these to antecedent and consequential events for a particular criminal act. Intensity and variations in criminal acts being related to the signalled rewards/costs for the offending.

In applying functional analysis principles to risk assessment the information relating to the development and maintenance of particular criminal behaviour can be summarised in a risk parameter statement. Such a statement presents to the reader an assessment of risk that allows the degree of risk to be assessed as well as what could be done to manage or reduce risk.

An example of a risk parameter statement used in training the Canadian Parole Board is:

> If (*the following criminogenic risk factors are present i.e., substance abuse, return to a gang*) then there is a (*very high, high, medium, or low*) probability that the person will engage in (*some specific*) criminal behaviour within (*specify period of time i.e., while on parole*) that may place (*specify typical victims based on offence chain i.e., intimate partners*) at risk for (*specific type and severity of harm that is likely based on past and predicted offending i.e., GBH with a weapon*) (Ogloff, 1995).

The above statement is very specific and there may not be enough information available to complete it fully. However, any gaps and the reasons for them should be part of a balanced assessment report. In addition, the statement focuses on probability of the antisocial behaviour in question occurring; risk is not a static entity and many dynamic factors play a part on the generation of different patterns of behaviour. Thus, predictions of risk recognise that the predicted antisocial behaviour is deemed to be the responsibility of the offender, avoiding a deterministic focus and a subsequent reduction in criminal responsibility (Ogloff & Lyon, 1998).

Why Validate the PCL: SV ?

The recommendations of the parole experts consulted by Justice Thorpe (1994) highlighted the importance of validating risk instruments from time to time to ensure

that they are still performing as expected. The National Parole Board had used the psychometric instruments designed by Hare, the PCL-R and PCL: SV, as part of its Structured Decision Making process since 1996. However, both the PCL: SV and the Board's own actuarial measure, the Risk Assessment Instrument, needed validation for use with New Zealand serious offender inmate populations. Therefore, it was proposed that the validation study examine how useful the PCL: SV is with respect to a representative sample of New Zealand offenders released by the Parole Board, in order to establish predictive data for recidivism, particularly reoffending viewed by the public as serious, namely, violent and sexual reoffending.

Finally, in considering the need for the validation study the Board has used a high cut-off score in their use of the PCL: SV to predict recidivism risk. This cut-off was based on guidelines from the manual indicating a high possibility of psychopathy and the need to use the PCL-R to confirm a diagnosis of psychopathy. While the assumption was made that a high score indicated the presence of the psychopathy construct and therefore an individual at high risk of reconviction for violent/sexual offending, this predictive validity was not established empirically. The reliability of the measure had also not been established for a New Zealand criminal population representative of both Māori and non-Māori offenders. In addition, the use of a high cut-off score while possibly acting to reduce the false positive error rate would, by definition, increase the false negative error rate, thus failing to detect potential parolees at high risk of reconviction for violent/sexual offending.

Addressing all these issues in the current validation study for the PCL: SV was viewed as timely in view of the increased focus on risk assessment by New Zealand judicial authorities brought about by changes to sentencing and parole legislation, increased pressure from public lobby groups concerned about safety, and legal and ethical challenge to actuarial risk assessment.

The next chapter outlines the retrospective-prospective method used to validate the PCL: SV for use in risk assessment for a New Zealand criminal population convicted of lengthy sentences of imprisonment, typically for violent and or sexual crimes.

CHAPTER THREE

PCL: SV Validation Study

Method

The previous chapter provided information on the legal and ethical requirements supporting research into the effectiveness of the PCL: SV as a measure of serious recidivism risk. The National Parole Board began to utilise this measure in parole decision making from 1996 and the new Parole Act 2002 has stipulated that the New Zealand Parole Board must use the best available information in deciding on risk from July 2002. However, prior to this study no New Zealand data were available on the effectiveness of the PCL: SV in predicting serious recidivism or on the decision errors associated with risk based cut-off scores. The following research was designed to provide an appropriate sample, valid comparison measures, and a procedure that provided reliable data on recidivism.

Participants

The core set of participants in this study were men who had been released by National Parole Board after serving sentences of imprisonment. This parole authority was responsible for decisions relating to release and parole conditions for inmates serving sentences of seven years or more (both determinate and indeterminate sentences) with 17 District Prisons Boards having similar responsibility for inmates subject to sentences of more than one year and less than seven (Heron, 2001). The

numbers of prisoners over whom the National Parole had parole authority has been an increasing proportion of the national prison population. It was noted by Justice Heron, the chairperson of the National Parole Board that the proportion of inmates subject to consideration by the board had increased from 15.7% of the prison muster to 25.6% in the period 1999-2000.

A total of 200 men were selected, as explained below, from a database of offenders released by the National Parole Board between 1985 and the end of June 1995 ($N = 722$). These men were a mixture of those eligible for discretionary release (serving life sentences with no final release dates from imprisonment), as well as those who were subject to automatic release having reached their final release date from imprisonment (based on having served two thirds of their sentence as mandated by Section 90 of the Criminal Justice Act 1985).

The long time period covered in the National Parole Board database of release inmates allowed for the selection of a representative serious offender sample for the study. The total sample of 722 was then divided up into the five National Parole Board assigned risk categories 'A' (very low) through to 'E' (very high) to ensure the final study sample reflected the entire risk range of inmates released by the board. The National Parole Board used an actuarial instrument developed at their request, the Risk Assessment Instrument (Lake, 1996) to assign inmates to the five risk categories as part of their structured decision making process (see Table 3.1).

Table 3.1

Parole Board Risk Assessment Instrument Based Risk Categories

RAI Score	Risk Category	Structured Decision Making Guidelines
0-20	A	Release as soon as possible, no conditions attached
21-40	B	Release as soon as possible, on specified conditions
41-60	C	Release after eligibility, if and when appropriate conditions have been settled and met
61-80	D	Release further deferred and not authorised until appropriate conditions can be settled and met
81-100	E	Only release if: (i) risk reduced to D or lower; (ii) no further reduction in risk is likely to be achieved during continued incarceration; and (iii) appropriate release plans are available

It was hoped that this approach would enable the random selection of 40 participants from each parole risk category to ensure the sample reflected a range of risk and offence profiles. However, only a limited number of offenders who had received an 'A' (very low) or 'E' (very high) risk classification could be found in the National Parole Board database. The distribution of study participants from the parole board risk categories in Table 3.2 reflected the limited numbers of offenders with very low and very high-risk categories and was representative of the risk profile in the total sample. Random selection could therefore only be used for inmates with risk categories, 'B', 'C', and 'D' where sufficient numbers were found in the total sample. In such instances, Microsoft Excel random number generation analysis was used to select cases.

Table 3.2

Distribution of RAI Categories for all Cases in PCL: SV Study

RAI Allocated Risk Category	**A**	**B**	**C**	**D**	**E**
***N* = 200**	11	50	58	50	31

Demographic information. Descriptive information was collected from the institutional files for all 200 participants and included: age at release on parole, file reported ethnicity, sentence length, index offence (offence for which they were imprisoned), and date of release from prison. Following the generation of the scores from the three risk measures used in this study (RAI, RoC*RoI, and PCL: SV), information on any reconviction and sentence type imposed (the focus was on sentences of re-imprisonment) was accessed for all study participants from a criminal history database. In addition, the time in days from release into the community to each of these recidivism variables was recorded (see Appendix A).

Psychometric Measures

Psychometric risk prediction data were collected using three actuarial risk measures. Summary details of the psychometric instruments used is provided below.

Risk Assessment Instrument (Lake, 1996). The RAI was developed using best practice as recommended by the North American parole experts consulted by Justice Thorpe (1994) in his review of parole board structured decision making

processes. His review identified that static predictors relating to previous criminal history were the best at identifying those at greater risk of serious recidivism. A construction sample was obtained of 101 inmates included in the 1989 penal census who had been released and had had at least 3 years in which to be reconvicted. Three levels of risk were used to rank offenders: high risk (reconvicted with prison), moderate risk (reconvicted without prison) and low risk (no reconviction). A scale was then constructed and its items were related to the reconviction event using linear regression to develop the appropriate scale items, all but one of which was significantly related to reconviction. The items for the Risk Assessment Instrument were:

- Prison History

  A1. Previous custodial sentences (number)

  A2. Age at first custodial sentence

- Criminal History

  B1. Previous convictions (number)

  B2. Age at first conviction

  B3. Previous convictions for violence (number)

- Age at release

- Current Sentence and Offence

  D1. Current sentence (length)

  D2. Current major offence (type of offence)

The resultant scale (score range 0-100) was then tested on a comparison sample of 167 men released from prison by the National Parole Board prior to May 1992. The reconviction rate for the 5 risk category groups (labelled A through to E) differed considerably from those in the lowest risk group, a 100% conviction rate as compared to 22% reconviction rate in the lowest rate group.

In a similar vein, the seriousness of reconviction was assessed by dividing the recidivists into three groups depending upon whether they had no imprisonment or less than three months, imprisonment of over three months but less than three years, and those with sentences longer than three years (Lake, 1996). Table 3.3 below shows that the Risk Assessment Instrument discriminated well between these three offender groups, with a greater proportion of those in the top risk groups having serious sentences than those in the lower groups. The initial validation of the Risk Assessment Instrument, therefore, proved successful. However, the sample was small and did not provide comparison with any other validated risk measures.

The Risk Assessment Instrument was completed on all participants in this study prior to their release by the National Parole Board secretariat in accordance with the Board's guidelines and a designated member of the Board then certified the score. The National Parole Board provided the RAI scores for all participants in electronic form to the researcher. When checks were made on ten cases using the individual hard copy of the RAI on their National Parole Board file no discrepancies were found between the two sources.

Table 3.3

RAI Group Members Reimprisonment Rate

RAI Category	Minor (%)	Moderate (%)	Serious (%)	Total (%)
A	2 (22.2)	0	0	2 (22.2)
B	4 (11.8)	1 (2.9)	0	5 (14.7)
C	21 (36.2)	1 (1.7)	5 (8.6)	26 (46.6)
D	29 (58.0)	10 (22.2)	11 (22.9)	50 (81.2)
E	9 (50.0)	4 (22.2)	5 (27.8)	18 (100)

Risk of re-Conviction X Risk of re-Imprisonment model. (RoC*RoI)

(Bakker, O'Malley, & Riley, 1998). The RoC*RoI measure was developed for the New Zealand Department of Corrections to assist in the accurate prediction of an offender's risk of conviction and likelihood of reimprisonment. The measure is based on static predictors (factors unchangeable by individual effort) from criminal history information. In developing the measure Bakker, O'Malley, and Riley (1999) used the following predictor variables:

Personal characteristics

- Race (four categories; Caucasian, Māori, Polynesian and Others);
- Gender;
- Age (continuous)
- Age at first offence
- Frequency of convictions

- Number of court appearances and convictions (running total)

Jail and time at large

- Total estimated time (yrs) spent in prison;
- Number of previous imprisonment sentences;
- Indicator that punishment for most recent crime was imprisonment;
- Maximum sentence length handed down to offender in past (yrs);
- Time at large (length of offender's most recent time at large);

Seriousness of offending

- Sum of seriousness ratings for all crimes (seriousness defined by average length of sentence in days a person receives if convicted of a crime);
- Weighted past seriousness measure (places greater weight on seriousness of most recent offence);
- Maximum serious measures for the past time period;
- Mean seriousness measures for the past time period;

Offence type

- Offence category (10 possible) (e.g., violent, disorderly conduct, sex);
- Number of convictions in crime category.

The complete criminal histories of more than 133,000 offenders (those convicted of an imprison able offence in 1983, 1988, and 1989) were used to develop RoC*RoI. Available information on these offenders included their complete criminal history prior to 1983, 1988, and 1989, and for any further offending over the next five years. Logistic regression was used by Bakker et al. (1999) to determine the

relationship between the predictor variables and future offending, with the size of the sample allowing random allocation to either the development or validation samples. The key strength of RoC*RoI is that it can effectively manage an enormous amount of factual information about an offender. Each piece of datum is weighed up and balanced against other pieces of factual information in an objective way to produce a statistical probability of reoffending (score range is 0.0 to 1.0, representing 0 risk to 100% risk of serious recidivism). As this is computer generated human error in calculating the score is eliminated.

The RoC*RoI actuarial measure is in fact a combination of two risk models. RoC equals Risk of re-Conviction, while RoI equals the Risk of re-Imprisonment. These two risk models derive from exploiting the mathematical relationship between basic social and demographic variables, criminal history variables and future offending. The RoC*RoI measure, therefore, is an expression of the likelihood that a person will be *both* reconvicted in the future *and* be sentenced to a term of imprisonment for that offence. As a combined measure, it is quite possible that any individual may have a very high chance of re-offending (say 90%), but a very low chance of also being sent to prison for that offence (say 10%). In such a circumstance, the actual chance of someone being both reconvicted for an offence, and being sent to prison for that offence would be only 9 percent. Conversely, it is possible for a person to have a very low chance of reoffending, but a very high chance of receiving a prison term if they do. Again, the combined value expressed by the RoC*RoI measure would result in a low probability of being reconvicted and sent to prison. The Corrections

Department has adopted RoC*RoI as its primary recidivism measure, rather than just risk of conviction alone, because this gives some indication of serious re-offending. A number of confusing results have been reported with the use of RoC*RoI with child sex offenders and youth offenders. Many child sex offenders have very low RoC*RoI scores. This reflects the fact that often this is a specialist form of offending, which occurs at a very low frequency with long gaps between offences. Sexual offending against children may also go undetected for long periods due to the nature of the offences and their effects on victims. The RoC*RoI model was developed as a measure designed to predict future general criminal offending. Sex offending against children is not necessarily highly correlated with other forms of criminal behaviour. However, only three offenders in my study sample were imprisoned for child sexual offences. The RoC*RoI model does appear to accurately predict serious reoffending among men who are convicted of aggressive sexual offences, such as rape, if such offending is part of a versatile criminal history.

As has already been noted, the RoC*RoI measure relies upon previous recorded offences in developing estimates of future risk. There are cases of very young offenders who come into the criminal justice system, who show no official record of offending in the adults courts, but who may have extensive offending histories which have previously been dealt with in the juvenile court. In these cases, the RoC*RoI measure can only be calculated on the criminal history data that are available, and this does not include their often extensive Youth Court criminal histories. However, no youth offenders were included in the current study.

The Roc*RoI model has been found to be very accurate. Bakker et al. (1999) report that comparing the predicted outcome to an optimal fitted model (45-degree "ideal" trend line) produced plotted data that were mathematically close to the ideal outcome line. The model did have some slight instability in which the data path moved under the 45-degree trend line at the upper end of the graph, with this believed to be due to small numbers in the validation sample with very high scores (.80 and over). Further analysis on the overall predictive accuracy of the RoC*RoI measure was carried out using Receiver Operating Characteristic (ROC) analysis with an Area Under of the Curve (AUC) of .76 found. This is interpreted as the instrument being able to discriminate 76% of the area under the curve plotted from the true false positive rate against the false positive rate for serious reoffending (*SE* = .0072) (Bakker et al., 1998).

ROC analysis is based on Signal Detection Theory (Swets, 1996). Blackwell in the 1950s used Thurstone's (1920s) theory involving two overlapping (bell-shaped) distributions to perform a "yes-no" detection task (cited in Swets, 1996). It is the relationship between the detection of the threshold (sensitivity) and non-detection (specificity) in which the rate of detection versus no detection is greater than 50/50. In statistical theory, the two overlapping distributions are a null and alternative hypothesis. ROC analysis shows for a given score the discriminative acuity how the true-positive rates (sensitivity) varies with the false-positive error (specificity or false positive fraction which is subtracted from 1.0 for a series of possible score cut-off scores). Discrimination between the two distributions is reflected in a numeric value

indicating the area under the curve. The AUC being defined as a measure of the locus of an ROC curve on its graph. The AUC figure measures dozens of empirical ROC's that are fitted well by a linear function, with varying slope (changes in score detection), thus allowing the use of several decision criteria simultaneously instead of the adoption of single cut-off scores. Area Under the Curve varies between 0.5 and 1.0 with 1 reflecting perfect discrimination or no false positive error, and .50 indicating chance discrimination. An $AUC = .80$ is an overall figure of an instruments ability to discriminate 80% of the area under a curve plotted from the sensitivity against the specificity for an identified behaviour.

The use of ROC analysis in the area of risk assessment has become the method of choice over the last ten years (Mossman, 1994; Rice, 1997; Quinsey et al, 1998). This has been because of ROC not being as dependant on the base rate of interest, in this case violent recidivism, as are correlation-based methods and indexes derived from 2 X 2 contingency tables (such as with false positive and false negative tables based on a single cut-off). Behaviours with base rates of under 50% reduce the size of correlations and the base rate for violence is usually lower than 50%. Another advantage is that ROC's allow the comparison of various predictive measures with a single optimal threshold (AUC) produced to allow the relative accuracy of a measure to be compared.

Psychopathy Checklist: Screening Version (PCL: SV) (Hart et al., 1995)**.** The PCL: SV was developed as a quick screen for psychopathy due to concerns about the length of time taken to administer a full PCL-R (Cooke, Michie, Hart, & Hare,

1999). In addition, there was recognition of the need for an instrument that was able to assess forensic patients who may not have the prior criminal behaviour needed for a valid score on the PCL-R (Skeem & Mulvey, 2001). The PCL: SV manual states that the instrument has good validity as a screening tool in forensic and non-forensic environments (Hart et al., 1995). Overall agreement between the PCL-R and PCL: SV has been found to be high. Although the PCL: SV over predicts the diagnosis of psychopathy relative to the PCL-R, it has virtually no false negative errors (i.e., does not miss anyone who would score over the diagnostic cut-off of 30 used for the PCL-R).

The high internal consistency in PCL-R items meant that there was some redundancy among its 20 items, leading to a reduction in the number of items in the PCL: SV needed to retain a conceptual and empirical relationship with the full measure. Thus, the PCL: SV is a 12-item rating scale (see Appendix B for further details on the instrument and items) based directly on the 20 items from the PCL-R. Although the 12 items require less detailed information to score, items retain the essential meaning of the PCL-R items and are strongly parallel in terms of internal consistency (Cronbach's Alpha = .84). The main concern with a reduction in item numbers was retention of reliability in terms of inter-rater reliability, but this was found to be adequate both for research and clinical purposes (inmate validation sample single ratings total score = .82). An item response theory analysis of the PCL: SV by Cooke, Mitchie, Hart, and Hare (1999) found 11 of the 12 PCL: SV items were strongly parallel to their equivalent PCL-R items. The last PCL: SV item 'Adult

Antisocial Behaviour' actually outperforming the two PCL-R items deemed to be equivalent ('Criminal Versatility' and 'Revocation of Conditional Release').

PCL: SV items are scored from detailed descriptions in the manual and are rated using a 3-point ordinal scale (0 = item does not apply, 1 = applies to a certain extent, and 2 = item applies to individual). Items can be omitted (total of two) if information is not available. Scores on the PCL: SV range from 0 to 24 with a cut-off score of $\geq$ 18 recommended as indicating the need for administration of the PCL-R for diagnostic purposes. Further details of the PCL:SV and its items and administration are in Appendix B.

The 12 items of the PCL: SV are separated into a two parts based on the two-factor organisation of the PCL-R with six items for each part. A clinically significant score on the PCL: SV (18 or over) has a .91 correlation with a significant score (30 or over) on the PCL-R (Cooke et al., 1999). The standard error of measurement for the PCL: SV (score range 0-24) is 1.80 for criminal populations, in keeping with the error rate of 3.25 for the PCL-R (score range 0-40). However, in this current research the variable of interest was not diagnosis but establishing risk of serious recidivism. The PCL: SV manual does not provide information of the error rates in regard to risk prediction as its development was based on providing diagnostic validity and reliability. There is a body of research into the applied use of the PCL-R as a risk prediction measure. Serin and Brown (2000) report a series of PCL-R scores with the false positive and negative error rates in relation to the prediction of general and violent recidivism. The recidivism data had a mean follow up time of 4.32 years (SD

= 2.11). An examination of these scores reveals high error rates for general recidivism but greater accuracy for the prediction of violent reoffending. Best balance between the two error rates was found when a PCL-R total score of 24 was used (32% false positive rate and 29% false negative rate.

Previous research using the PCL: SV to predict risk of violence has been carried out with forensic/psychiatric populations rather than criminal. The PCL: SV has been used with this population either on its own or as part of the Violence Risk Appraisal Guide (Harris, Rice & Quinsey, 1993; Webster et al., 1994) and the Historical-Clinical-Risk 20-item scale (Webster, Douglas, Eaves, & Hart, 1997). The PCL: SV was found to be the best single predictor of violence in the MacArthur violence risk assessment study (Skeem & Mulvey, 2001), and to have a high level of accuracy in predicting criminal violence (*AUC* = .79; *SE* = .056) (Douglas et al., 1999). A recent study in England examined the validity of the PCL: SV, Violence Risk Appraisal Guide, and the Historical subscale (note the PCL: SV total score is item 9 of the 10 Historical subscale) of the Historical Clinical Risk-20 and found the PCL:SV was the most accurate at predicting in-patient violence in a sample of offenders diagnosed with mental disorders (Doyle, Dolan, & McGovern, 2002). Douglas et al. (1999) used a sample of 87 inpatients and scored their risk measures from file information. This study confirmed the predictive validity of the PCL: SV in predicting violence (*AUC* = .76; *SE* = 0.05) and provided further evidence of its ability to add to the predictive accuracy of the other study risk measures.

Procedure

The procedures for this study were authorised by the Corrections Department Chief Executive, with permission obtained from the General Manager of Public Prisons for access to inmate institutional records. Ethical approval was also obtained from the University of Waikato Ethics Committee, through the Psychology Department Research Ethics committee.

PCL: SV evaluation process. Three Clinical Psychology Post-Graduate Diploma students (all had achieved Masters degrees in psychology, one male, two female, all aged in their late twenties) were trained in the theory of psychopathy and the psychometric structure of the PCL: SV. This training followed the guidelines outlined in the manual for the PCL: SV (Hart et al., 1995), which stipulated that researchers or their supervisors should;

(i) Possess an advanced degree in the social, medical, or behavioural sciences;

(ii) Have expertise in psychopathology and psychometric evaluation; and,

(iii) Be responsible for the supervision of raters with lesser qualifications.

I am qualified to administer the PCL-R and PCL: SV having attended a specialised training course run by Robert Hare, the primary developer of both these instruments and met the test user criteria as outlined by the instruments publisher Mental Health Systems. My initial training took place in 1997 over a period of two days and followed the recommended guidelines, namely, a review of the concept of

psychopathy, the development of the PCL instruments, instructions in scoring then mock assessments using both the PCL-R and PCL: SV. In addition, I have taken part in all on-going training on the PCL-R and PCL: SV held by Corrections Department Psychological Service. After my initial training in the use of the PCL instruments I carried out approximately 50 supervised assessments using the PCL-R or the PCL: SV in clinical practice before carrying out this study. In addition to these practise guidelines it is also recommended in the PCL: SV manual that researchers should provide formal training to raters and evaluate the reliability of the raters' assessment (Hart et al., 1995). Formal training was further defined in the manual as programmes that covered three major topics: nature and assessment of psychopathy; PCL: SV assessment procedure; and PCL: SV scoring practice. This comprehensive training approach has been endorsed by a number of recognised experts in the field of psychopathy (Gacono, 2000).

PCL: SV training. This training for research assistants took place over a period of a week and followed the guidelines detailed above with a special focus on scoring from collateral information only. Reliance on collateral information in scoring the PCL: SV is endorsed in the manual as a valid procedure although it is noted that interview includes information with special relevance to Factor 1 items (Hart et al., 1995). A number of previous studies into risk prediction have reliably used collateral information to score the PCL: SV and PCL-R (Grann, Landstrom, Tengstrom, & Kullgren, 1999; Harris et al., 1993; Wong, 1988). In addition, training focused on assessing a New Zealand criminal population to reduce the North American bias in

PCL: SV item descriptions. This bias has been identified by Cooke (1998a) for specific items rather then the factor structure of the PCL instruments. Cooke used Item Response Curves (IRC) to examine the relationships between PCL items and the underlying traits in an examination of PCL-R items in Scotland and North America. While items were found to discriminate as well in Scotland as they do in North America, items measuring glibness/superficial charm differed markedly for the two settings. This difference was hypothesised to be because of variability in social acceptance of behaviours and their effectiveness. This variability was not addressed in the PCL manual guidelines that reflected a North American cultural bias. To counter this bias the study training looked at the constructs and how a New Zealand offender would present as superficial and glib so that the assessors were able to apply the intent of the items to this criminal population.

The research assistants were required to complete five PCL-R and five PCL: SV assessments during training using file information only. These practice cases involved a variety of offenders with different ethnic, cultural, and offending background to ensure that the research assistants were able to reliably score the instruments and not-under score because of the North American bias in the manual item descriptions. In addition, all these cases had been previously assessed by clinicians experienced in the administration of the PCL instruments, enabling the reliability of the research assistant's scores to be checked during training. All research assistants were able to achieve the internationally accepted reliability standard of being within two points of the clinician's scores (Gacono, 2000). An examination of the

scorer bias indicated that the research assistants did not under or over score the cases as a group.

The research assistants were then employed to score 200 PCL: SV assessments from institutional prison file information under my supervision. I held regular individual supervision sessions with the three research assistants used in the study. I scored a sample of 10% (n= 20) of the completed assessments as a reliability check. Weighted sampling was used, with a bias towards the initial PCL: SV assessments, so that inconsistencies could be detected and additional training provided during supervision. A check of the re-scored sample found that no fewer than three PCL: SV assessments for each research assistant were present in the 20 selected. The reliability check of the scoring of the PCL: SV found a high inter-rater reliability score (r = .89). A further reliability check involved locating the scores from any previous PCL instruments carried out prior to the study by Departmental psychologists. This exercise found seven cases of prior Corrections Psychological Service PCL: SV assessment among the PCL study participants. An examination of scores from these prior PCL: SV assessments (these assessments had included interview, as well as collateral review) found acceptable inter-rater reliability (r = .80) with the scores from the file only scored PCL: SV assessments.

Institutional records. The institutional record used in this study to inform the scoring of the PCL: SV involved individual prison files for all study participants. These paper files are created when an inmate is first imprisoned (includes Borstal and Corrective Training sentences) and are reopened for each new instance of

imprisonment. Two copies of the file are kept, one in Wellington at the head office of the Public Prison Service, and one at the particular custodial institution where they served their sentence.

Typically the files contain all official correspondence relating to the offender along with some personal correspondence:

Sentencing information:

- Community Probation pre-sentence reports, Judge's sentencing notes, Regional Forensic Service reports, Police summary of facts, victim impact reports, previous criminal history;

Public Prison Service assessments:

- Case management reports, employment records, medical records, pre-release reports, authorizations for special privileges or visits, institutional misconduct reports, administration of inmate finances and access to visitors, phone logs;

Psychological Service reports

- Assessment and treatment reports
- Reports from special treatment programmes
- Parole Board reports

Personal correspondence (seized by the prison authority and placed on file)

- Letters from inmates to the prison authorities asking for things or complaining about treatment.
- Inmate letters to individuals deemed unsuitable
- Personal diary information, poetry etc of an inflammatory nature

When difficulties were found in locating the institutional files for many of the offenders (n = 105), a switch was made to using head office files to complete the scoring. A reliability check was carried out from 10 files randomly selected from the 95 cases already scored from institutional files. Head office files were selected for these 10 offenders and checked to see if these files contained all the information used to score their PCL: SV from institutional files. For all 10 cases, the information used as evidence to support PCL: SV item scores were also found to be contained on head office files.

The institutional files often included information on offending and imprisonment carried out after release on the index offence identified for this study. As the collateral information was to be used to assess risk prior to any further offending during the five years after release, an administrative assistant examined all files after they were received by my office. This assistant who was not involved in scoring the PCL: SV assessments marked the file information after the individuals release date to ensure that the research assistants did not examine this as part of their scoring. When I carried out the score reliability checks I also examined the information used by the assistants to justify their item scores to ensure that is was selected from material on file before the participants' release from prison.

The research assistants recorded all the information they used to score items using data recording sheets and all PCL: SV scoring information (item, factor, and total scores) was entered into an Excel database that already had demographic

information on participants. I carried out reliability checks on this data entry by randomly selecting 10 cases and checking the electronic data against the paper file. No discrepancies were found.

Finally, after the 200 participants had PCL: SV scores entered into the database I accessed the Risk Assessment Instrument and RoC*RoI data for all individuals (this was not available to myself or the research assistants during the period that the PCL: SV assessment were carried out. Also at this time up to date criminal history data was accessed for all participants and any further reoffending recorded on the excel database. This information included, date of offence, type of offence, and sentencing option.

This was the database that was then used in the validation of the PCL:SV. The results of the analysis of the reliability and validity of the PCL: SV in predicting future criminal behaviour resulting in reimprisonment is detailed in the next chapter.

CHAPTER FOUR

PCL: SV Validation Results

The sample, comparison measures, and PCL: SV data collected using the procedure outlined in the previous chapter were used to create a comprehensive database. This enabled univariate, bivariate, and multivariate analysis to be carried out. The results from these statistical analyses will be used to describe the demographic details of the sample, the relationship between the Risk measures, RAI, RoI*RoI, and the PCL: SV, and how predictive these measure were of a number of recidivism variables.

Descriptive Information on PCL: SV Study Sample

An examination of the demographic details of the 200 prison inmates included in this study found a mean age of 46, ranging from 32 to 67 years of age. Ninety-six (48%) cases were listed as having Maori ethnicity from institutional file information while 91 (45%) cases indicated European descent. Only 14 cases (7%) were listed as 'Other' with this group made up of those of Polynesian, Indian, and Asian descent. Inmates in this study were reported to have a range of index offences (last offence) from murder through to fraud. The distribution of index offences for offenders included in this study (see Figure C1; Appendix C) revealed that the majority had committed violent offences (87%) with the remainder having committed drug or dishonesty offences. It was of note that 33% of the sample had been imprisoned for

murder, with the next largest offender group having been imprisoned for committing sexual violence. These two offence types reflecting the New Zealand legal system's pattern of imprisonment sentence length.

Distribution of Scores on the RAI, RoC*RoI, and PCL: SV Measures

All 200 offenders included in the study had Risk Assessment Instrument (RAI) scores calculated by the Parole Board after the completion of one year of their sentence to provide information to guide the parole decision making process (see Appendix A). The normal distribution of RAI scores ranged from 13.2 up to 97.2 with a mean score of 54.8 (*SD* = 21.3) (see Table 4.1 and Figure C2 Appendix C). The National Parole Board scoring classification guidelines for the RAI indicated that the 'C' risk category (RAI score range 41-60) was the most endorsed category. RoC and RoI scores were obtained from the Law Enforcement System (LES) criminal histories (calculated at the time of their release) and processed by dedicated calculation software (Bakker et al., 1999). The RoC scores were multiplied by the RoI scores to produce unconditional scores.

Descriptive statistics for RoC and RoI scores, as well as Roc*RoI are listed in Table 4.1. The distribution of the RoC*RoI scores (see Figure 4.1) revealed a positive skew with the majority of offenders scoring over 0.62 (57.5%) (see Table C3 Appendix C). The PCL: SV total scores for offenders in the study (see Figure 4.2) shows a positive skewed distribution towards higher scores. The PCL: SV total mean

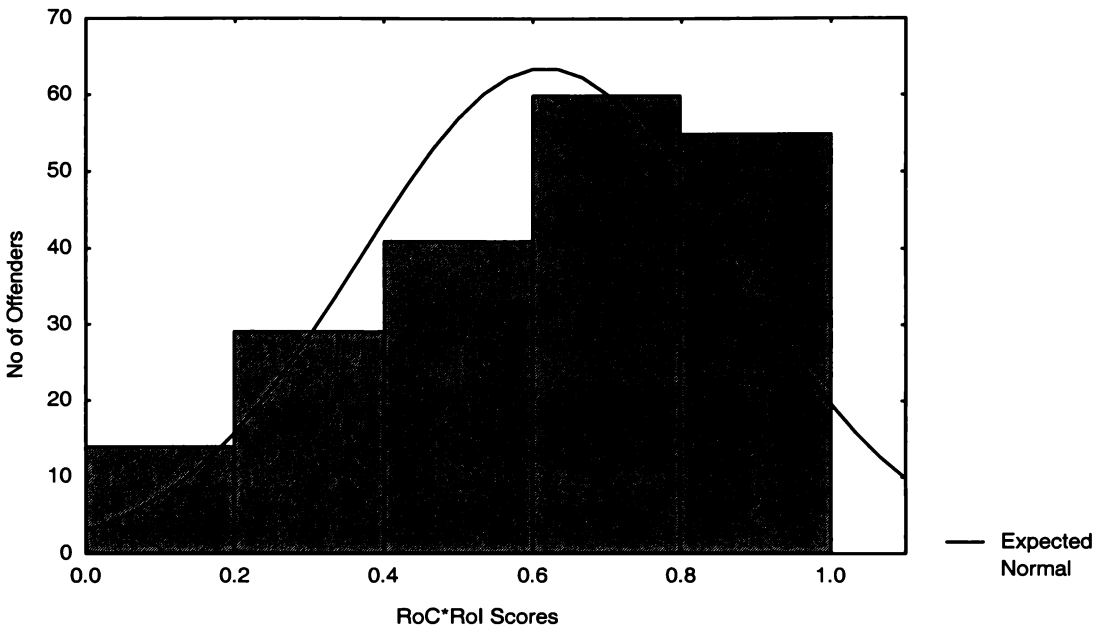

Figure 4.1. Distribution of RoC*RoI scores ($N = 199$)

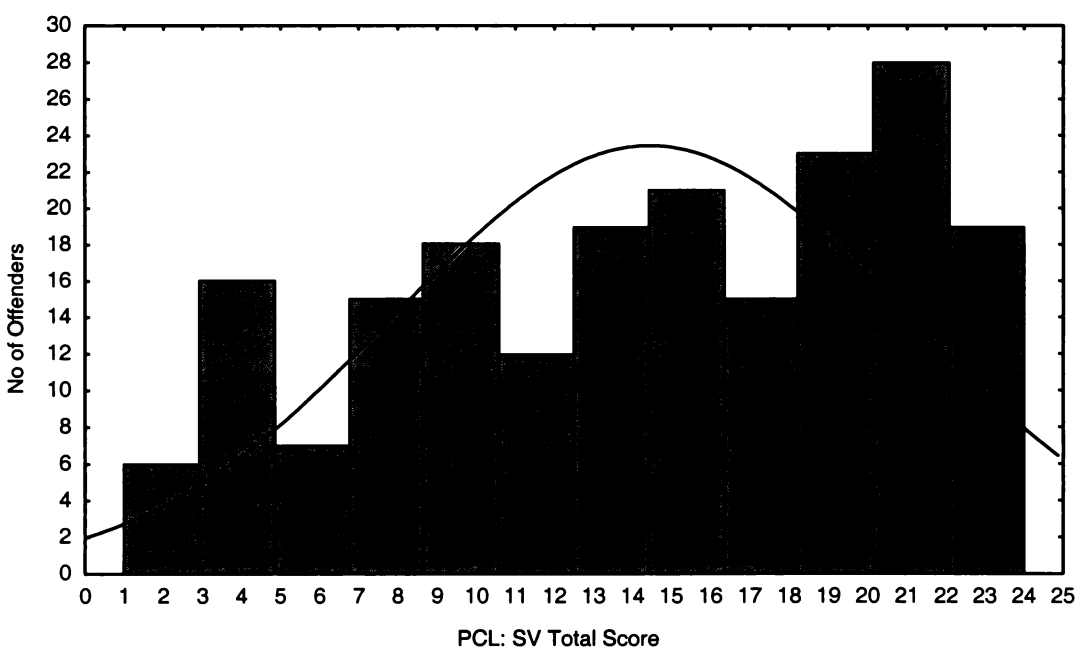

Figure 4.2. Distribution of PCL: SV total scores ($N = 199$)

score was high at 14.4, with the Factor 1 mean being slightly lower than that for Factor 2 (see Table 4.1). It should be noted that 34% of the cases scored 18 or greater on the PCL: SV, thus meeting the manual cut-off criterion for a strong indication of criminal psychopathy. Further information on the distribution of RAI, RoC and RoI (Table C4, Figure C5, & C6) and PCL: SV Factor 1 and 2 scores (see Figure C7 & C8) is listed in Appendix C.

Table 4.1

Descriptive Statistics for RAI, RoC*RoI, and PCL: SV

Variables	***M***	**Median**	***SD***	**Range**
RAI	54.8	56.5	21.3	13.2 – 97.2
RoC	0.80	0.9	0.2	0.0 - 1.0
RoI	0.70	0.8	0.2	0.2 - 1.0
RoC*RoI	0.61	0.65	0.2	0.0 - 1.0
PCL: SV Total	14.4	15	6.5	1 – 24
PCL: SV Factor 1	7.1	7	3.4	0 – 12
PCL: SV Factor 2	7.2	8	3.7	0 – 12

Analysis of Recidivism Factors

The 200 cases involved in the PCL: SV study were followed up using the LES computer criminal database to establish which offenders were reconvicted and which were imprisoned as a result of reoffending following release on parole. The period

from which data were extracted began at the study participant's official parole date until the end of April 2000. This criterion meant that all offenders in the study had been in the community for a minimum period of five years. During the analysis one case was dropped from the study when computer-sentencing records could not be obtained. Of the remaining 199 cases, 77% (N= 153) were reconvicted and of these 43% (N = 86) reimprisoned at the April 2000 cut-off date.

Correlations Between National Parole Board Risk Measures

Pearson product-moment correlation coefficients were computed among the three risk measures used in this study (RAI, RoC*RoI, and PCL: SV). All risk measures used in the PCL: SV study had significant correlations with the recidivism variables, time to reconviction, and reimprisonment (see Table 4.2). The results indicate that 31 out of the 36 correlations were statistically significant with 24 greater than or equal to .30.

However, while most of the measures correlated with each other, the RAI did not have a significant correlation with the RoI. The PCL: SV total score showed a high and significant negative correlation with time to reconviction (r = -.57) and reimprisonment (.r = -.51). The RoC*RoI scores had a lower significant negative correlation with time to reconviction (r = -.43) but a high correlation with reimprisonment (r = -.49). RAI scores while significantly correlated with both time to reconviction (r = -.19) and reimprisonment (r = -.19) were far lower than the other two measures of risk.

The RoC*RoI combination had a higher correlation with reimprisonment, however the RoC scores outperformed all other measures in correlating with time to reconviction (r = -.64) but was slightly behind the other measures for reimprisonment (r = -.46). Finally, the PCL: SV Factor scores were lower than the total instrument scores in relation to time to reimprisonment with Factor 2 and Factor 1 both having high correlations with time to reconviction. In addition to the correlations listed in Table 4.2, the PCL:SV total, Factor 1, and Factor 2 scores correlated .50, .37, and .47, respectively, with reconviction, and .49, .40, and .47, with reimprisonment.

Table 4.2

Pearson Product-Moment Correlation Matrix for all Risk Measures and Recidivism Variables (N =199)

Variables	RAI	RoC	RoI	RoC *RoI	PCL: Total	PCL: Fct 1	PCL: Fct 2	T-Reco	T-Reim
RAI	1.0	----	---	---	---	---	---	---	---
RoC	.23*	1.0	---	---	---	---	---	---	---
RoI	.05	.28*	1.0	---	---	---	---	---	---
RoC*RoI	.18*	.83*	.74*	1.0	---	---	---	---	---
PCL: SV Total	.30*	.59*	.13	.33*	1.0	---	---	---	---
PCL: SV Factor 1	.22*	.39*	.13	.35*	.90*	1.0	---	---	---
PCL: SV Factor 2	.33*	.68*	.13	.55*	.90*	.64*	1.0	---	---
Time to Reconvict	-.19*	-.64*	-.03	-.43*	-.57*	-.42*	-.58*	1.0	---
Time to Reimprison	-.19*	-.46*	-.24*	-.49*	-.51*	-.41*	-.49*	-.55*	1.0

* $p < .01$

Survival analysis. This analysis was carried out using the Kaplan-Meier product-limit method. This method estimates the survival function directly from the continuous survival or failure times for the variables, time to reconviction (see Figure 4.3) and to imprisonment (see Figure 4.4). The cumulative survival function represents the proportion of offenders remaining free of reoffending or reimprisonment as a function of time since release from custody. That is, survival is depicted as not having failed, although throughout this analysis this function is referred to as its inverse, namely, failure. The curve in Figure 4.3 shows a steep drop from 1.0 (100% survival) with the majority of the reoffending taking place within a period of one year from release. This indicates that there was a high rate of reconviction within a short time of release into the community by the sample, with 56% reconvicted within two years of release. Table 4.3 shows the breakdown of reconviction by year for the sample for a five-year period post release. This period accounted for the majority of reconviction (71%). However, data was collected on half of the sample for up to eight years at which stage the reconviction rate had reached 76%.

A less severe reduction in survival rate was found for time to reimprisonment in Figure 4.4. The curve in the data path, while showing a sharp fall in the first year starts to flatten out in the second and third years following release, with most reimprisonment occurring within a period of five years. Table 4.4 details the reimprisonment percentage change for the first five years post release. Starting at 13%

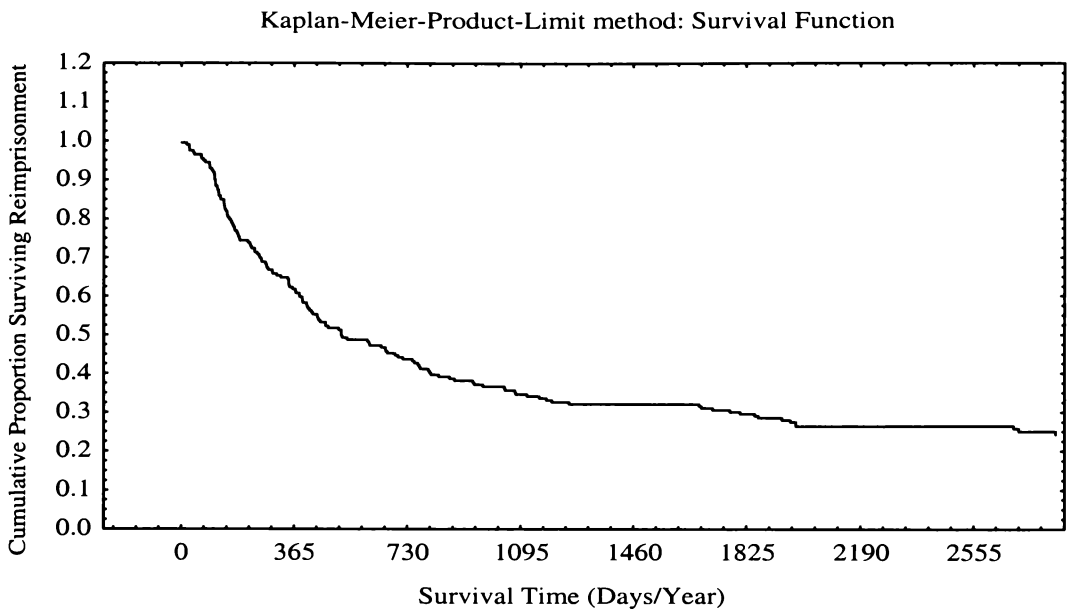

Figure 4.3. Survival curve (cumulative proportion surviving) for study offenders for general recidivism

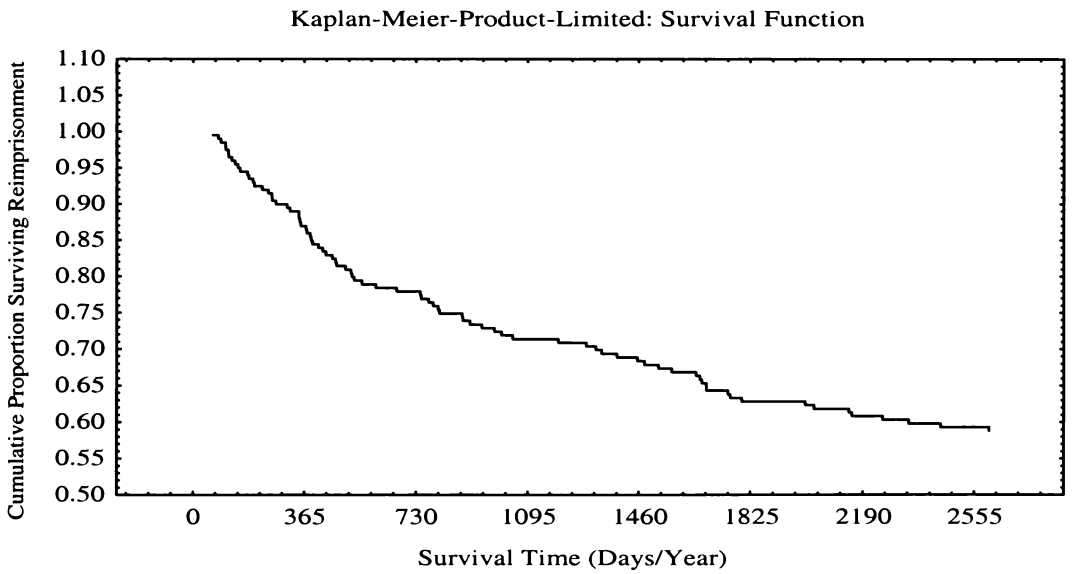

Figure 4.4. Survival curve (cumulative proportion surviving) for study offenders for recidivism resulting in reimprisonment

Table 4.3

Distribution of Cumulative Survival Reconviction Post Release for Five Years

Year Post Release (days)	**Cumulative Survival**	**Percentage of Reimprisonment**	***SE***
One (365)	0.6	38	0.0
Two (730)	0.4	56	0.0
Three (1095)	0.3	65	0.0
Four (1460)	0.3	68	0.0
Five (1825)	0.3	71	0.0

Table 4.4

Distribution of Cumulative Survival Reimprisonment Post Release for Five Years

Year Post Release (days)	**Cumulative Survival**	**Percentage of Reimprisonment**	***SE***
One (365)	0.9	13	0.0
Two (730)	0.8	22	0.0
Three (1095)	0.7	29	0.0
Four (1460)	0.7	32	0.0
Five (1825)	0.6	38	0.0

for the first year, the percentage almost doubles to 22% by year two before flattening out over the remaining three years to a total of 38%. Note that the offence date was used for this analysis rather than the court date, which was often up to a year or more after the recidivism. The majority number of the sample were followed for longer than the minimum five year post release period, half up to ten years, at the end of which the reimprisonment rate had increased to 43%.

Descriptive Statistics for the Risk Measures

A large percentage of the 199 offenders in the PCL: SV study were reconvicted (77%) however, the recidivism of most concern for the parole authority was reimprisonment. Therefore, reimprisonment over time was used as the criteria to group offenders to gauge the abilities of the RAI, RoC*RoI, and PCL: SV to accurately predict 'membership' of the reimprisonment group or the non-imprisonment group. A period of five years to reimprisonment (1825 days) was used as the cut-off criteria for group membership of the two groups. Descriptive statistics for the risk measures, RAI, RoC*RoI, and PCL: SV for each group can be found in Table 4.5.

The mean scores for all instruments in Table 4.5 were significantly different for the reimprisonment group over those not imprisoned within five years of parole. It was of note that the same trend of a higher Factor 2 than Factor 1 mean that was found for the total PCL: SV sample continued. The difference in scores between the two groups for these measures clearly shows higher mean scores on all measures for those in the reimprisonment group. However, a higher mean score for PCL: SV Factor 2

(9.4) over Factor 1 (8.8) scores was found for the reimprisonment group with those not reimprisoned instead having a higher mean score for Factor 1. Also of note in looking at the range of scores was that no offender in the reimprisonment group had a low PCL: SV total score (6 or under).

Table 4.5

Means, Standard Deviations, and Score Ranges of the Sample Risk Measures and Differences Between Reimprisonment and Non-Imprisonment Groups

	Group 1: Imprisoned (*N*= 76)		**Group 2: Not Imprison (*N*= 123)**		
Variables	***M (SD)***	**Range**	***M (SD)***	**Range**	***t*-value (*df*)**
PCL: SV Total	18.4 (*4.4*)	7-24	12.1 (*6.4*)	1-24	7.22** (*197*)
PCL Factor 1	8.8 (*2.6*)	1-12	6.1 (*3.5*)	0-12	5.56** (*197*)
PCL Factor 2	9.4 (*2.6*)	1-12	5.9 (*3.6*)	0-12	6.87** (*197*)
RoC*RoI	0.70 (*0.2*)	0.13-1.0	0.5 (*0.2*)	0.02-1.0	6.92** (*197*)
RAI	58.6 (*18.9*)	17.6-97.2	50.6 (*20.1*)	13.2- 91.8	2.56* (*197*)

*$p < .01$**

$p < .001$

In addition, the PCL: SV total score mean for Group 1 is now the same as the top cut-off criterion score of 18 from the PCL: SV Manual, categorised as 'strong indication of psychopathic personality'. While the mean score for the RAI was

significantly higher for Group 1 (M = 58.4) this score reflected only a moderate risk of recidivism.

Predictive Cut-off Scores for Risk Measures in Relation to the Reimprisonment Group

The score distributions for the RAI, RoC*RoI, and PCL: SV total score (see Appendix C; Tables C7 and C8) were used to identify the most appropriate cut-off score for each instrument before determining their effectiveness at predicting imprisonment. Table 4.6 presents rates of false positives and negatives for a number of cut-off scores for each measure. These scores were selected to give the best balance between the two error rates and to indicate the change in error when lower of higher cut-off scores were selected.

The marked criterion scores in Table 4.6 were regarded as the best 'fit', producing a balance between not identifying offenders regarded as at high risk of imprisonment and including offenders who do not go on to commit further serious offences. The PCL: SV total score of 16 indicates risk of recidivism, not how closely the individual meets the diagnostic criteria for criminal psychopathy. The PCL: SV manual utilises a cut-off of 18 to indicate a 'strong indication of psychopathy' with a score of 16 viewed as at the high end of the criterion indicated as 'maybe psychopathic'. The PCL: SV total score of 16 had the best balance between false negative and false positive error rate closely followed by the RoC*RoI cut-off score of 0.67 (67% chance of serious reoffending within five years of release). The RAI

Table 4.6

Estimations of Positive and Negative Error in Predicting Reimprisonment from Total Scores of the RAI, RoC*RoI, and PCL: SV Instruments

		PCL: SV		
Cut-off Score	**Predict Reimpr**	**Predict Non-Impr**	**False Negative**	**False Positive**
13	88%	52%	12%	48%
***16**	**76%**	**68%**	**24%**	**32%**
20	50%	82	50%	18%
		RoC*RoI		
.55	82%	52%	18%	48%
***.67**	**70%**	**70%**	**30%**	**30%**
.76	63.5%	85%	36.5%	15%
		RAI		
61-80	50%	70%	50%	30%
***58.6**	**58%**	**67%**	**42%**	**33%**
81-100	11%	94%	89%	6%

*Cut-off scores indicated in bold are judged the best balance between the error rates

instrument appeared to be less accurate in identifying high-risk offenders and was biased more towards reducing false positive error rate (33%) while having a high false negative error rate (42%).

The distribution of the PCL: SV total scores in Figure 4.5 indicates a strong negative skew with few scores under 16 for the reimprisonment group while the distribution of the non imprisonment had a normal distribution. The distribution of RoC*RoI scores found similar results, however the distribution for the RAI was not skewed (see Table 4.5).

Accuracy of the Risk Instruments

Discriminant function analysis. Discriminant function analysis is typically used to predict group membership from a set of predictors. It establishes if group membership can produce a reliable difference for the three risk measures used in this study, in other words does the 'model' produce a significant difference between the groups, and which measure was the best predictor variable. The dependent variable, group membership, was defined as either reimprisonment or non-imprisonment within a five-year period of release on parole. The Wilks' lambda statistic (Λ) for the overall discrimination is computed as the ratio of the determinant of the within-groups variance/covariance matrix over the determinant of the total variance covariance matrix. The overall Wilks' Lambda for the model was significant, $\Lambda = .72$, X^2 (3, 199) = 62.54, $p < .001$, indicating that the risk measures differentiated between the two groups. Table 4.7 lists the unique contributions the three risk measures made to the

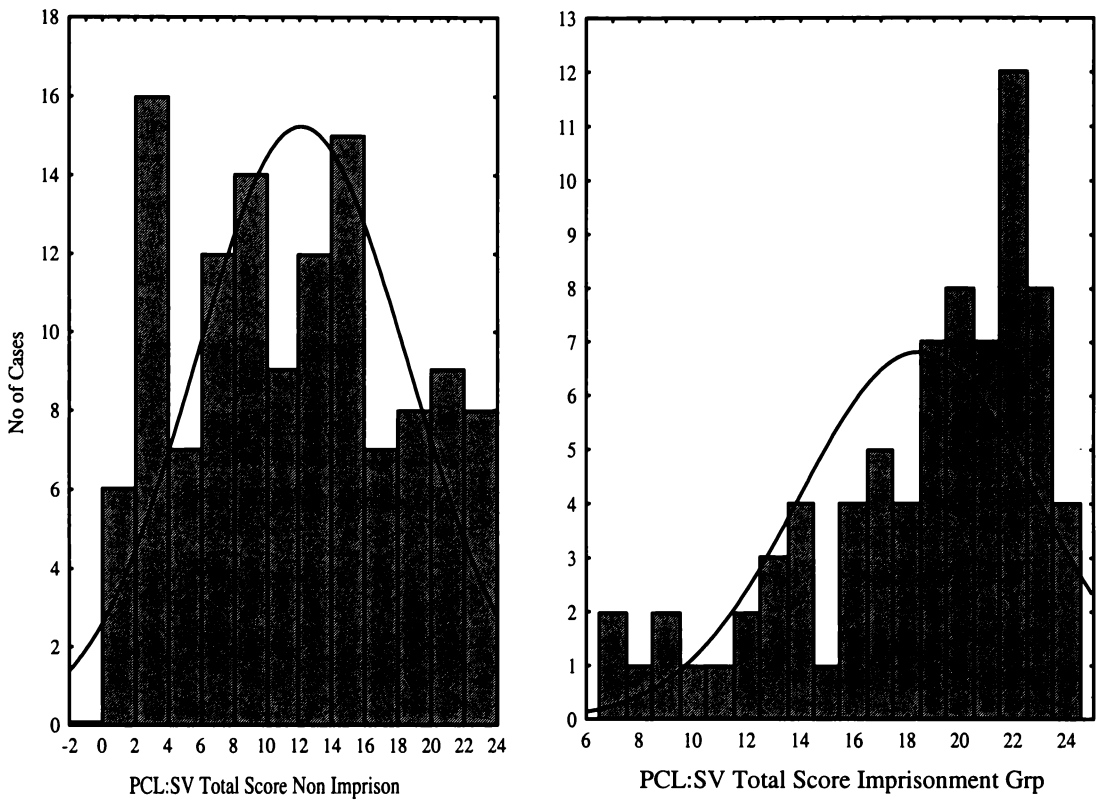

Figure 4.5. Distribution of PCL: SV total scores for both imprisonment and non-imprisonment groups

model. The Partial Lambda scores for the risk measures revealed that the RAI measure was found to have the lowest scores, $\Lambda = .73$, F- (1, 195) = .32, $p = .57$, which were not statistically significant in relation to the discriminant function. Instead it was the RoC*RoI score, Wilks, Lambda $\Lambda = .79$, F (1,195) = 16.74 $p < .001$, and the PCL: SV score, $\Lambda = .79$, F (1,195) = 18.22 $p < .001$ with the largest regression coefficients that made the statistically significant contributions to the discriminant power of the model. The Eigenvalue (λ^2) calculated as a square root provides an estimation of the effect size for each independent variable included in the model. Table 4.7 shows that the Eigenvalue $\lambda^2 = .08$ for the RAI accounted for less than 1% of the effect size of the model. The high Eigenvalues for the RoC*RoI, $\lambda^2 = .57$, and the PCL: SV $\lambda^2 = .62$, indicate that these variables accounted for 99% of effect size of the model in discriminating between the two group. The PCL: SV was the best single predictive variable, however it accounted for only slightly more of the regression coefficient than the RoC*RoI measure.

When forward stepwise discriminant function analysis was used with the model to "build" a model of discrimination step-by-step, the analysis reviewed all the risk measures to evaluate which as predictor variables contributed most to the discrimination between groups. This process resulted in the RAI measure being removed from the model (see Table 4.8). The new model with just the two risk measures, RoC*RoI and PCL: SV scores had an overall Wilks' Lambda that was significant, $\Lambda = .72$, F (2, 196) = 36.72, $p < .001$, with a larger regression coefficient than the model that had contained all three risk measures. The PCL: SV score was

found to be the individual factor with the best contribution to the discrimination between the two groups, with Wilks' Lambda $\Lambda = .80$, $F\ (1, 195) = 20.70$, $p < .001$ and an Eigenvalue indicating it was responsible for most of the effect size, $\lambda^2 = .63$. However, the RoC*RoI score was virtually as efficient in discriminating with a high Wilks' Lambda $\Lambda = .79$, $F\ (1, 195) = 17.05$, $p < .001$ and Eigenvalue of $\lambda^2 = .57$.

Table 4.7

Discriminant Function Analysis of Imprisonment and Non-Imprisonment Groups using PCL: SV, RoC*RoI, and RAI scores

Discriminant Analysis	Analysis Summary: No. of variables in model: 3; Wilkes Lambda: .73 approx. $F\ (3,195) = 24.51$ $p < .000$* Chi-Square = 62.54 ($df = 3$) $p < .000$*			
Variables	**Wilkes' Lambda**	***F*-remove (1,195)**	***p*-level**	**Eigenvalue (λ^2)**
RAI	.73	.32	.569	.08
RoC*RoI	.79	16.74	.000*	.57
PCL: SV	.79	18.22	.000*	.62

*$p < .001$

Table 4.8

Discriminant Function Forward Stepwise Analysis of: PCL: SV, RoC*RoI, and RAI

Discriminant Analysis	Step 2, N of variables in model 2, RAI variable eliminated Wilkes Lambda: .77 approx. F (2,196) = 36.72 p< .000* Chi-Square = 62.38 (df = 2) p < .000*			
Variables	**Wilkes' Lambda**	***F*-remove (1,195)**	***p*-level**	**Eigenvalue (λ^2)**
RoC*RoI	.79	17.05	.000*	.57
PCL: SV	.80	20.70	.000*	.63

*p < .001

Cox proportional hazard model. Further analysis was carried out to see how the predictor variables predicted reimprisonment over the follow up time period. To this end Cox proportional hazard model was utilized. The model does not make any assumptions about the nature or shape of the underlying survival distribution. Instead, the model assumes that the underlying hazard rate (failure/reimprisonment rather than survival time) is a function of the independent variables (RAI, RoC*RoI, PCL: SV). Table 4.9 lists the parameter estimates for the Cox proportional hazard regression model where the three risk measures have been compared to the failure variable, reimprisonment over time.

The analysis indicates that overall the three variables had a significant relationship with reimprisonment over time X^2 (3, 199) = 75.01, p < .001. Table 4.9

also listed the individual relationship each measure had with reimprisonment where the Wald statistic and *p* value provides a test of significance of the regression coefficient based on the asymptotic normality property of maximum likelihood estimates. The RAI was not significant when tested against the Chi-square distribution with Wald statistic $w = .25$, $p = .619$. However, the RoC*RoI score was significant at Wald statistic $w = 20.68$, $p < .001$ as was the PCL: SV score, Wald statistic $w = 16.62$, $p = .001$.

Table 4.9

Cox Proportional Hazard Regression Model for Reimprisonment using PCL: SV, RoC*RoI, and RAI scores

Discriminant Analysis	Summary: Variables in model: 3; Hazard Rate-Reimprisonment Chi-Square = 75.01 ($df = 3$) $p < .000$*; $N = 199$			
Variables	***SE***	***t*- value**	**Wald Stat**	***p*-level**
RAI	.01	.50	.25	.619
RoC*RoI	.71	4.55	20.68	.000*
PCL: SV	.02	4.08	16.62	.000*

*$p < .001$

Further analysis of reimprisonment over time and the relationship of this to the risk measures was carried out using a between-group survival analysis (Meier Kaplan Product-Limit model) with group membership based on the distribution of risk

measure scores. In view of the poor predictive ability of the RAI, only the RoC*RoI and PCL: SV measures were used. For the RoC*RoI measure two groups were formed based on the score distribution in Table 4.5. The cut-off score with the best balance between the two error rates was used to determine group membership (.67). Therefore a lower risk group was formed from all those reimprisoned with RoC*RoI scores under .67, and a higher risk group from all cases of .67 and above. A similar approach was used for the PCL: SV score distribution from Table 4.5. In this case 16 was the cut-off with the best balance in predicting reimprisonment so the lower risk group were those with scores under 16 and the higher risk group scores of 16 and above.

Figure 4.6 shows the rate of reimprisonment over time for the two groups selected on the basis of the RoC*RoI predictive cut-off score. The top data path indicates the rate of reimprisonment for study participants categorised as the lower risk group who had a RoC*RoI score of under .67 or 67% risk of recidivism. The graph line for this group indicates both a low percentage and rate of serious recidivism over the five-year follow-up period. In contrast, the higher risk group those with RoC*RoI scores over .67 accounted for the vast majority of reoffending resulting in reimprisonment and that the majority of this occurred within one year of release from prison. Cox's F test was used to compare survival in the two groups based on the lower and higher RoC*RoI score distributions and found the difference was significant, $F\ (44,108) = 4.172, p < .001$.

Figure 4.7 shows the rate of reimprisonment over time for the two groups selected on the basis of the PCL: SV predictive cut-off score. The top data path

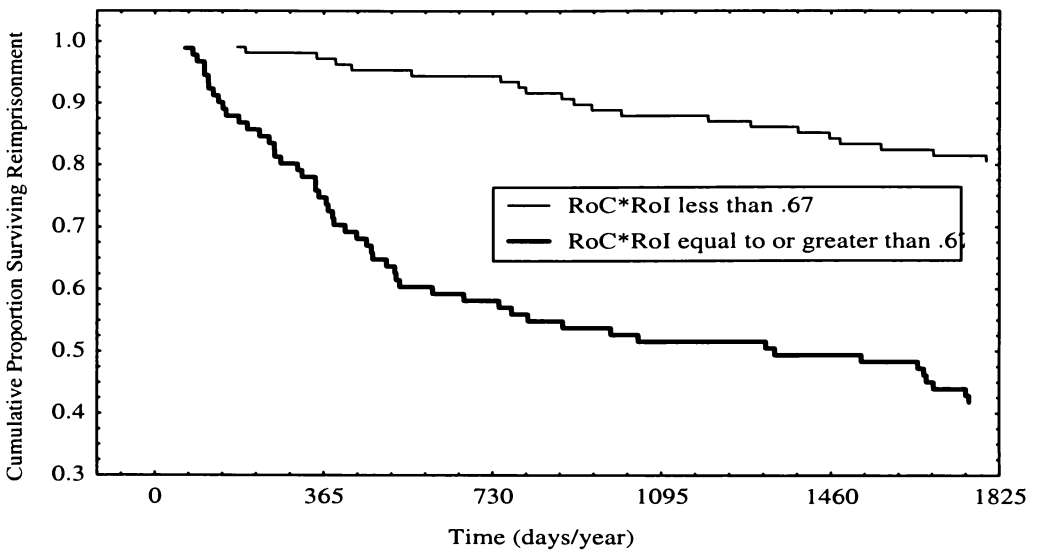

Figure 4.6. Group comparison of cumulative proportion surviving reimprisonment based on RoC*RoI score cut-off (Lower risk < .67, Higher risk ≥ .67).

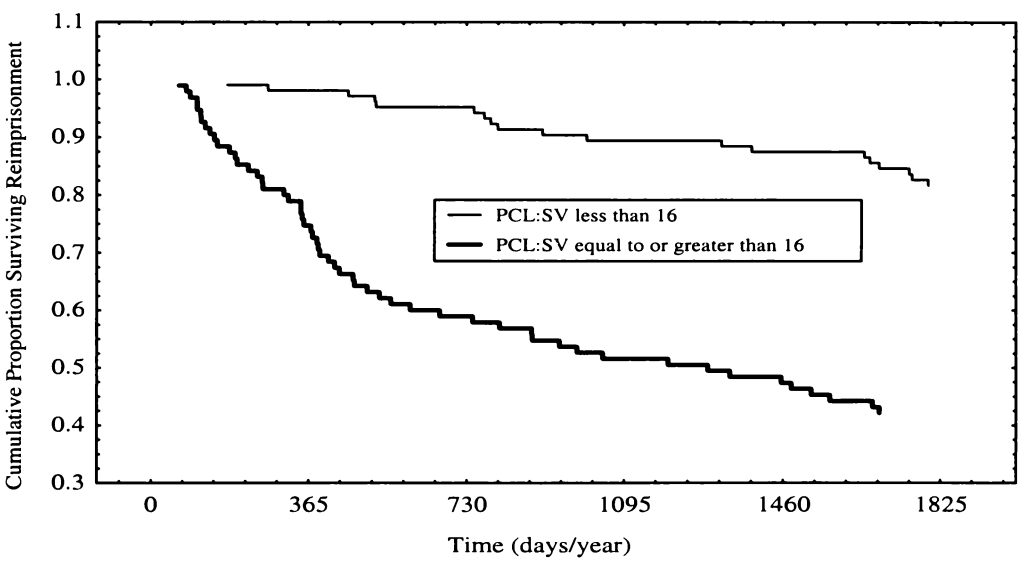

Figure 4.7. Group comparison of cumulative proportion surviving reimprisonment based on PCL: SV score cut-off (Lower risk <16, Higher risk ≥16).

indicates the rate of reimprisonment for study participants who had a PCL: SV score of under 16. This graph indicates again both a low percentage and a low rate of serious recidivism over the five year follow-up period. In contrast the higher risk group, those with PCL: SV scores of 16 or more, accounted for the vast majority of reoffending resulting in reimprisonment and the majority of this occurred within one year of release from prison. Cox's *F* test was used to compare survival in these two groups and the difference was significant, $F\ (40,112) = 4.467$, $p > .001$. Therefore, the PCL: SV had a slightly larger regression coefficient than the RoC*RoI risk measure.

An analysis of the distribution of reimprisonment rates between the lower and higher risk groups based on PCL: SV is presented in Table 4.10. The difference in reimprisonment rate is marked and means that those with scores 16 or more on the PCL: SV had a serious recidivism rate seven times higher (49%) than those with scores under the score cut-off. Most of the serious reoffending occurred within two years of release from prison.

Probability of serious reoffending by PCL: SV total scores. While the PCL:SV total score of 16 appeared the best cut-off score in determining a high risk group in the study, the individual score rates of serious reoffending were plotted in Figure 4.8. This enables the relationship between serious reoffending and the PCL: SV scores to be shown for the five year follow-up period. Figure 4.8 indicates that none of the sample with low scores in the 1-6 range were reimprisoned. There was a sharp increase in the rate of reimprisonment after 16 with this leveling off at approximately 70% after 19 through to a high of 80 % for the top score of 24.

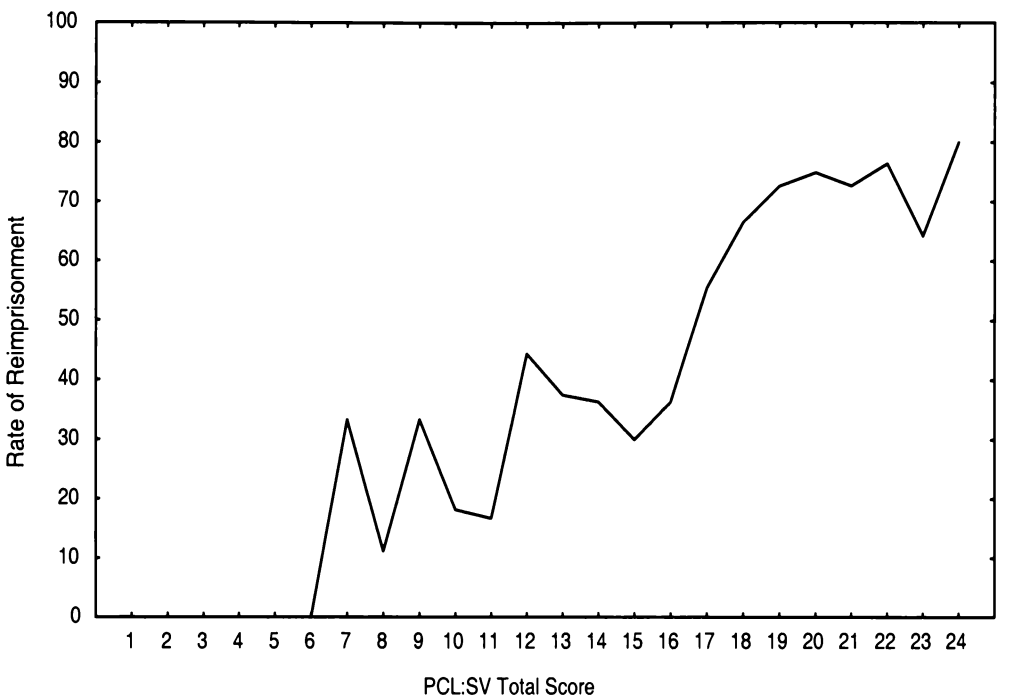

Figure 4.8. Rates of reimprisonment for total sample at each PCL: SV score for the five year follow up period

Receiver Operating Characteristic (ROC). This analysis provides information on the probability with which a randomly chosen recidivist will have a higher score than a randomly chosen non-recidivist. The ROC area examines the trade off between hits and false alarms as a function of score on the instrument.

A final analysis of the predictive ability of the PCL: SV used ROC to estimate the Area Under the Curves (AUC) for all measures as an indication of their relative accuracy in predicting the variable of most concern, reimprisonment. Measures and sub-scale scores were also combined to produce the most accurate predictive model. The AUC can be taken as an index for interpreting the overall accuracy of the predictor variables. Areas can range from 0 (perfect negative prediction) to .50 (chance prediction) to 1.00 (perfect positive prediction).

Table 4.10

Cumulative Percentage of Reimprisonment for the Lower and Higher Risk Groups based on PCL: SV for the Five Years Post Release

Year	Lower Risk Group: Cumul % (*N*)	Higher Risk Group: Cumul % (*N*)
1	6.6 (5)	48.7* (37)
2	14.5 (11)	60.5* (46)
3	17.1 (13)	68.4* (52)
4	25.0 (19)	72.4* (55)
5	26.3 (20)	75.0* (56)

* $p < .001$

The results in Table 4.11 indicate once again that the RAI was a poor predictor, a finding in keeping with the results from the discriminant function assessment while the other measures, the RoC*RoI and PCL: SV both predict well. Of particular note is that the PCL: SV predicts adequately on its own (AUC = .80) with increased accuracy (AUC = .83) when combined with the two most predictive subscale elements of the RAI (age at first custodial sentence and current major offence). The RoC*RoI was the measure with the best accuracy at AUC = .83. However, the PCL: SV also appears to add predictive power over the other risk measures that depend on static risk variables (RAI and RoC*RoI) in producing the PCL: SV/RoC*RoI combined model (AUC=. 86), which was the best predictive model.

Table 4.11

Areas Under Curves (AUCs) of the Receiver Operating Characteristic Analyses for the RAI, RoC*RoI, and the PCL: SV

Model (*N*= 199)	**Reimprisonment**	
	AUC	***Standard Error***
RAI Score	.63	.039
PCL: SV total Score	.80	.031
PCL: SV, RAI age, and offence scores	.83	.029
RoC*RoI	.83	.029
PCL: SV/RoC*RoI (combined model)	.86	.026

The actual degree of predictive accuracy cannot be determined from this analysis alone because the models have been developed on a limited sample of 199 offenders and would have to be validated by seeing how accurately they predicted for another separate sample. However, the validation study methodology was retrospective/prospective by only using information on participants up until the date of their release in scoring the risk measures. The difference in the relative strength of the PCL: SV compared to the discriminant analysis is noteworthy but the ROC analysis does not use a particular criterion cut-off score (instead using multiple points on the ROC curve) and therefore can produce different results. This difference between ROC and discriminant analysis estimations of predictor accuracy is usual when the criterion dependent variable (reimprisonment) base rate is under 50%, as in this study. In such cases, the discriminant analysis is usually regarded as more accurate as it involves a one-way analysis that is not affected by unequal sizes (or low base rate). The major findings of both analyses appear similar with the PCL: SV having good predictive accuracy at 80%, and the RoC*RoI model at 83%.

Odds ratios for reconviction or reimprisonment. The previous analyses establishing the accuracy of the instruments in predicting the recidivism variables, reconviction and reimprisonment over the five years post release. Odds ratio analysis is also typically used to provide easily understood information on the increased risk that individuals have who score over the mean on the measures used in this study. The odds ratio is easily understood, with a ratio of 4.5 indicating that serious offenders

scoring over the mean of a particular measure are 4.5 times more likely to have the stipulated outcome, in this case either reconviction or reimprisonment. The odds ratio is a nonparametric test that calculates the odds of a 0-1 categorised dependent variable occurring for an independent variable determined by those above or below the mean of the relevant measures. Table 4.12 lists the odds ratios for the three measures used in this study. This shows a very low odds ratio for the RAI, with only the reimprisonment able to generate an odds ratio (1.24). The RoC*RoI measure indicate that those scoring over the mean (.67) were approximately twice as likely to be reconvicted but nine times more likely to be reimprisoned. Those scoring over the mean for the PCL: SV (14.4), were eight times more likely to be reconvicted and six time more likely to be reimprisoned.

Table 4.12

Odds of Reconviction or Reimprisonment as a Function of RAI, RoC*RoI, and PCL: SV Scores Greater than the Mean

Type of recidivism	RAI	RoC*RoI	PCL: SV
Reconviction	---	2.21**	8.30**
Reimprisonment	1.24*	8.83**	5.69**

*$p < .05$.

**$p < .001$

Analysis of Recidivism by the Reimprisonment Group

Seventy-six offenders from the PCL study sample were reimprisoned within five years of release (38.2% of total sample of 199 offenders). They took on average two years from time of release to conviction for the offending that resulted in their reimprisonment (M = 738 days, SD =595, Range 65 - 2605 days). Those in the reimprisonment group had a significantly lower mean age (M = 32.1, SD = 9.0) than the mean age (M = 36.8, SD = 11.0) found for the non-imprisonment sample (t (1,196) = 9.$p < .01$) (see Table 4.13).

The distribution of ethnicity also differed significantly with the reimprisonment group with 72.3% (N = 55) listed on records as Māori, and 27.63% (N = 21) as Non-Māori. While the ethnic distribution for the non-imprisonment sample (N = 123) was 33.3% Māori and 67.5% non-Māori. Both the total group and the reimprisonment sub group had virtually identical index offence distribution (murder to dishonesty). The term index offence is used to describe the offence that participants in the study were imprisoned for prior to their release on parole. Index offence categories are listed in Table 4.14 for the reimprisonment group and clearly indicate that the vast majority of those who were later reimprisoned were originally imprisoned for violent/sexual offences (97.4%). This was expected in view of the length of sentence needed include offenders in the study, namely, seven years of more.

Table 4.13

Comparison of Age and Ethnicity for Reimprisonment and Non-Reimprisonment Groups

	Non-Imprisonment Grp (*N* =123)	**Reimprisonment Grp (*N* = 76)**
	***M* (*SD*)**	***M* (*SD*)**
Age	36.8 (*11.0*)	32.1* (*9.0*)
	% (n)	***% (n)***
Ethnicity		
Māori	33.3 (*41*)	72.3** (*55*)
Non-Māori	67.5 (*83*)	27.6** (*21*)

* $p < .01$

** $p < .001$

Table 4.14

Distribution of Index Offence for Reimprisonment Group (*N* = 76)

N	**% of total**	**Category of Offence**
27	35.5	Serious Violence/Robbery
26	34.3	Rape
18	23.7	Murder
3	3.9	Child Sex Offender
2	2.6	Theft/Drug

Type of reimprisonment offending. When the offence codes were examined for all offenders reimprisoned within five years, the distribution was heavily weighted towards violent recidivism resulting in a sentence of imprisonment. Table 4.15 shows four main reimprisonment categories, with offences divided into non-violent (theft, drug, driving), violent (common assault; male assault female; assault child; threatening to kill; possession of offensive weapons), serious violence (robbery; aggravated robbery/assault; rape; kidnapping, child sexual offences; use of weapons to assault), predatory offending (resulting in an indeterminate sentence of preventative detention), and murder/attempted murder. Only a small percentage of the total number of reimprisoned offenders had been sentenced for non-violent crimes (21.0%). In contrast, 78.9 % were reimprisoned for violent offences, with the majority reconvicted of serious violent offending.

Table 4.15

Distribution of Reimprisonment by Recidivism Type Category

Recidivism Type Categories	*N*	**% Reimprisoned**
Non Violent Offending	16	21.0
Violent Offending	15	19.7
Serious Violent Offending	35	46.0
Predatory Sexual Offending	7	9.2
Attempted Murder; Murder	3	3.9
Total Violent Reoffending	60	78.9

When the relationship between index offences and later reimprisonment offences was analysed (see Table 4.16) it became clear that those at most risk of serious violent reoffending were originally imprisoned for similar offences. In other words, previous violent behaviour strongly related to future violence. Offenders with an index offence for rape were responsible for a significant percentage of the serious violent recidivism and the vast majority of predatory reoffending (resulted in a Preventive Detention sentence), as well as two of the murder convictions.

Correlations between reimprisonment and non-imprisonment groups. Correlations were examined for all risk measures and the recidivism variables for the reimprisonment group. The recidivism variables included in the analysis were reimprisonment offence seriousness rating (Justice Department rating based on average sentence length [days] for all criminal offences); actual sentence length; and time in the community prior to reimprisonment offence.

Pearson product-moment correlation coefficients were computed among the three risk measures and the three recidivism variables. Only the RoC*RoI and the PCL: SV were found to have significant correlations with the recidivism variables (see Table 4.17). The results indicate that 17 out of the 28 correlations were statistically significant with 11 greater than or equal to .30. The significant positive correlations in Table 4.17 indicated that for the RoC*RoI score had a moderate correlation r = .29 with the reimprisonment offence seriousness rating, and actual sentence length, but not with time to reimprisonment offence. The PCL: SV Factor 2 score had a significant

Table 4.16

Distribution of Index and Reimprisonment Offending for Reimprisonment Group

	Reimprisonment Offence Category				
Index Offence for Reimprison Grp (*N*)	Non-Viol (n)	Violent (n)	Serious Viol (n)	Predatory (n)	Murder (n)
Non-Violent (2)	1	---	1	---	---
Child sex (3)	1	1	---	1	---
Murder (18)	4	4	10	---	---
Rape (26)	5	4	10	5	2
Serious Viol (27)	3	5	17	1	1

Table 4.17

Pearson Product-Moment Correlation Matrix for all Risk Measures and Recidivism Variables of Interest

Variables	Serious	Sentence	RAI	RoC* RoI	Time to Reim	PCL Total	Factor 1	Factor 2
Seriousness	1.00	---	---	---	---	---	---	---
Sentence	0.83*	1.00	---	---	---	---	---	---
RAI	0.07	0.14	1.00	---	---	---	---	---
RoC*RoI	0.29*	0.29*	0.15	1.00	---	---	---	---
Time to Reim	-0.12	-0.17	-0.16	-0.14	1.00	---	---	---
PCL: SV Total	0.21	0.23*	0.39*	0.42*	-0.40*	1.00	---	---
Factor 1	0.17	0.22	0.31*	0.26*	-0.42*	0.89*	1.00	---
Factor 2	0.22*	0.19	0.40*	0.57*	-0.28*	0.84*	0.57*	1.00

*$p < .01$

moderate correlation with seriousness of reoffending (r = .23). The Factor 2 scores were also highly correlated with the RAI (r = .40) and RoC*RoI score (r = .57) confirming similar static criminogenic factors were assessed by all these measures. While the PCL: SV total score did not have significant correlations with the sentence seriousness rating or the actual sentence length, it did have a high negative correlation with the time to reimprisonment offence (r = -.40). The PCL: SV Factor scores also had significant negative correlations with time to reimprisonment offence, with Factor 1 having the highest correlation (r = -.42). This indicates that a high Factor 1 score correlates with a shorter time to reimprisonment, and that this was more predictive of speed of recidivism than any of the other measures of risk.

Analysis of violent recidivism. The sample was then split up into two categories, those reimprisoned for violent offences (N = 60), and those for non-violent offences (N = 16) to establish if there were significant differences between these groups on the risk predictor variables. The small sample sizes meant that the most appropriate analysis to establish if such differences were significant was to carry out a series of one way independent sample t-tests. The tests of significance listed in Table 4.18 revealed a significant difference between the two groups for RoC*RoI scores ($p \leq 0.05$), and for both offence seriousness rating and actual sentence length ($p \leq 0.01$). Those in the violent reoffending group had higher RoC*RoI scores (M = .79), and a higher seriousness rating (M = 1023 days) and actual reimprisonment sentence length (M = 1757 days). While a number of the other variables (younger age,

RAI, less time to reimprisonment, and higher Factor 2 score) had a trend reflecting higher risk for the violent group these differences were not significant.

Multiple linear regression analysis. Regression analysis was carried out with all quantitative dependent recidivism variables (actual sentence for recidivism, seriousness rating, recidivism time, and violent or non-violent reoffending) to learn more about their relationship with the prediction instruments. The group used were those in the study sample who were reimprisoned for violence ($N = 60$).

Table 4.18

One-Way Independent *t*-test Evaluating Differences for Group 1 (Reimprisoned for non-violent offences) and Group 2 (Reimprisoned for violent offences).

Variables	*M* Grp 1	*M* Grp 2	*df*	*P*	*N* Grp1	*N* Grp2	*SD* Grp1	*SD* Grp2
Age at release	32.1	31.8	74	*ns*	16	60	6.9	9.32
Seriousness rating (days)	168	1023	74	0.00**	16	60	276	1019
Sentence length (days)	681	1757	74	0.00**	16	60	900	1409
RAI	53.8	58.6	74	*ns*	16	60	23.1	18.7
RoC*RoI	0.68	0.79	74	0.05*	16	60	0.20	0.20
Time to reimprison	911	760	74	*ns*	16	60	639	646
PCL: SV Total	18	18.0	74	*ns*	16	60	5.2	4.8
Factor 1	8.9	8.5	74	*ns*	16	60	2.8	2.8
Factor 2	8.55	9.5	74	*ns*	16	60	3.5	2.6

*$p < 0.05$**$p < 0.01$.

In order to examine the contribution of the factor scores on the dependant variables the PCL:SV total score was not used to eliminate the effects of multi-colinearity. The dependent variable offence seriousness rating was not found to be significantly related to any of the risk measures used in this study. However, when the dependent variable was changed to imprisonment sentence length for violent reoffending, the RoC*RoI score was found to have a significant relationship (t (56) = 2.16, p = .03) (see Table 4.19). As has been shown in Table 4.18, offenders committing violent offences received the longest reimprisonment sentences, in contrast to the non-violent reimprisonment group, thus the higher the RoC*RoI score, the greater the likelihood that an offender will commit an offence punishable by a lengthy sentence of imprisonment.

Table 4.19

Regression Summary (Standard) for Risk Measures Compared to Sentence Length for the Violent Reimprisonment Group

R= .33 R^2= .11 Adjusted R^2= .06 F (4,56)= 2.38 p< .05 SE: 1338.6 (N = 60)

Variables	BETA	*SE*	*B*	*SE*	*t*(56)	*p*-level
Intercpt			-565	720	-0.79	0.434
RAI	-0.08	0.12	5.59	8.32	-0.67	0.503
RoC*RoI	0.28	0.13	1893.83	877.00	2.16	*0.033
Factor 1	0.19	0.13	93.26	67.10	1.38	0.168
Factor 2	-0.10	0.16	-52.70	79.81	-0.66	0.511

*$p \leq .05$

When the analysis was changed to forward stepwise where the model (risk measures) is changed by adding a risk measure to see if additional 'steps' exceed the specified critical value (*F* to enter = 1.00) for entry. Table 4.20 shows that this analysis still finds that the RoC*RoI score has a significant relationship with sentence length (t (58) = 2.19, p = .03) but that Factor 1 score while not significant on its own added value to the regression model (t (58) = 1.43).

Table 4. 20

Regression Summary for Risk Measures (Forward Stepwise) Compared to Sentence Length for the Violent Reimprisonment Group

R= .32 R^2= .10 Adjusted R^2= .08 F (2,58) = 4.49 *p<. 014 SE =: 1327.3 (N = 60)

Variables	**BETA**	***SE***	***B***	***SE***	***t*** (58)	***p***
Intercpt			-407	659.	-0.62	0.538
RoC*RoI	0.24	0.11	1628.44	743.81	2.19	*0.031
Factor 1	0.16	0.11	79.05	55.09	-1.43	0.155

*p < .05

When the time to reimprisonment (a measure of speed of serious recidivism), the last dependent variable was examined, an unexpected result was found with the PCL: SV Factor 1 score being the most significant predictive variable. Table 4.21 lists a regression summary of time to reimprisonment offending using a standard model.

Table 4.21

Regression Summary (Standard) for Risk Measures Compared to Time to Reimprisonment for the Violent Reimprisonment Group

R= .41 R^2= .17 Adjusted R^2= .12 F (4,56)= 3.81 p< .007 SE: 607.7 (N = 60)

Variables	BETA	*SE*	*B*	*SE*	*t*(56)	*p*-level
Intercpt			1735	324	5.35	0.000
RAI	-0.03	0.11	-1.25	3.74	-0.33	0.738
RoC*RoI	-0.03	0.13	-112.91	394.88	-0.29	0.775
Factor 1	-0.37	0.13	-85.77	30.21	-2.84	*0.005
Factor 2	-0.02	0.16	-4.84	35.93	-0.13	0.893

*$p \leq .01$

Table 4.22 lists a regression summary of time to reimprisonment offending using a forward stepwise model. Variables that were eliminated as not adding to the regression analysis listed in order were; age at release, RAI score, RoC*RoI score, and PCL: SV Factor 2 score. The PCL: SV Factor 1 score was found to have a high significant correlation with time to reimprisonable offending (r = .40 t (1,59) = 15.4, $p \leq .001$). The correlation coefficient was r = .40 which using an adjusted correlation (fixed effects model) to account for population bias was R^2= .15, meaning that the Factor 1 score alone accounted for 15% of the variance of time to reimprisonment. This result suggests that offenders who were reimprisoned for serious reoffending in the study with high Factor 1 scores are more likely to have a shorter time to violent reoffending.

Table 4.22

Regression Summary (Forward Stepwise) for PCL: SV Factor 1 Scores Compared to Time to Reimprisonment for the Violent Reimprisonment Group

R= .40 R^2= .16 Adjusted R^2= .15 (N = 60) F (1,59)=15.4 p<. 000 SE = 592

Variable	BETA	*SE*	*B*	*SE*	*t*(59)	*p*-level
Intercpt			1597	214	7.43	*0.000
Factor 1	-0.40	0.10	-93.46	23.8	-3.42	*0.000

*$p \leq .001$

The predictive relationship is displayed in Figure 4.9, a bivariate scatter plot in which high PCL: SV Factor 1 scores were significant (negative correlation) with the recidivism variable, time to reimprisonment (days). The graph has a systematic shape indicating the strong relationship between the Factor 1 score and time to reimprisonment offence. The regression line (95% confidence) indicates that a Factor 1 score range of 8-11 was the best fit for violent reimprisonment recidivism within one year and 8-10 for the period of two years post release.

Further support for the strong relationship between high Factor 1 scores and time to reimprisonment within five years can also be found when the total study sample (N = 199) is grouped into those with scores of ≤ 6 and those ≥ 7. When this low/high Factor 1 grouping variable is used in survival analysis of time to reimprisonment, the speed and high rate of reoffending is clearly higher for those with scores in the high Factor 1 range (see Figure 4.10). When the data paths in Figure 4.10 were compared with Cox's F test the difference was significant, F (28, 124) = 4.531, $p < .001$.

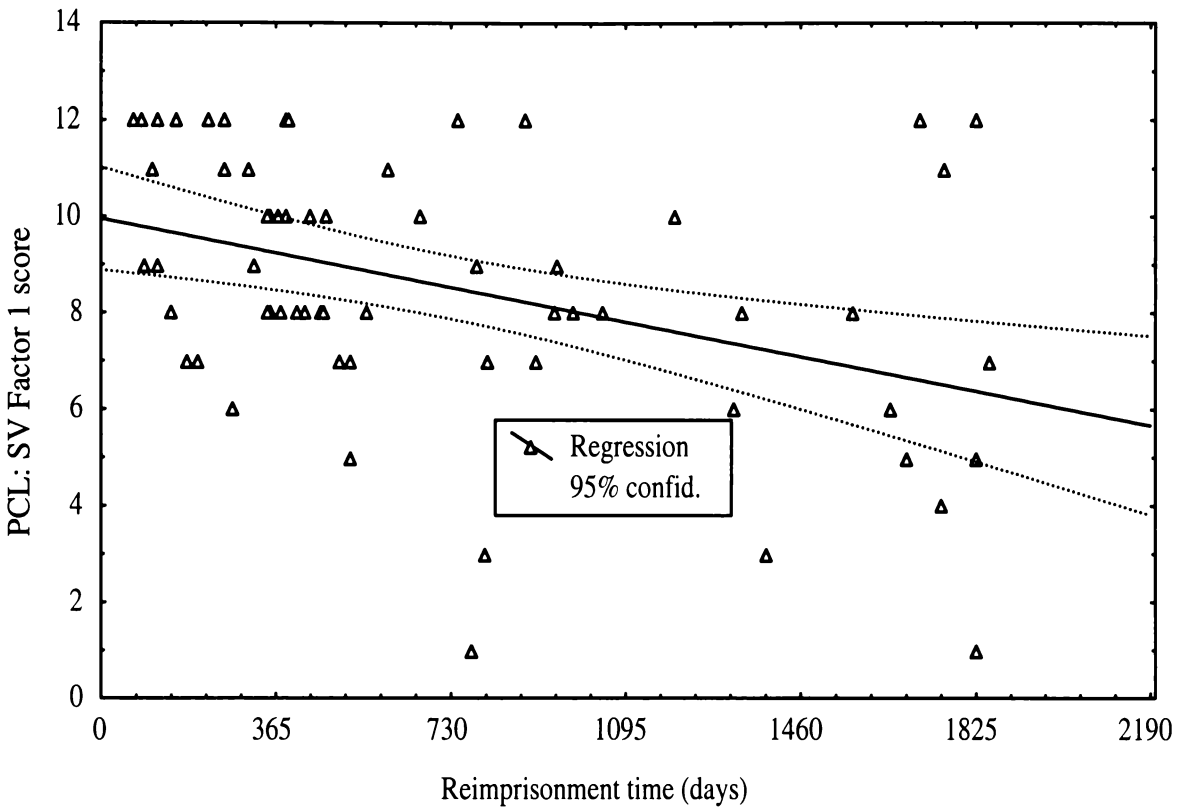

Figure 4.9. Relationship between PCL: SV Factor 1 score and time to reimprisonment for all offenders reimprisoned for violent reoffending (N = 60) within five years of release

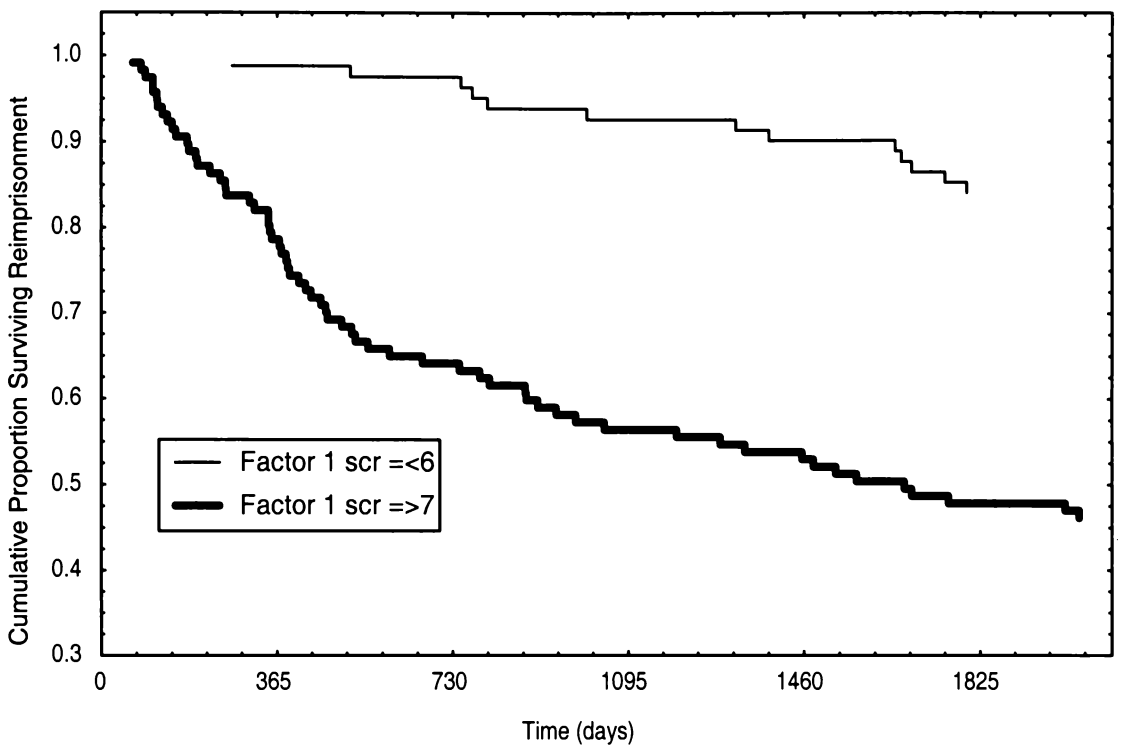

Figure 4.10. Group comparison of cumulative proportion surviving reimprisonment based on PCL:SV Factor 1 scores (low score group ≤ 6 and high score group ≥ 7)

Summary of Results

This summary is designed to aid the reader in consolidating the large number of results included in this chapter, with the discussion of their implications left until Chapter 6. This study set out to establish whether the PCL: SV was an effective predictor of reoffending resulting in reimprisonment for a NZ criminal population. The majority of the 199 men included in the study had been imprisoned for violent crimes, most were middle aged when released, with half identified by file information as of Māori descent, the majority of the rest were European. The sample had high mean scores for all three of the risk measures, with the distribution of the RoC*RoI and PCL: SV in particular showing a marked positive skew. All the measures correlated with each other and with the recidivism variables relating to time to reconviction or reimprisonment. Analysis of the reoffending by the sample for a five-year period found a high rate of reconviction (71%) and reimprisonment (38%), with the majority of recidivism occurring within two years of release. An examination of recidivism over time using survival analysis confirmed this pattern of serious reoffending within a relatively short time of release into the community. Survival analysis also confirmed that the reimprisonment group appeared stable in size after four years.

The ability of the study risk measures, and in particular the accuracy of the PCL: SV, in predicting serious recidivism was examined. Significant differences were found for all measures for the reimprisonment and non-reimprisonment groups. In addition, the reimprisonment group were found to be significantly younger with more

offenders of Māori descent. The score distributions from the risk measures were used to generate reimprisonment risk cut-off criteria taking into account the best balance between the false positive and false negative error rates. A PCL: SV total score of ≥ 16 (false negative error = 24%; false positive error = 32%) was recommended as the best cut-off criterion to identify those at higher risk of reimprisonment.

Discriminant function analysis was utilised to establish which of the measures were accurate predictors of those who were members of the reimprisonment and non-imprisonment groups. The best measures were the RoC*RoI and PCL: SV instruments, with the PCL: SV being a slightly better predictor variable in discriminating group membership. Cox proportional hazard analysis provided more evidence of the PCL: SV and RoC*RoI measures as significant predictors of reimprisonment when time to recidivism was taken into account. Splitting the reimprisonment sample into high and low risk groups based on mean RoC*RoI and PCL: SV scores produced clear graphic evidence of the differential for the higher risk group for higher percentage of serious recidivism and rate of reoffending. Finally, in relation to the accuracy of the instruments, ROC analysis was used to provide an estimation of measure accuracy. This found that both the RoC*RoI and PCL: SV had a high degree of predictive validity for serious reoffending, with both measures having an $AUC \geq .80$.

An analysis of the type of recidivism punished by reimprisonment for the sample confirmed the serious nature of the reoffending. The majority (79%) committed violent offences with 59% reimprisoned for very serious violent acts,

including several murders. Strong relationships were found between the RoC*RoI and PCL: SV measures and variables associated with recidivism regarded as serious (seriousness rating, actual sentence length, and time to offence). When the reimprisonment sample was split into violent and non-violent reimprisonment groups regression analysis revealed that RoC*RoI scores were significantly related to sentence length.

The only other significant relationship related to time to reimprisonment (r = -.41). Forward stepwise regression eliminated all risk measure variables except for PCL: SV Factor 1 scores that had a high correlation with time to reimprisonment, or, put another way, speed of violent recidivism.

In conclusion, this study has supported that the PCL: SV is able to predict reimprisonment with a high level of accuracy. It compared well to the current Corrections Department computer generated measure, the RoC*RoI which uses a number of static risk predictors sourced from computerised criminal history records. The PCL: SV, which has both static and dynamic variables, was found to be as accurate. In addition, the PCL: SV Factor 1 score was able to demonstrate a unique strong relationship with speed of violent recidivism. The ability of the PCL: SV to add value to the prediction of recidivism risk by supporting measures reliant on past criminal behaviour, provides further support for psychopathic personality as a valid predictor of reoffending.

The next study was designed to investigate the false positive error rate for the PCL: SV using the cut-off score of $\geq$ 16 established in this study. While the PCL: SV

was found to be accurate in predicting reimprisonment (usually for violence), and even speed of violent reoffending, the use of this measure as part of a structured decision making process by parole authorities demands that an effort is made to increase our knowledge about this error group to reduce error, and to learn from apparent rehabilitative success.

CHAPTER FIVE

PCL: SV False Positive Study

The previous chapter established that the PCL: SV has a high level of predictive validity in relation to recidivism resulting in reimprisonment. However, the use of this measure as part of a structured decision making process by parole authorities requires that accurate decision error rates are available for the cut-off scores used to classify high risk offenders. In particular, investigating the false positive prediction decision error rate group (scores of 16 or greater on the PCL: SV) from the validation study will enable reduced false classification of those at high risk. In addition, investigation of the false positive group allows research into these individuals' apparent rehabilitative success.

Method

Participants

The investigation into the false positive group study included all offenders from the PCL study database (*N*=199) assessed with a PCL: SV score of 16 or more (out of a score of 24). This was the cut-off criterion score recommended in the PCL: SV validation study as providing the best balance between the false positive and false negative error rates in predicting reimprisonment. All these offenders had been released by the New Zealand National Parole Board and, according to criminal record

information, were subsequently not reconvicted of an offence that received a sentence of imprisonment within five years of release (1825 days). In total there were 32 offenders who met these selection criteria.

Information from a variety of sources (Community Probation Service and Public Prisons Files; the Corrections Department computerised data base [Integrated Offender Management System; IOMS]; the electoral rolls; telephone directories; and the Department of Internal Affairs Births, Deaths and Marriages Register) was used to locate the study participants, thus enabling letters to be sent outlining the project aims and requesting their consent to participate in an interview and psychometric testing (Appendix D).

The Waikato University Human Ethics Committee approved the participant contact procedure. In total 81% of the sample was able to be located, including those who were found to have died after release from prison (confirmed by requesting copies of their death certificate). It should be noted that I was not able to gain access to Interpol or Internals Affairs information on those who may have left New Zealand since release. Table 5.1 indicates that 44% of those identified as "false positive' were interviewed.

Frameworks for reducing Māori offending (FReMO). The guidelines established in the FReMO model (McFarlane-Nathan, 1999) were followed in this study to ensure that the rationale, methodology, and implementation utilised

knowledge from Western scientific literature and Māori perspectives and Māori Tikanga. FReMO is a process by which Department of Corrections initiatives that have implications for Māori include consultation with appropriate stakeholders. Tikanga Māori refers to customary beliefs that reflect Māori approaches to understanding the world, organising social relationships, assessing problems, and generating decisions.

Table 5.1

Percentage of False Positive Sample Located and Interviewed

Contact with False Positive Sample (*N* = 32)	*N*	**% of total**
Located	26	81%
Not located	6	19%
Interviewed*	14	44%

*The five offenders deleted from the original false positive group were not contacted; this means that 67% of those true false positive subjects who were located agreed to be interviewed.

The FReMO consultation process was undertaken at an early stage of the project to ensure that the aims and procedures used were appropriate for Māori. The consultation took the form of a representative focus group (Māori staff from the Community Probation Service, as well as offenders convicted of serious offending and therapy staff from the Montgomery House Violence Prevention Programme). The focus group participants were provided with an outline of the FReMO process and the existing aims of the study and asked for their opinions (Appendix E). A summary of

the results of this consultation was produced and circulated to the focus group members to ensure their views were accurately recorded (Appendix F). This summary was used in finalizing the areas covered by the structured interview and in clarifying those areas for which I might not have had the necessary assessment skills.

Measures

Structured interview. The structured interview areas outlined below were based on the work of Zamble and Quinsey (1997) in examining recidivism and from consultation with the FReMO focus group. A full copy of the Structured Interview is contained in Appendix G.

Personal history:

- Age at release;
- School achievement (and problems);
- Stability (longest time): In same residence; same job; sexual relationship;
- Family members/friends with criminal history;
- History of psychological problems;
- Suicidal attempts or thoughts.

Criminal history:

- Total prior offences;
- Total violent prior offences;
- Age when first in trouble with the law;
- Security level prior to last release;

- Number of institutional misconducts during last period imprisonment;
- Sentence length, time in prison;
- Sentence type, determinate or indeterminate.

Lifestyle after release:

- Employment (both paid and voluntary);
- Marital/De facto status;
- Living in familiar residential area;
- Main source of income;
- Satisfaction with employment/income;
- Interpersonal functioning;
- Active associate/member of gang;
- Time spent in prosocial activities.

Parole period:

- Length of parole;
- Release conditions;
- Relationship with Probation Officer;
- Cultural/gender/age match with Probation Officer;
- Violation of release conditions.

Substance abuse:

- Frequency of drug use (days/month);
- Choice and number of drugs used;
- Frequency and quantity of alcohol use;

- Usual effects of alcohol use; (e.g., increases violence; social activity).

Post-release problems experienced and coping strategies:

- Specific problems plotted on a time line;
- Problem seriousness rating;
- Relationship between problems and feelings.

Cognitions (thoughts/beliefs):

- Rating of quality of life in the period following release;
- Confidence of success in preventing serious antisocial behaviour;
- Thoughts about reoffending on a time line covering at five-year period.

Offending following parole:

- Type of new offence and sentence received;
- Number of new offences;
- Days to first new offence following parole;
- Thoughts and behaviour and environmental events prior to reoffending;
- Coping strategies for stressors;
- Any particular factors believed to have assisted in the prevention of serious reoffending.

Cultural factors:

- Knowledge of cultural identity (protocols, language);
- Iwi/Hapu/Whanau support;
- Received treatment/therapy from traditional healer;
- Had spiritual experience.

Psychometric measures used in the interview. Psychometric data were collected from all the men interviewed using five instruments. These were employed to provide descriptive information about the participants especially in the areas of emotional functioning, risk of recidivism, and personality pathology. A brief summary is provided below of the psychometric instruments used in the study.

Level of Service Inventory-Revised (LSI-R)(Andrews & Bonta, 1995). This is a widely used instrument designed for probation and parole officers to aid decisions about the level of supervision offenders require in relation to their criminogenic risk/needs. The LSI-R uses collateral sources and interview information to source information that is then used to score 54 risk and need items in a zero-one format. The items are distributed across 10 sub-scales: Criminal History, Education/Employment, Financial, Family/Marital, Accommodation, Leisure/Recreation, Companions, Alcohol/ Drug Problems, Emotional/Personal, and Attitude/Orientation. The items included in the LSI-R are associated statistically and theoretically with criminal conduct, especially the 'Big Four' risk predictors; criminal history, antisocial personality, antisocial attitudes, and antisocial associates (Andrews & Bonta, 1998). The LSI-R total score can be used to calculate the individual's risk of reconviction over the next 12 months, with norms available for adult male and female offenders. Scores for needs-related scales (e.g., Financial) are used to identify areas that if addressed would reduce recidivism risk (see Appendix H).

The instrument has been used to assess change in risk for offenders attending criminogenic programmes (Andrews, 1982), and to assess general and violent recidivism risk in parolees (Rowe, 1996). The LSI-R has also been used to assess risk

in inmates diagnosed with psychiatric disorders (Harris et al., 1993), and to indicate those at higher risk of prison misconduct behaviour (Bonta & Motiuk, 1985).

Millon Clinical Multiaxial Inventory-Version III (MCMI-III) (Millon, Millon, & Davis, 1997). The MCMI-III is the updated version of a diagnostic personality assessment inventory designed for use with clinical and forensic populations. Each of the Axis II scales is an operational measure of a syndrome derived from personality theory and DSM-IV criteria, with Axis I scales reflecting how the individual's interpersonal style may be expressed in acute/chronic clinical disorders. The MCMI-III consists of 175 items scored true or false by the respondent and that load onto 11 basic personality scales, 3 severe personality styles (e.g., Schizotypal), 7 clinical syndrome and 3 severe clinical syndrome scales (e.g., Major Depressive Disorder). In addition, there are modifying indices scales that assess response validity and the individual's level of disclosure, desirability, and debasement, to pick up possible respondent bias. The MCMI-III uses base rate (BR) scores to provide diagnostic clinical cut offs to indicate presence (BR 75) and prominence (BR 85) of the various personality traits and clinical syndromes. Normative information is available for male and female cases from 19 to 88 years of age with a number of the cross validation sample for the development of the MCMI-III being correctional inmates (Millon et al., 1997) (see Appendix I).

The MCMI-III has been used extensively in establishing personality pathology in criminal populations with Millon recognising the need to assess tendencies towards domination, impulsive acting out, rage, and brutality. Research has established the ability of the MCMI-III to assess personality and mental health problems in general

criminal populations (Retzlaff, Stoner, & Kliensasser, 2002; Nelson, 2002), addicts/alcoholics (Stiles, 2001), domestic violence perpetrators (Gondolf, 1999), and in the prediction of institutional misconduct (Kelln, Dozois, & McKenzie, 1998).

State Trait Anger Expression Inventory-2 (STAX-2) (Spielberger, 1999). The STAXI-2 is the latest version of a published instrument designed to assess the experience, expression, and control of anger. The STAXI-2 is based on the widely used first version of the instrument with the self-report items increased from 44 to 57. This increase in items was designed to provide assessment of the components of anger that relate to the evaluation of personality pathology. In addition, the STAXI-2 provides information on the contribution that anger may make to the development of medical conditions such as hypertension.

The questionnaire requires respondents to rate themselves on a 4-point scale that assesses either the intensity of their feelings now or how frequently they experience, express, or control their anger. The STAXI-2 has six main scales: State Anger (three sub-scales), Trait Anger (two subscales), Anger Expression-Out, Anger Expression-In, Anger Control-Out, Anger Control-In, and an Anger Expression Index (provides an overall measure of the expression and control of anger). The instrument only requires 12-15 minutes to complete and is designed for both genders with norms for three age groups: 16 to 19 years, 20-29 years, 30 to 39 years, and 40 years and older. The normative data were derived from the responses of more than 1,900 individuals from two populations: heterogeneous samples of normal adults, and hospitalised psychiatric patients (see Appendix J).

The STAXI has been used in a number of studies of violent antisocial men, for example, domestic violence (Barbour & Eckhardt, 1998), general offender and inmate populations (Foley, Hartman, Dunn, Smith, & Goldberg, 2002; Slaton, Kern, & Curlette, 2000), adolescent offenders (Swaffer & Epps, 1999), and male sexual offenders (Dalton, Blain, & Bezier, 1998). There are also many studies supporting the use of the STAXI with men from a variety of different cultures and ethnic groups, for example, African-American (Johnson, 1989) and Samoan men (Steele & McGarvey, 1996).

Behavioral Inhibition Scale/Behavioral Activation Scale (BIS/BAS)(Carver & White, 1994). The BIS/BAS is an experimental set of scales developed to measure dispositional sensitivities of the Behavioural Inhibition System [BIS] and Behavioural Activation System [BAS] related to the assessment of avoidant or approach behavioural patterns (see Appendix K). The existence of the two systems is based on Gray's work on neurological systems in regulating motivation and emotional influence on fear (avoidant) and appetitive (approach) behaviour (Gray, 1982, 1990). The scales developed by Carver and White (1994) were the result of a pool of items written to reflect either BAS or BIS sensitivity in regard to their role in generating emotional reactions. All 20 items are scored using a Likert-type format on a 4-point response scale. A BIS example of concern over a bad occurrence is "I worry about making mistakes" while an example for the BAS scale is "I go out of my way to get things I want". Factor analysis produced four scales: A BIS or punishment sensitivity scale and three BAS related scales, Drive, Fun Seeking, and Reward Responsiveness. BIS scale scores were found to be relatively independent to the BAS scales while the BAS

scales correlated closely (all above .75 in an un-rotated factor matrix) (Carver & White, 1994). The scales when tested produced data that was consistent with Gray's conceptual model with support for the BAS scales of Drive being strongest. The Drive items appear to measure reward dominant behaviour that has little regard for the rights of others.

Later research by Meyer, Johnson, and Carver (1999) used the BIS/BAS scales to identify individuals at risk for mood disorder. They found that high BAS scores accounted for 27% of current mania symptoms, while BIS sensitivities were related to symptoms of depression.

Interpersonal Measure- Psychopathy (IM-P) (Kosson, 1997). The IM-P is an experimental measure of the interpersonal aspects of psychopathy that are captured by the PCL instruments as Factor 1 items. It was designed to provide a more objective record of these distinctive interpersonal features by providing simple event labels written to achieve an intermediate level of specificity (e.g., "Unusual calmness and ease" indicated by reclining in a chair to an unusual degree, or walking around the room during the interview) (see Appendix L). Items were selected from a review of the literature addressing interpersonal behaviour associated with psychopathy, a survey of current experts in the field and the author's clinical judgement. Twenty-one items were found to be sufficiently reliable when items were rated on a 4-point scale (0-3) (Kosson, Steuerwald, Forth, & Kirkhart, 1997). The instrument was designed to be used usually in conjunction with the PCL instruments being filled out by the interviewer after the PCL was scored. Little formal training is required for the IM-P as

the rater is simply instructed to observe interpersonal processes, distinctive behaviours, and interactions.

While only limited research has been carried out into the validity of IM-P scores, Kosson et al. (1997) found that ratings correlated highly with Factor 1 scores from the PCL-R with a US sample of adult Federal prison inmates (r = .62). In addition, IM-P scores have been linked to the prediction of violent behaviour, especially high rate behaviours such as inmate fights. While the number of studies to date are small and the results tentative, many of the interactional measures related to psychopathy also appear to be related to the construct measured by the IM-P (Kosson, Gacono, & Bodholt, 2000).

Procedure

Arrangements were made to meet with all those who agreed to participate in the interview and psychometric evaluation. These interviews took place in the area in which the participant currently resided and at a location of his choice. Often this meant the interview took place at their home and on occasion involved their partner or a support person. A small koha[1] was given to participants to acknowledge the time and inconvenience involved in the assessment process. The structured interview and administration of the psychometric instruments took an average of three hours to complete.

As soon as possible after the interviews, I made audio taped comments on my impressions on the participant and their home environment if applicable. Often the

surroundings conveyed as much pertinent information as the actual interview. These taped notes were made to ensure that all relevant information relating to the areas contained in the structured interview was included and to allow a 'debrief' of the interview process. The tapes were recorded after the interview and destroyed following the addition of relevant information to the structured interview data. In addition, the *Interpersonal Measure- Psychopathy* (IM-P) was completed by the interviewer as soon as possible after the interview based on the interpersonal behavioural display of the participant.

[1] Māori term for gift showing respect. In the present study this consisted of a $20.00 petrol voucher

Results

Descriptive Statistics

The offenders placed into the false positive group during the PCL: SV validation study had a mean age of 34 years of age when released (*SD*. 7.7: Range 23-54). Group member's ethnicity was recorded as 44% Māori and 56% non-Māori. The majority of the group had served a sentence of imprisonment prior to release for committing a violent crime (see Figure 5.1). The majority of the false positive sample (91%) was reconvicted for an offence that did not result in reimprisonment (see Figure 5.2) following release from prison. The false positive sample took longer to reoffend (M = 1116 days) to reoffend compared to the reimprisonment group (M = 253 days).

Were they actually false positives? When the sample was followed up in more detail it was found that two of the 32 PCL study offenders classified as false positive because of non-reimprisonment during a five-year period post release had died[2] during this period. As such, they no longer met the study criteria to be viewed as false positive. It is noted that both offenders had been reconvicted for minor offending and had died within 18 months of release on parole.

The reoffending records for the other members of the false positive group were examined as part of tracing their current whereabouts. During this exercise it was

[2] Application was made to the Coroners Court to obtain the death certificates for these two men and the causes of their demise were listed as in the first case; motor vehicle accident and in the second; virus causing heart failure.

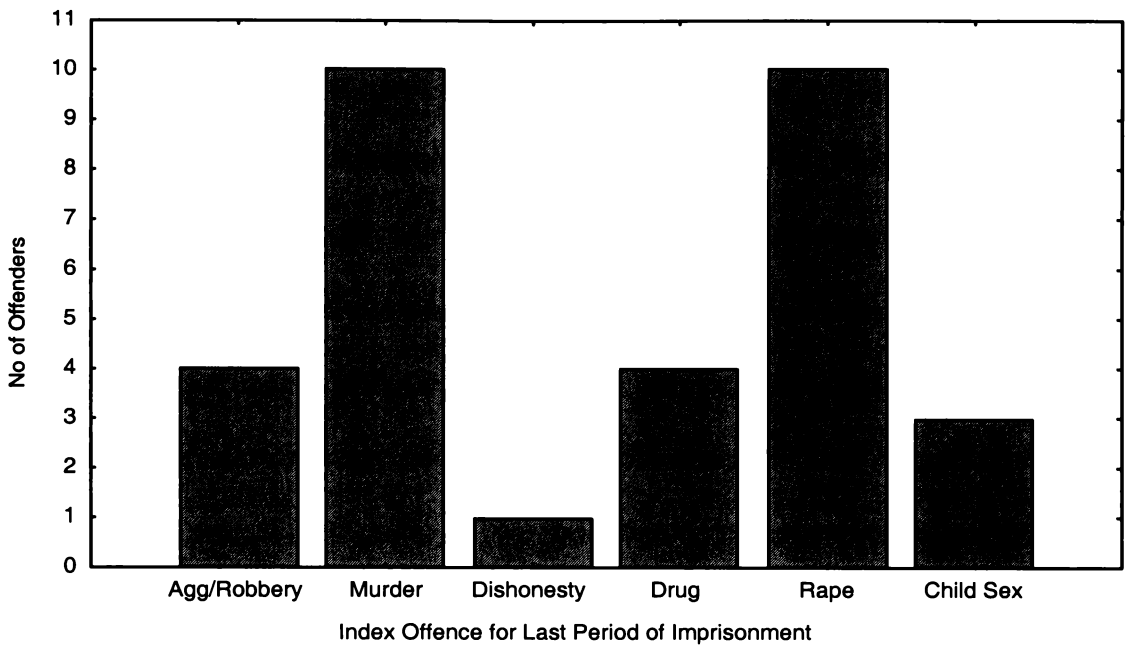

Figure 5.1. Distribution of index imprisonment offences for the false positive group ($N = 32$)

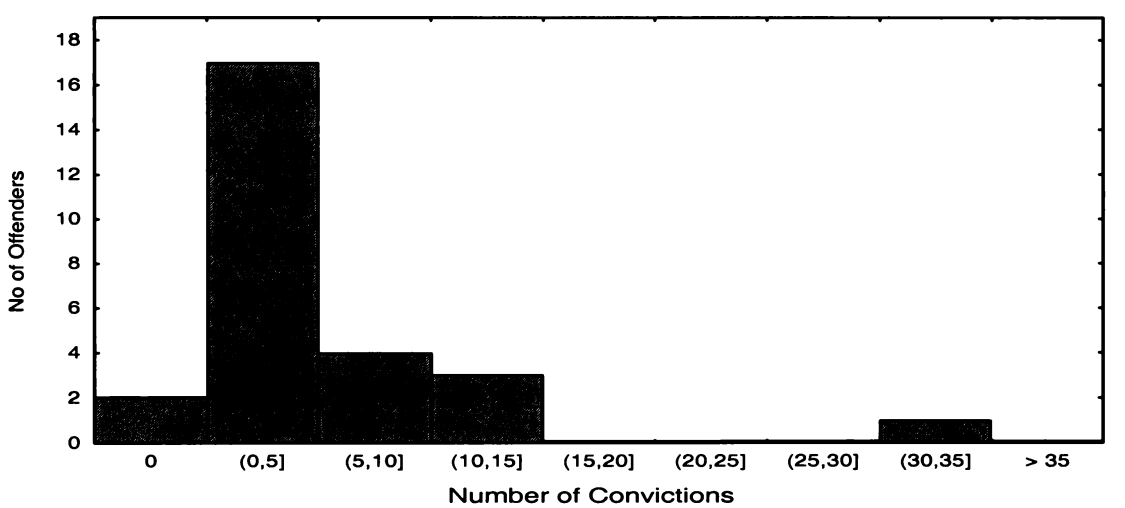

Figure 5.2. Frequency of reconviction for offenders classified in the 'false positive' error rate group ($N = 32$)

found that one of the group appeared to have 'disappeared' from the criminal history records. Enquiries aimed at locating this offender's Community Probation file were not successful, as the Police had removed the file from the local office. Further investigation revealed that this offender had entered the Police Witness Protection Programme and had actually served a further sentence of imprisonment during the five years after release under a different name. Again, this individual no longer met the criteria for the false positive group. No further contact was initiated with this man in the interests of protecting his safety. Two further group members were also identified as having been reimprisoned within the five-year period, one being on remand for a period of a year awaiting trial, and one being recalled to serve his remaining sentence of imprisonment. These errors were not picked up in the initial PCL: SV study analysis of computerised criminal records. Taking account of this extra information reduced the false positive group down to a 'real' false positive sample size of 27 rather than the original 32 offenders.

The PCL: SV validation covered in Chapter 4 recommended a total PCL: SV score of 16 and above as the best balance between false positive error (32%) and false negative decision error (24%) (see Table 5.2). When the original data were re-analysed using the revised estimate of who can actually be classified as high risk but not reimprisoned (n = 27), the error rate changed (see Table 5.3). The false positive decision error rate using a PCL: SV total score of 16 reduced to 24% from 32%. The false negative rate remained unchanged at 24%. This meant that 76% of offenders who were not reimprisoned within five years and 76% of those who were sent back to

prison within this time period were identified by a PCL: SV cut off score of 16 and above. A full list of the PCL: SV decision error rates is contained in Appendix M.

Table 5.3 indicates that if the recommended cut off of 16 was changed to a PCL: SV score of 13 and above, then the false negative rate (those missed who later seriously reoffend) reduced to 13% and the false positive rate increased to 49%. In other words an increase in predictive accuracy for the reimprisonment group to 87% but with almost half of those who were not reimprisoned falsely classified as high risk. If the PCL: SV cut-off score of 16 was increased to a score of 20 this produced a low false positive risk error rate of 14%. However, using this score also produced a false negative decision error rate of 49%, in other words failing to accurately classify as high risk almost half those who were subsequently reimprisoned.

Table 5.2

Percentage Positive and Negative Decision Error in Predicting Reimprisonment From Original PCL: SV Validation Study

PCL: SV Cut-off Scr	Predict Reimpr	Predict Non-Impr	False Negative	False Positive
13	88	52	12	48
16	76	68	24	32
20	50	82	50	18

Table 5.3

Percentage PCL: SV Positive and Negative Decision Error in Predicting Reimprisonment Based on Revised Recidivism Information

Cut off	Predict Reimpr	Predict Non-Impr	False Negative	False Positive
13	87	51	13	49
14	84	64	16	36
15	78	72	22	28
16*	76	76	24	24
17	70	80	30	20
18	65	81	35	19
19	59	84	41	16
20	51	82	49	14

*Note a PCL: SV total score of 16 or more was viewed as the best 'balance' between the error rates.

Was the false positive group actually at high risk for recidivism? The false positive group while classified as high risk based on their PCL: SV total score of 16 and above (see Table 5.4), had a significantly ($p < .05$) lower total score mean than the main reimprisonment group selected using this cut-off score. The group was also assessed with two other actuarial measures of risk, the RoC*RoI, and the RAI. Table 5.4 indicates, that based on RAI score, no significant difference in risk existed between these two groups (Reimprisonment $M = 60.9$; False Positive $M = 57.8$; *ns*). However, the RoC*RoI score clearly differentiated between the groups, displaying a significantly higher risk score for the reimprisonment group (Reimprisonment $M = 0.79$;

False Positive $M = 0.62$; $p < .001$).

The distribution of PCL: SV scores for the revised false positive group and actual reimprisonment group clearly shows that those with higher scores for the PCL: SV were more likely to be reimprisoned. It is noted that no one in the reimprisonment group scored less than 7 on the PCL: SV. Distribution tables for the PCL: SV scores for the groups can be found in Appendix M.

Reoffending by the false positive group. The false positive group were reconvicted of a large variety of further offences not punished by further reimprisonment. In fact, at the time of writing, two members of the revised false positive group were awaiting sentencing for yet further reoffending, with reimprisonment the recommended sentencing option for both. Figure 5.2 shows the frequency of reoffending by this group since release. The majority had more than one further conviction but at least one group member had been convicted of 32 further offences since his release without receiving a sentence of imprisonment. The evidence of continued offending after release supported the view that the false positive group had not falsely identified as being at high risk of recidivism after release. However, to assess if the group had in fact been falsely identified as at high risk of serious reoffending leading to reimprisonment, the LSI-R was administered to the interview sub-sample. This instrument is based on both static and dynamic risk predictors.

Table 5.4

RAI, RoC*RoI, and PCL: SV scores for Reimprisonment and False Positive Group for Offenders with a PCL: SV Total Score ≥ 16

	Reimprisonment Group (N = 64)		False Positive Group (N = 32)	
Variables	***M (SD)***	**Range**	***M (SD)***	**Range**
RAI	60.9 (*18.0*)	22.2-97.2	57.8	22.4-80.4
RoC*RoI	0.79 (*.19*)	0.21-1.0	0.62**	0.18-0.87
PCL: SV	20.5 (*2.3*)	16-24	19.5*	16-24

*$p < .05$

**$p < .001$

The LSI-R risk ratings for the false positive participants (see Figure 5.3) who were interviewed (n = 14) indicated only one participant with a rating of low predicted recidivism risk (percentage risk of being reconvicted within 12 months). All the other participants based on their LSI-R scores were assessed as having high risk and criminogenic needs requiring intensive levels of service from Correctional personnel in secure settings or close supervision. This assessment of high risk was made for all those who were interviewed. The information used to rate the LSI-R items included all relevant data up until the time of interview, thus incorporating the period they had spent in the community since release. This is in contrast to their PCL: SV score, which was only based on information up until the time of their release from prison.

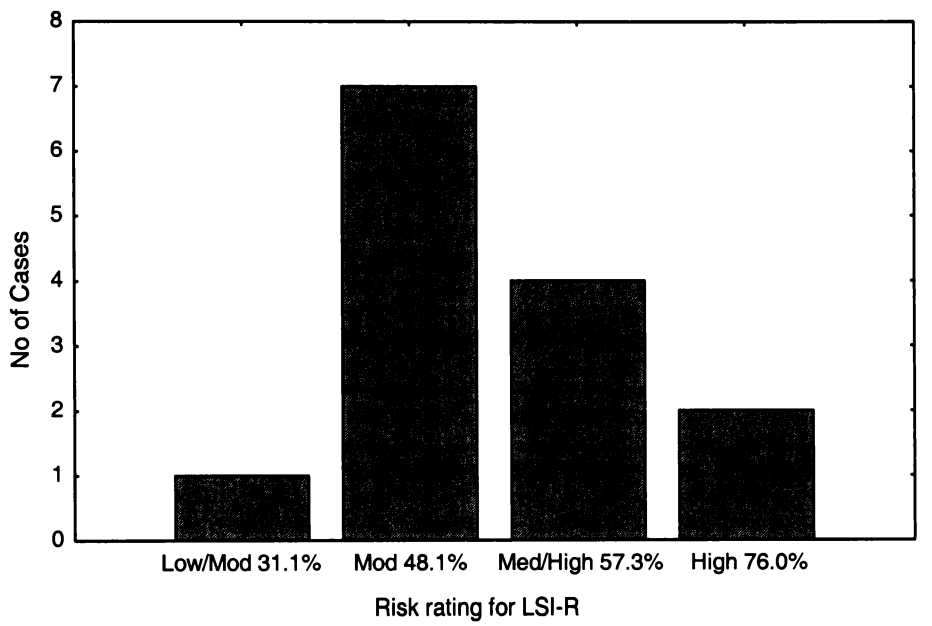

Figure 5.3: LSI-R risk ratings for false positive interview group (n = 14)

The mean scores for the interview group on the LSI-R were compared to a Canadian Federal inmate sample (see Table 5.5). The majority of the comparison sample was made up of repeat male offenders who were imprisoned for serious violent offences (robbery and assault, 59%, murder, 19%), serving an average of six years in prison, with a mean age of 30 years at release. There was only one significant difference ($p < .001$) for the LSI-R component, *Companions* (antisocial). The false positive interview group having a higher mean score than the Canadian sample.

Table 5.5

Group Comparison of Level of Service Inventory-Revised (LSI-R) Scores for the False Positive Interview and Canadian Federal Inmate Samples

	Group			
	False Positive Interview (n=14)		**Canadian Federal Inmates (N = 285)**	
LSI-R Component	***M***	***SD***	***M***	***SD***
Criminal History	7.6	1.0	7.14	1.9
Education/Employ	7.1	2.4	6.45	2.6
Finance	1.3	0.8	1.23	0.7
Family/Marital	2.4	0.7	1.67	1.1
Accommodation	0.8	0.9	1.27	1.0
Leisure/Recreation	1.3	0.8	1.54	0.7
Companion	3.8*	0.9	2.51	1.0
Alcohol/Drug	3.8	1.8	3.90	2.9
Personal/Emotional	1.9	1.2	1.70	1.3
Attitude	1.9	1.3	2.00	2.2
Total Score	31.9	7.4	29.30	7.7

*$p < .001$. Note. Canadian Federal inmate sample from Simourd & Hoge, 2000

Structured Interviews

All interview participants completed the interview and psychometric protocol and said they welcomed the chance to take part in the study. Many stated they hoped that discussing their life since release would provide information that could be used to improve the 'system'. Many of the participants felt that they had been able to 'beat the system' by not returning to prison. They were forthright in their views that the Department of Corrections had played little or no role in their apparent success in not being reimprisoned after serving long sentences.

While they were suspicious of the system without exception they were open with me about their thoughts and behaviours with little attempt made to hide difficulties through impression management. However, my experience in interviewing a wide range of offenders both as a Policeman and in my current role as a Clinical Psychologist in the correctional field meant I was not naïve to their lifestyle. My clinical experience was of value when offending was discussed, as I was able to challenge distortions. The interviewees stated that they enjoyed being able to talk with someone who knew what they had done but did not make judgements. Many of the men had not disclosed their previous offending or the seriousness of their convictions to those around them making this a rare opportunity to discuss the past. While discussions focused on the structured interview schedule the need to build rapport meant that conversations were held on a variety of subjects relating to the legal system and the interviewees life. At least one man later contacted me for advice on a personal issue and many more commented during the interview sessions that they had found the experience a positive one.

Descriptive information. The participants who agreed to be interviewed had a mean age of 46.7 years (range 33-65) with 27% identifying as Māori and 73% as European. Their index offences included drug dealing (18%), murder (54%), and sexual offending (27%). The vast majority of the group had been reconvicted since release (91%). Their reoffending while not judged sufficient to impose further imprisonment had included offences such as Burglary, Excess Blood Alcohol, Male Assault Female, Possession of Morphine, and Assault with a Weapon. The most common reoffending committed by this group was driving while intoxicated. Those who did not agree to interview did not differ significantly on variables such as age, ethnicity, index offence, or further reconviction following release.

Psychometric Results

Level of Service Inventory- Revised. All interviewed participants were administered this structured risk assessment instrument. While the sample was small, Table 5.6 indicates that significant correlations were found between some of the LSI-R items. Notably, positive correlations were found between LSI-R scales *Criminal History*, *Education/Employment*, and *Accommodation*. Therefore, a high score on criminal history items related to unsatisfactory education/employment outcomes and poor accommodation. Also a significant positive correlation was found between scales *Family/Marital, Finance* and *Education/Employment* indicating a relationship between scores indicating unsatisfactory marriage type relationships and prosocial family support and difficulties with finances and education/employment outcomes.

Table 5.6

Correlations between Sub Scales on the LSI-R for all Interviewed Participants

LSI-R Domains	Crim/	Educ/Em	Finan	Fam/M	Accom	Leis/Re	Antis/C	Sub/Ab	Men/H	Antisoci
Criminal/Hist	1.00	---	---	---	---	---	---	---	---	---
Education/Empl	0.68*	1.00	---	---	---	---	---	---	---	---
Finance	0.59	0.71*	1.00	---	---	---	---	---	---	---
Family/Marital	0.49	0.61*	0.57	1.00	---	---	---	---	---	---
Accommodation	0.67*	0.40	0.40	0.23	1.00	---	---	---	---	---
Leisure/Recre	0.40	0.24	0.43	0.32	0.40	1.00	---	---	---	---
Antisocial/Comp	0.25	0.22	0.19	0.01	0.13	0.29	1.00	---	---	---
Substance Abuse	0.18	-0.01	-0.02	0.09	0.07	0.54	-0.06	1.00	---	---
Mental Health	0.57	0.47	0.27	0.23	0.38	0.42	0.04	0.47	1.00	---
Antisocial/Attitu	0.39	0.35	0.31	0.43	0.59	0.16	0.39	-0.04	-0.15	1.00

*$p < 0.5$

Emotional and Interpersonal Functioning

BIS/BAS Scale, STAXI-II, and ***IM-P.*** The small sample size meant that scores from these instruments should not be viewed as representative, they are reported here as descriptive only of the interview group. Scores for the BIS/BAS scale (see Table 5.7) revealed only low scores for the BIS scale (anxious/inhibited) ($M = 6.8$; $SD = 4.1$) with higher scores for the BAS total (impulsive/reward dominant) scale. The distribution for total BAS scores ($M = 27.07$, Range 20-43, $SD = 6.4$) revealed that all interview participants scored highly on this scale that was related to reward dominance with a small group of four assessed with scores in the top quarter (see Appendix N). The study ($N = 732$) detailing the development of the BIS/BAS scales used college

students and reported a BIS mean of 19.99 (*SD* = 3.79) and a BAS mean of 14.0 (*SD* = 2.25) (Carver & White, 1994).

Table 5.7

Distribution of BAS/BIS Scores for the False Positive Interview Group

BAS/BIS Scores (*n* = 14)				
Variables	***M***	**Minimum**	**Maximum**	***SD***
BIS Score	6.8	2	15	4.1
BAS – Drive	8.4	1	16	3.4
BAS – Fun Seek	10.1	6	16	2.8
BAS – Reward	7.0	5	11	1.5
Total BAS	27.0	20	43	6.4

The scores for the STAXI-2 indicated that the interview group had mean scores indicating no significant difficulties (all around the 50th percentile for normal males ages 30 and over: Spielberger, 1999) with anger state, or trait, or in the expression and control of anger (see Table 5.8). The STAXI-2 manual indicates that scores over the 75th percentile should be viewed as significant (Spielberger, 1999). The STAXI-2 revealed several members (*n* = 4) of the interview group had scores over the 70th percentile for the AX-O scale, which measures how often a person controls the outward expression of angry feelings. High scores for this scale are indicative of individuals who frequently express their anger in aggressive behaviour directed towards other persons or objects in their environment.

Table 5.8

Distribution of STAXI-2 Scores for the False Positive Interview Group (n = 14)

Variables	*M*	Minimum	Maximum	*SD*
S – ANG	16	15	22	1.9
S – ANG/F	5	5	5	0.0
S – ANG/V	5	5	5	0.3
S – ANG/P	5	5	5	0.0
T – ANG	17	10	24	3.7
T – ANG/T	6	4	11	2.0
T – ANG/R	8	4	11	2.1
AX – O	14	9	21	3.0
AX – I	16	12	21	3.0
AC – O	24	14	31	5.6
AC – I	23	15	31	5.5
AX – INDEX	31	12	45	9.6

The Interpersonal Measure-Psychopathy (IM-P) scale (Kosson, 1997) has no norms for New Zealand criminal populations and is only interpreted in this study in a descriptive fashion due to the small sample size (*M* = 11.4, *SD* 9.9). The distribution of scores ranged from 1 through to a high of 31 for the interview participants and revealed two main groups (see Appendix O). The IM-P graph in Appendix O reveals a small group of three participants with very high scores. The three participants with high IM-P scores (24, 26, and 31) also had medium/high LSI-R risk ratings.

MCMI-III results. All of the interview respondents who completed the MCMI-III assessments produced valid profiles. The score range from the MCMI-III modifying indices (see Table 5.9) revealed no cases reached prominence (BR 85), indicating no test bias for the Disclosure, Desirability, or Debasement scales. The lack of social desirability bias measured by the Desirability scale is important to note when considering the responses by those interviewed to other instruments included in the psychometric battery. Such bias is usually related to lower than expected scores on instruments such as the STAXI. While several of those interviewed indicated prominent elevations on the Clinical Personality Pattern scales, Narcissistic (n = 2), Antisocial (n = 2), Compulsive (n = 1) and Passive-Aggressive (n = 2), no significant elevations were revealed for the Severe Personality Pathology scales. The mean Base Rate scores in Table 5.9 confirm that over all as a group no presence of personality patterns, pathology, or clinical syndrome. An examination of scores for the Clinical Syndrome scales indicates only one case with a prominent elevation for the Alcohol Abuse scale with no cases having high scores for the Severe Syndromes scales.

Correlations Between Risk and Interview Psychometric Measures

Pearson product moment correlations were carried out with the PCL: SV validation sample risk measures (PCL: SV, RoC*RoI, and RAI), and all psychometric measures administered as part of the interviews. Table 5.10 presents correlations between the study risk measures, as well as the IM-P and LSI-R full and sub-scale score. Aside from the expected high significant correlations between the PCL: SV and factor scores, Factor 1 had the highest correlation (r = .77).

Table 5.9

MCMI-III Scores for the False Positive Interview Group (*n* =14)

Modifying Indices	*M BR*	Minimum	Maximum	*SD*
Disclosure (X)	61	34	75	12
Desirability (Y)	70	55	84	11
Debasement (Z)	51	38	69	11
Clinical Personality Patterns				
Schizoid (1)	67	36	80	12
Avoidant (2A)	55	12	83	20
Depressive (2B)	59	20	84	20
Dependent (3)	44	20	80	18
Histrionic (4)	48	30	64	10
Narcissistic (5)	60	37	115	21
Antisocial (6A)	66	22	85	20
Sadistic/Aggressive (6B)	55	9	78	20
Compulsive (7)	56	41	91	13
Passive Aggressive (8A)	58	22	100	22
Self-Defeating (8B)	46	0	77	28
Severe Personality Pathology				
Schizotypal (S)	52	20	76	20
Borderline (C)	39	0	75	24
Paranoid (P)	56	0	81	25
Clinical Syndromes				
Anxiety (A)	50	0	80	30
Somatoform (H)	45	0	75	24
Bi-Polar (N)	53	0	72	27
Dysthymia (D)	47	0	79	27
Alcohol Abuse (B)	63	45	92	15
Drug Dependence (T)	61	30	75	11
PTSD (R)	45	15	63	20
Severe Clinical Syndromes				
Thought Disorder (SS)	46	0	63	24
MDD (CC)	33	0	67	26
Delusional Disorder (PP)	48	0	70	31

The PCL: SV Factor 2 score was negatively correlated with the LSI-R sub scale, *Emotional/Personal* distress (r = -.61), with this indicating that higher scores on Factor 2 meant lower scores for emotional and personal distress. The IM-P was found to only correlate significantly with one other variable, Attitudes/ Orientation (r = .55). Indicating that higher scores on the IM-P related to higher ratings of procriminal attitudes and orientation. The LSI-R sub scales as expected had moderate to high correlations with each other.

Table 5.11 describes the correlations between the BAS/BIS scales, STAXI-2 trait scales, and the MCMI-III personality scales. As expected, high internal correlations were found between the various scales. The BIS scale had negative correlations with MCMI-III scales, Schizoid, Avoidant, and Sadistic/Aggressive, and the BAS scales correlated with negatively with Antisocial and STAXI-2 Trait-Anger, and positively with Compulsive. The small sample size meant that a number of reported inter-relations between variables were not statistically significant.

Qualitative Results

The qualitative results are based on the structured interview outlined in the method section of this study. The small sample meant that only descriptive results can be presented based around a number of common lifestyle choices and beliefs that appeared related to their relative prosocial behaviour after release from prison. The interview areas relating to interactions with Probation Officers and antecedents to recidivism did not elicit enough detail to formulate any common themes.

Table 5.10

Correlations Among Risk Measures for the Interview Group

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. PCL:SV	---																	
2. Factor 1	0.77*	---																
3. Factor 2	0.58*	-0.06	---															
4. RoC*RoI	-0.12	-0.30	0.19	---														
5. RAI	0.03	-0.22	0.37	-0.04	---													
6. IM-P	0.11	0.24	-0.08	-0.29	0.22	---												
7. Criminal Hist	0.02	-0.31	0.48	0.30	0.24	0.02	---											
8. Educ/Employ	-0.10	-0.32	0.31	0.01	0.51	0.27	0.69*	---										
9. Financial	-0.26	-0.24	-0.04	0.18	0.37	0.04	0.59*	0.71*	---									
10. Family/Marital	-0.14	-0.25	0.17	-0.02	0.38	0.51	0.49	0.61*	0.57*	---								
11. Accommodation	0:17	0.16	0.11	0.39	-0.08	0.30	0.68*	0.41	0.40	0.24	---							
12. Leisure/Lifestyle	0.08	0.02	0.17	-0.04	-0.09	-0.03	0.41	0.25	0.44	0.32	0.40	---						
13. Antisocial Comp	-0.30	-0.25	-0.13	-0.01	0.22	-0.22	0.25	0.23	0.19	0.01	0.13	0.30	---					
14. Alcohol/Drug	0.13	-0.03	0.31	0.12	-0.36	-0.15	0.18	-0.01	-0.02	0.10	0.08	0.55*	-0.07	---				
15. Emotional/pers	-0.20	-0.61*	0.48	0.50	0.04	-0.10	0.58*	0.47	0.27	0.23	0.39	0.42	0.04	0.48	---			
16. Attitudes/Orient	0.09	0.27	-0.12	-0.03	0.29	0.55*	0.40	0.36	0.31	0.44	0.60*	0.17	0.39	-0.04	-0.15	---		
17. LSI-R Total Sc	-0.06	-0.27	0.33	0.21	0.25	0.20	0.84*	0.80*	0.69*	0.63*	0.66*	0.64*	0.36	0.40	0.64*	0.52	---	
18. LSI-R Risk Rate	0.07	-0.14	0.35	0.21	0.11	0.11	0.76*	0.71*	0.47	0.40	0.72*	0.63*	0.46	0.40	0.63*	0.49	0.92*	---

*$p < .05$, $n = 14$ (Casewise deletion of missing data)
Note. Variables 7-16 are LSI-R subscales

Table 5.11

Correlations Among BAS/BIS, STAXI-2, and MCMI Personality Scales for Interview Group

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1. BIS	---																						
2. BAS-Drive	0.11	---																					
3. BAS-Fun Seek	-0.01	0.74*	---																				
4. BAS-Reward	0.17	0.74*	0.66*	---																			
5. BAS Total	-0.09	0.84*	0.83*	0.76*	---																		
6. T-Anger	-0.44	-0.68*	-0.84*	-0.58*	-0.67*	---																	
7. T- Anger Temp	-0.19	-0.49	-0.67*	-0.47	-0.36	0.66*	---																
8. T- Anger Reaction	-0.53	-0.41	-0.47	-0.32	-0.42	0.71*	0.09	---															
9. Anger Exp Index	-0.12	-0.32	-0.53	-0.65*	-0.37	0.48	0.72*	0.14	---														
10. Schizoid	-0.54*	-0.13	0.00	-0.20	-0.19	0.21	-0.11	0.51	0.05	---													
11. Avoidant	-0.67*	0.19	0.12	0.06	0.12	0.12	-0.02	0.37	-0.03	0.67*	---												
12. Depressive	-0.50	-0.28	-0.42	-0.29	-0.18	0.61	0.65*	0.36	0.66*	0.13	0.34	---											
13. Dependent	-0.34	0.15	-0.25	-0.17	-0.16	0.37	0.27	0.44	0.51	0.50	0.61*	0.41	---										
14. Histrionic	0.28	-0.10	0.05	0.23	0.10	-0.04	0.03	-0.2	-0.09	-0.44	-0.56*	0.14	-0.60*	---									
15. Narcissism	0.45	-0.11	0.11	0.13	-0.09	-0.15	-0.20	-0.05	-0.25	-0.14	-0.29	-0.13	-0.41	0.63*	---								
16. Antisocial	-0.30	-0.27	-0.59*	-0.32	-0.29	0.72*	0.50	0.59*	0.57*	-0.08	-0.04	0.52	0.44	0.03	-0.31	---							
17. Sadistic-Aggre	-0.56*	-0.43	-0.52	-0.29	-0.39	0.82*	0.51	0.73*	0.28	0.32	0.44	0.56*	0.49	-0.16	-0.08	0.63*	---						
18. Compulsive	0.24	0.55*	0.62*	0.58*	0.60*	-0.64*	-0.33	-0.69*	-0.42	-0.12	-0.12	-0.25	-0.46	0.43	0.26	-0.64*	-0.62*	---					
19. Passive-Aggre	-0.36	0.16	-0.05	0.06	-0.08	0.30	-0.04	0.51	0.13	0.53	0.61	0.28	0.69*	-0.17	0.02	0.41	0.58*	-0.23	---				
20. Self-Defeating	-0.30	0.32	0.11	0.20	0.06	0.09	-0.04	0.17	0.11	0.51	0.66*	0.39	0.61*	-0.04	0.06	0.06	0.31	0.18	0.83*	---			
21. Schizotypal	-0.59*	0.01	-0.10	-0.05	-0.00	0.36	0.24	0.3	0.30	0.37	0.64*	0.81*	0.39	0.04	-0.11	0.23	0.48	0.05	0.52	0.70*	---		
22. Borderline	-0.25	-0.05	-0.41	-0.14	-0.29	0.43	0.26	0.39	0.45	0.40	0.32	0.38	0.73*	-0.20	-0.42	0.59*	0.34	-0.35	0.63*	0.56*	0.34	---	
23. Paranoid	-0.52	-0.10	0.11	-0.08	-0.09	0.20	-0.18	0.42	-0.13	0.76*	0.62*	0.27	0.18	-0.08	0.21	-0.18	0.40	0.12	0.50	0.55*	0.64*	0.00	---

*$p < .05$, $n = 14$ (Casewise deletion of missing data)

Examples of the backgrounds and present living situations of the interview participants are described in Table 5.12. The four examples represent a range of different index offences and reintegrative outcomes. However, all have childhoods characterised by abuse or hardship, with most having recorded criminal convictions as adolescents. The participants described in the examples are all over 40 years of age with this reflecting the lengthy sentences of imprisonment they served in prison.

While their PCL: SV total scores ranged from 16-24 most had higher Factor 1 scores than Factor 2. Noting that Factor 1 scores indicate interpersonal and affective deficits and Factor 2 socially deviant behaviour. Factor 1 scores have been found to remain stable as offenders' age while Factor 2 reduced (Harpur & Hare, 1994). The reduction in Factor 2 scores has been found to be most significant after 40 years of age. In relation to their reoffending after release, the examples reflect that most were reconvicted, usually for driving offences but also in the case of example 3, for violent reoffending, but did not receive another imprisonment sentence.

Geographic isolation. The geographic isolation of many of the interview group was not expected prior to this project. It should be noted that many of the difficulties experienced in contacting participants were due to such isolation from main population areas. The majority of the participants had been located in larger population centres prior to their last sentence of incarceration, however, after release from their last sentence many choose to relocate to smaller centres, usually in country areas.

Table 5.12

Brief Example Presentation of Four Interview Participants' Past and Present Lives, Criminality, and PCL:SV Scores

		Participants		
	Example 1	Example 2	Example 3	Example 4
Past	Aged 10 when father died, mother supported family on widows benefit, often unsupervised, slow progress at school (3rd form). Came to attention of authorities from 15 years of age, alcohol problems as adolescent	Youngest of 13 children but isolated, the 'black sheep', loner, left school at 14 years of age, limited evidence behaviour problems, married at early age, no difficulties until association in late 20s with antisocial associates	Abusive childhood, parents said to be alcoholic and violent to each other and him, placed in children's home at 2 years of age, then variety of foster placements and sporadic placement back with parents, left school in 4th form.	Reported to have extremely hard upbringing, father abandoned family when he was young giving no financial support to family. Is said to have helped his mother cope, and to care for younger sisters. Left school at 16 years of age
Present	Now in late 40s, At time of interview living with defacto, on sickness benefit, poor ability to deal with stressors, few friends, has part custody two children former relationship, still has alcohol abuse difficulties, heavy involvement with church	Aged 65 years at time of interview, lives off investments, living with 23 year old defacto in very geographically isolated home, interacts socially with few friends,	In his early 40s when interviewed, living alone isolated in the country, has not worked since release, currently on ACC for motor bike injury, claims a small circle of friends, mainly women	In his fifties when interviewed, living in geographically isolated home with defacto, on sickness benefit (somatic complaints when stressed), has few friends, viewed by those around him as eccentric and difficult to deal with. ,
Criminality	First conviction at 14 years, frequent offending after this involving theft, assault, wilful trespass, burglary false pretences, up until he was convicted of murder when he was 30 years of age. It is noted that much of his offending was alcohol related. Since release one conviction driving while intoxicated	First conviction at age 29, then a number of offences, including firearms, burglary, assault, and dealing in class A drugs. He was imprisoned for a total of 10 years for drug dealing on large scale as part of international drug syndicate No evidence of serious reoffending since release but has a number of driving while intoxicated convictions (x4)	First conviction at 17 years of age, very frequent offending after this, involved assault, theft, offensive weapons, cheque fraud, attempted murder conviction when he was aged 23, and manslaughter when he was 28 years of age. Has offended violently after release using a weapon but not reimprisoned	Was convicted at 17 years of age of burglary, then number of EBA convictions and driving offences (including careless use causing death) before being imprisoned for a long period for multiple invasive sexual offences against his children, male and female, aged 9-14. Since release he has not been reconvicted of any offending
PCL: SV	Total = 16; F1 = 6, F2 = 10	Total = 17; F1 = 10, F2 = 7	Total = 24; F1 = 12, F2 = 12	Total = 18; F1 = 11, F2 = 7

A good example of geographic isolation was provided by Case 5 with my notes at the time recording the following:

> "Lives in XXXX way up past XXXXXX up in the hills. Quite a business to drive there. I was under instructions from him to ring him on my mobile phone when I got to the end of this gravel road which ended at a river. When I did he came out of the bushes on the other side of the road and instructed me to walk along the river bank until I came to a hidden rickety swing bridge that went across the river to his home on the other side."

In total just over 57% of those interviewed resided in an isolated area, defined in this case as being in a town of less than 1,000 residents or living in the country, in all cases by choice. These geographically isolated participants all stated that this isolation helped them in not reoffending by allowing them to reduce environmental stressors and contact with antisocial friends and family. An example from interview notes for Case 1 provides evidence of how this isolation reduced risk:

> "He explained, that he had a job at some stage where he was doing electrical repairs and he couldn't deal with the public because the public is always right and he couldn't handle that. That was backed up by some difficulties with road rage (partner stated this). He gets very angry when people cut him off and follows them etc, and he confirmed this. He said he was quite impulsive and gets very angry. He had insight that this was a risk factor for him. Both he and his partner saw it as something he needs to work on. Most of other risk factors are under control, mainly he had distanced himself from anti-social associates and family, he has built a lifestyle where his contact with others is minimised that he is able to do his own thing."

Isolation from antisocial peers. The previous section on geographic isolation emphasised that this strategy allowed many of the men to reduce/stop contact with antisocial friends and family. In many cases this isolation involved considerable personal sacrifice from the study participants. Several had moved over 1,000

kilometres from family and friends. The strategy of avoidance of antisocial influences applied to most of the men rather than just those who were geographically isolated, with 78% of those interviewed stating that they no longer associated with former criminal friends or family. A good example of this strategy of avoiding antisocial associates came from the interview notes for Case 3:

> "Main strategy for keeping himself safe seems to be avoidance or escape. Avoidance of criminal associates. In part because he actually has no respect for them and over his time in prison he saw them as actually quite weak and yet if he continued to offend he was part of that group. He even admitted that when he was in XXXX he was really doing it so as to get others to do his dirty work. Maybe over time people got to know him and know that he is only out for himself, so it was more difficult for him to maintain contact with criminal fraternities/groups. Two years ago tried to move back into town but first weekend back at party with antisocial associates involved in major gang fight (in which he broke another mans arm with a wooden club) and decided he needed to go back the isolation he enjoys in XXXX just to get himself back on track again."

The man mentioned above in Case 3 appears to have accepted the need to continue to isolate himself from his former antisocial associates. However, he was also open about the pressure he felt over no longer having access to previously rewarding activities as a result of his isolation.

Prosocial support. The participants indicated that the prosocial support in their lives was usually from heterosexual partners they had met either prior to release or after release from prison (64%). Table 5.13 lists the attributions the men interviewed provided as to why they had been able to prevent further serious reoffending. These comments reinforce the impact they believe prosocial partners had

in preventing recidivism. An example from interview notes of this strong reliance on partners comes from Case 1:

> "The salient factor in him being able to be prosocial appears to be his partner. They have been together for ten years, and even though they indicated some rockiness where they separated after three years, this relationship is a very important part of his life. Something that helps him deal with the frustrations of dealing with bureaucracy and the areas he has problems with and also gives him someone who he can trust. He revealed very few close friends and that he does not really trust anyone, but he does trust his partner. She is his best friend. She provides, because of her employment, the money that they need to survive and provides the control on impulses. In addition, she helps to socially smooth things as well for contact with prosocial people."

Continued thoughts of offending. All participants interviewed confirmed that they had continued to have thoughts about offending, although they said these had decreased over the years following their release from prison. They stated that they had not acted on these antisocial thoughts because of their awareness of the negative consequences that could follow from committing further crimes. While this consideration of consequences did include judicial contingencies the strongest negative consequences considered were loss of partner and access to children. However, most admitted to continued thoughts on possible criminal activities. An example from the interview notes for Case 3:

> "Constantly thinks about crime, and prides himself on his ability to plan jobs and to think about them, his 'backup' if he ends up sleeping on a park bench. But, doesn't think about acting on them because he doesn't want to go back to jail. Also I am (his comments) 'more intelligent than that'."

Table 5.13

Interview Participant Beliefs about Why Serious Reoffending Has Not Occurred

Case	Beliefs about why they have not been reimprisoned
1	"Having a partner who sticks by me, she also handles all the stuff that frustrates me, like bureaucracy; getting away from out of work mates, criminal family, I now have very little to do with anyone else but my partner; also another inmate during my last lag helped me get into minimum security before release".
2	"Avoiding old associates, I believe that this has been the main thing, that and my current geographical isolation, I did think about moving into town but my recent conviction changed my mind, being a loner I do not need to be around others".
3	"Finding the Lord as my saviour changed my life. Also how my new spiritual awareness resulted in me meeting my wife through a Christian friendship group. She visited me for five years before my release. In addition to my faith and wife my kids are a powerful reason why I will not reoffend".
4	"Meeting my wife prior to release, she was a very religious woman, we married three days after my release and she and her church gave me the moral guidance I needed. I was able to start my own business and had ready made support".
5	"Making a new life; while I was inside some people from the community burned my house down and my family refused any contact. I moved away from the area. A local priest helped me when I first got out, I also had the right attitude and a plan and a small isolated community that gave me some acceptance because they do not know my history".
6	"The wife and kids and having a place in a halfway house after release, also getting on top of my addictions. I also try to avoid trouble".
7	"After release went back to old community, got hassled, starting getting into trouble so moved long way away, this really helped going to a place no-one knows me. Also finding regular employment and choosing my friends carefully. Being a bit of a loner helped".
8	"Having a partner that stuck by me, getting away from out of work friends, criminal family members. There was also another inmate who encouraged me to move to minimum security and to learn a trade".
9	"Prison was a huge chunk out of my life, really punishing, I also developed really bad chronic health problems. I think that the other big factor was being a real father to my son, he is now the biggest thing in my life, if I went back to jail it would kill me and I could not be there for him".
10	"Had somewhere to go to, had bought land before going to jail. I had also met a woman before release so had her support. I was getting old too, over 50 when released; too old to keep on with the old lifestyle. In my new life I am isolated geographically and have a small group of friends that I only see when I want to".
11	"Meeting my partner soon after release was a huge factor, she was very different from my previous wife, more on to it, organized. But I still initially had problems still into party lifestyle and the gang, if I had been caught during the first few years I would have gone back. When my cook up and left because of my violence made me wake up. I told the gang that was it and moved with her and really left my old ways behind".
12	"I have kept to myself in the main, when I first got out I hung around with my old friends but found myself committing burglaries again and was almost caught again but the cops did not have enough evidence. This really scared me as I did not want to go back to jail so moved across town and stopped seeing my friends".
13	"If I go to prison I will die there, I made some enemies during my last lag and I know they will get me if I go back, I am too old now to get them first".
14	" I moved to the South Island to get away from my whanau, they were all into crime and the gang and I knew I had to get away, I have not had any contact with them since release and have a new group of friends who do not know about me killing that guy".

And another example of continued antisocial thoughts from Case 2:

> "Interesting when we were talking about offending XXXX talked about a potential crime: it involved possibly robbing a small Lotto shop with a woman attendant. He had noticed that she was on by herself at night and he had already thought about the location being close to a road out of town, and he could have done it and be out of town in a few minutes. He said this is something he does quite often, in seeing these opportunities around him but not acting on them. He described it as almost a pride in being able to see these things.

Enfeeblement. The majority of those interviewed (64%) revealed they had significant problems from health related difficulties. This enfeeblement was reported by the interview participants to have reduced their ability to engage in criminal activity, find gainful employment, and to enjoy previous pleasurable activities. A number had health related problems that were directly related to their past offending and antisocial lifestyle such as Hepatitis C and B, HIV, and liver damage from substance abuse and physical injuries from fights and assaults. In addition, some related their poor health to car accidents, old age, and the diffuse effects of long periods of incarceration.

An example of such consequences is one man who has Hepatitis B from using shared needles when he injected illegal drugs while in prison. This man also has extensive arthritis in his arms and hands from fighting related injuries. He was open about how his health problems reduced his ability to enjoy time with his son, and he believed had led to his last relationship failing. Many of the men with similar serious

health problems were under fifty years of age yet were already reconciled to spending the rest of their working lives on a sickness benefit.

Problem coping strategies. Ninety percent of the men who were interviewed endorsed avoidance as the main strategy used to deal with problems they experienced after release. This strategy is reflected in their avoidance of previous antisocial associates and life stressors through geographic isolation. Many of the men also relied on their partner's ability to effectively solve problems, with this attribute being highly valued in the relationship. An example from the interview notes of Case 11 provides more detail of this strategy:

> "Met a new partner shortly after release and she was very different from previous partners. She was a very organised, on to it, sort of women, who helped him with his finances and was just a lot more assertive than his previous partners. He gave an example of how his new partner's financial abilities had enabled him to buy a new V8 powered four-wheel drive vehicle."

Continued antisocial behaviour. The frequency of reoffending committed by the false positive group has been shown in Figure 5.3, with details on typical recidivism provided in the four example cases in Table 5.12. During the interview process, participants were also asked about offending that had not been detected by the Police since their release. At least three participants admitted to continuing to offend at a high rate. They believed that this offending was justified to maintain the necessities of life. In two cases they used younger offenders to carry out the actual criminal acts they benefited from. It is noted that one participant with previous convictions for child sexual offending has recently had his daughter from his current

relationship removed by Child, Youth, and Family because of allegations he has sexually abused her.

Employment. Only 36% of those interviewed reported they were currently employed. Most reported they had worked following release but cited a number of reasons such as poor health or geographic isolation to explain why they were not currently employed. Typically such employment had been unskilled labouring positions or semi-skilled such as house painting. All those classified as unemployed were on a benefit of some type (typically the Unemployment Benefit or Sickness Benefit).

Substance abuse. The men commented that gaining control over historical substance abuse problems had been a major factor in reducing their risk of reoffending. Their low scores for LSI-R scale Alcohol/Drug and MCMI-III scores for scale Alcohol and Drug abuse reflected this reduction in abuse. An example of this increased awareness of the role that substance abuse played in maintaining their risk came from the interview notes for Case 11:

> "He gathered the gang members together and told them 'that was it' and he was not going to have anything more to do with them and he was giving up the drugs and the 'booze'. He went up to Auckland following his partner and made a new commitment to her, found regular employment and settled down."

Another example came from the interview of Case 7:

> "He still continued to have some alcohol problems and it was only really the last year or two that he had got on top of those and reduced his alcohol abuse. Again this was with the assistance of his partner."

Participant reoffending beliefs. The interview participants were all open about their beliefs on why they have not been reimprisoned since release by the Parole Board. Their beliefs are summarised in Table 5.13. In general, the comments reflect the themes of prosocial partners, avoidance of old associates, and an increased awareness of the punishing aspects of imprisonment. No expressions of empathy for victims, remorse for antisocial acts, or indications of increased social competency were related as reasons for increased management of risk of recidivism.

Summary of Results

This summary is designed to aid the reader in consolidating the large number of results included in this chapter with the discussion of their implications left until the next chapter. This study focused on the 32 offenders from the PCL: SV validation sample who were placed in the false positive error group by virtue of their scores being 16 or greater. The group had a mean age of 34 years when released, with approximately half of Māori, and half European descent.

A comparison of the false positive group with the rest of the validation sample who were actually reimprisoned found statistically significantly lower scores for the PCL: SV and the RoC*RoI measures but no difference for the RAI. However, clinically the range was the same for both groups and the lower PCL: SV mean difference for the false positive group was small. Convergence among the validation study risk measures was supported by another measure of recidivism risk based on static and dynamic risk factors, the LSI-R, also finding a high assessment of risk of

recidivism even after at least five years in the community for those who agreed to interview. The majority of the false positive group were originally imprisoned for violent crimes (usually rape or murder) and a computerised search of their criminal convictions records indicated almost all were reconvicted although not reimprisoned after release, in the majority of cases for driving, dishonesty, or minor assault offences.

A more detailed examination of this group of offenders found that two had died within 18 months of release and that another three had actually committed serious offences that resulted in reimprisonment within the five-year period. One under another name, and the others after long periods in remand, with conviction and sentence occurring after the five-year period. Eliminating these five individuals reduced the false positive error rate from 32% to 24% while leaving the false negative rate unchanged. During the research into reoffending by the false positive group, the geographical location of 81% of these individuals was found. After eliminating those who were deceased or had actually been reimprisoned, a total of 14 from the revised false positive group after being contacted agreed to interview (67% of the 'true' false positive group members).

The majority of those who agreed to be interviewed were European with a mean age of 46 years, with half having an index offence of murder and the rest rape or hard drug dealing convictions. Again, as with the rest of the false positive group, almost all had been reconvicted since release, usually for dishonesty and driving convictions. Those who did not agree to interview did not differ markedly from those who agreed to be seen on criminal history or demographic variables. It is important to

note that the small size of the group limited the analysis of information gained as a result of the interview process.

The results of the psychometric battery completed by the interview group found that the LSI-R indicated high scores on criminal history items correlated with unsatisfactory education/employment and accommodation outcomes, and that a correlation also existed between scores indicating unsatisfactory marriage-type relationships, prosocial family support, and difficulties with finances and education/employment outcomes. The BIS/BAS Scale found higher scores for the BAS (impulsive/reward dominant scale) while the STAXI-2 scores indicated no significant anger state or trait or control of anger in the group. The IM-P, used purely in a descriptive fashion due to the lack of normative data for the instrument, revealed two very different groups, a large group with low scores and a small group with very high scores. The high scoring group also had higher total scores on the LSI-R. Finally, in relation to the psychometric measures, the MCMI-III found that none of those interviewed had prominent elevations on the Severe Personality Pathology or Clinical Syndrome scales. However, several of those interviewed had prominent elevations on one of the following scales; Narcissistic, Antisocial, Compulsive, and Passive-Aggressive.

The results from the qualitative section of the structured interview found that the majority of this group were geographically isolated by choice, with this being in marked contrast to their location in larger more central population centres prior to their imprisonment for their index offences. This avoidance, which formed the principle

strategy to deal with problems and stressors, was also noted in relation to isolation from antisocial peers. A clear majority of those interviewed indicated they no longer associated with former criminal friends or family. However, while many were isolated, they tended to have an intimate partner who provided a high level of prosocial support after release. The interview participants were quick to point to their partners' support as important in reducing their return to serious reoffending.

An examination of their procriminal beliefs found all continued to have thoughts of offending, although these had reduced in frequency over the years. They were also clear that an awareness of the negative consequences of a return to prison inhibited such thoughts and any intent to act on them. Another area that served to inhibit a return to serious criminal behaviour was their high level of enfeeblement; this was either health related or a result of poor physical condition related to aging. Physical difficulties had reduced their ability to carry out previous antisocial patterns of behaviour, and also made them aware of how difficult a return to the aversive prison environment would be. Their enfeeblement also reduced their ability to find gainful employment. The participants commented that gaining control of substance abuse problems was part of their increased management of their recidivism risk.

While a number of apparent resilience factors were identified in the interviewees, it was important to note the continued low level offending by virtually all in the group. The confidential nature of the interviews meant that at least three participants admitted to serious reoffending in the past, and as has already been pointed out one man was alleged to have reoffended sexually. If these offences had been

subject to detection by the Police, then likely judicial punishment would have been reimprisonment, and the true false positive rate would have fallen even further.

Finally, when the interview participants were asked about their own beliefs about why they had not returned to prison, their comments as predicted reflected the themes of prosocial partners support, avoidance of antisocial associates, and an increased awareness of the punishing consequences of a return to prison. What was not expressed or observed was any increased empathy for victims, remorse for their previous antisocial behaviour, or increased social competency.

The final chapter of this dissertation discusses the results of the validation study and the follow-up of the false positive group and the relevance of these findings to the assessment of risk both from an empirical and theoretical standpoint. The relevance of the study to the assessment of risk and how this could appropriately inform and parole decision making forms that last part of this discussion.

CHAPTER SIX

Discussion

The research was designed to investigate the effectiveness of the PCL: SV instrument in predicting recidivism leading to reimprisonment for a New Zealand offender population. In keeping with the programmed research into predictive accuracy a further study was carried out that followed up those in the study sample who were falsely identified as at high risk of recidivism based on their score on the PCL: SV. The research effort has been successful in adding to the growing body of knowledge on the ability of the PCL: SV and the concept of psychopathy to predict serious recidivism by criminal populations. In doing this, New Zealand normative data have been provided for PCL: SV score distribution and subsequent reimprisonment recidivism. In relation to ethnicity, it was important that approximately half of the current study were of Māori descent and that the PCL: SV was shown to be efficient in predicting reimprisonment for this group.

The study has fostered the development of 'best practice' guidelines to aid risk prediction by correctional and parole authorities in general, and New Zealand in particular. In addition, evidence was found of a strong relation between PCL: SV Factor 1 scores and speed of violent reoffending for those reimprisoned for serious recidivism. This finding supports the special ability of the PCL Factor 1 items associated with the psychopathic/antisocial personality construct to predict violent behaviour.

The follow-up of the false positive group helps to account for part of this prediction decision error rate and has provided further support for the accuracy of the PCL: SV as a recidivism risk prediction tool. In addition, insights into the beliefs and lifestyles of this parole group were gained that will assist in the development of effective correctional re-integrative initiatives and accurate parole decision-making.

The PCL: SV Validation Study

Distribution of PCL: SV scores. The distribution of total PCL: SV scores clearly indicated that a considerable proportion (34%) of the randomly selected sample had a score of 18 or more. The PCL: SV Manual (Hart et al., 1995) states that such scores indicates a strong likelihood of the presence of the personality trait of psychopathy with a high correlation with the criterion diagnostic score of 30 for the PCL-R (Cooke et al., 1999).

While the proportion of the study participants with high PCL: SV scores was large, with the score distribution revealing a strong positive skew, the research sample did represent New Zealand's most serious male offender population (sentences of seven years or longer). The percentage of study subjects with a PCL: SV total score $\geq$ 18 was the same as the base rate obtained from a sample of 50 Canadian federal prisoners incarcerated in British Columbia. The results of the Canadian study were used in the original PCL: SV validation study (Hart et al., 1995). The inmates of federal prisons in Canada are usually convicted of serious offending, mostly for violence and must have received sentences of more than two years.

An examination of the current study validating the PCL: SV for a New Zealand criminal population found similar factor score means to the Canadian serious criminal inmate samples used to validate the instrument (Hart et al., 1995). The other three validation samples from the PCL: SV manual containing prison inmates had a total of 149 participants in contrast to the current study's 199. While there is virtually no difference in the means for total scores for the current study and those used in the validation samples, a slightly higher mean for Factor 2 scores was found. Hart et al. (1995) reported that all 11 population samples used in the PCL: SV validation samples had higher Factor 2 mean scores than Factor 1, with this trend being present even in civil/psychiatric and non-criminal/non-psychiatric samples. This was explained in terms of Factor 1 items being more difficult to score. This score bias comes from the conservative constraint inherent in the scoring system, whereby Factor 1 psychopathic symptoms are treated as either present or not present. This is in contrast to the Factor 2 items that are easier to view as lying on a continuum. Alternatively, the lower mean for Factor 1 scores could reflect the lower prevalence of these interpersonal and affective deficits among the sample populations.

Limitations in rating Factor 1 items. My view is that the reliable assessment of Factor 1 items demands from assessors a high level of self-control, the ability to suppress inappropriate emotional responses, and comprehensive psychological knowledge. These attributes are required to identify and manage the affective and defensive reactions from contact with individuals displaying psychopathic behaviour. Evidence in support of this view has come in part from my own experience in

assessing a large number of offenders (over 300) using either the PCL-R or PCL: SV and in supervising and training Corrections Psychological Service psychologists in the use of the instruments.

The transference, counter-transference aspect in assessing Factor 1 items was first identified by Cleckley (1976) and addressed recently by Kosson et al. (2000) in their guidelines for effective interview strategies. Kosson and colleagues identified that the defensive reaction by clinicians can involve denial of pathology or the development of an intellectual approach that fails to acknowledge their own negative emotional response. Rutherford, Alterman, and Cacciola (2000) identify the need for clinicians to be experienced with difficult and manipulative clients before attempting therapy with psychopathic offenders due to the transference, counter-transference, and resistance issues present, especially for those with high Factor 1 scores.

Kosson (1997) developed the Interpersonal Measure of Psychopathy as an experimental instrument designed to provide more objectivity to the assessment of Factor 1 items. This was attempted through the provision of simple event labels for distinctive interpersonal features associated with the construct. The instrument is useful for the novice assessor in instructing them to observe interpersonal processes and distinctive behaviours. It should only be used in conjunction with the PCL-R or PCL: SV, and should be scored following the assessment interview. The instrument has been found to only take 10-15 minutes to score and adds a different perspective to the analysis of interpersonal interview behaviour.

In reality the Interpersonal Measure of Psychopathy fills a 'gap' in the clinician's training, with the same aspects being covered in appropriate workshops on the PCL instruments and the provision of adequate support and supervision from clinicians experienced in the concept of psychopathy. The current study provided full training and supervision for the research assistants who scored the PCL: SV. In addition, the PCL: SV assessments were carried out using file information alone, thus reducing the potential affective and defensive reactions elicited by contact with individuals displaying psychopathic behaviour.

Reliability of the PCL: SV. The PCL: SV was found to have moderate to high item-total correlations, indicating an acceptable level of endorsement frequency. The correlation range was similar to the item-total correlation range presented in the manual for the 11 validation samples. Further evidence of the reliability of the measure in comparison to other measures came from alpha scores over .80 for both the total and factor scores. These Cronbach's Alpha scores were again similar to those listed for the forensic/non-psychiatric validation sample from the manual (Hart et al., 1995). In assessing the reliability of the PCL: SV for individual scores a SEM of 2.30 was found to represent the standard deviation of total scores if the true score was held constant. This was slightly higher than the SEM for the forensic/non-psychiatric sample listed in the manual (1.80), however, the difference was small indicating only a half point difference (0.5). For clinical purposes where an assessment is subject to supervision or multiple raters, 2.30 is rounded down to remove any decimal places

thus a score of two is used as the reliability check, as the instrument does not produce half or part point scores.

Correlations with the other measures of risk. The other two measures of risk used for comparison purposes in this study also indicated a large proportion of the sample were at moderate to high risk of further recidivism. The RAI score distribution revealed that the majority clustered around a moderate risk rating, while the RoC*RoI scores were skewed towards high risk with 28% of the sample with scores indicating 80-100% risk of serious recidivism.

The PCL: SV total was significantly correlated most of the other risk measures used in this study ranging from $r = .30$ for the RAI to $r = .59$ for the RoC. However, the RoI measure was found to only correlate significantly with the RoC and RoC*RoI risk measures. The absence of a relationship between the PCL: SV and RoI model indicated that the instruments were measuring different risk variables. The RoI model focuses solely on static predictor variables such as age at release, previous imprisonment, and previous offence seriousness ratings, variables not directly assessed by the PCL: SV items.

The recidivism variable, time to reconviction was found to be significantly correlated with all risk measures except the RoI measure. This very low correlation with reconviction was expected in view of the focus of the variables in the RoI model on serious reoffending resulting in reimprisonment. The highest correlation was found between time to reconviction and the RoC model, followed by the PCL: SV Factor 2 score, and PCL: SV total score. This high correlation was expected due to the RoC

measure being designed to predict risk of reconviction thus having a focus on the likelihood of any recidivism, no matter how minor.

With the PCL: SV Factor 2 score indicating a strong pattern of previous antisocial/criminal behaviour it was also expected to be sensitive to the prediction of future criminality. Factor 2 items expected to directly measure a pattern of previous antisocial behaviour are: (8) *Poor Behavioral Controls*; (11) *Adolescent Antisocial Behavior*; (12) *Adult Antisocial Behavior*. Significant correlations were found for all risk measures, with the recidivism variable, time to reimprisonment having the highest correlation with the PCL: SV total score closely followed by the RoC*RoI and PCL: SV Factor 2 scores.

Analysis of Recidivism Factors

Reconviction and reimprisonment. Using data on recidivism from the New Zealand criminal history database it was found that most of the sample was reconvicted for a further offence (71%) with a large number (38%) being reimprisoned within five years of release. Data from those released for longer than five years found that 77% were reconvicted and 43% sentenced to reimprisonment post release. This high reimprisonment rate was not expected based on the official report by the National Parole Board for the year ended 31 December 2000 (Heron, 2000). This report indicated that 21.5% of those subject to National Parole Board jurisdiction released between 1994-1999 were reconvicted within one year of release. In addition, this report stated that all inmates appearing before them and released in the period 1985-

1997 were followed up for a three-year period. This group was found to have a total recidivism rate of 53.9% with only 22.9% subject to reimprisonment. It is noted that these figures were calculated using the same criminal history information available for the current study.

The marked difference in the recidivism figures found in my study and the official report by the National Parole Board may be due to a number of factors. Firstly, I used a five-year follow up period rather than the three years utilised by the board. This may mean that more reoffending that resulted in reimprisonment by parolees was identified when consideration is made of possible long periods remanded in custody before a jury trial date was available. Second, while I used the same database considerable efforts were made to eliminate error through downloading the individual criminal history data and then going through reconviction and sentence information by hand, using a release date that was confirmed from a number of sources (Public Prison Service institutional file, National Parole Board records, and Community Probation supervision records). Finally, the rate of recidivism over time was analysed in this study using survival analysis and a statistical sampling procedure rather than the use of discrete year-based categories.

Survival analysis. In using a more appropriate measure of recidivism rates, namely, survival analysis calculated from time of release to offence dates (not conviction date), it became clear that a large number of offenders in the sample had reoffended (38%) with 13% of this recidivism resulting in reimprisonment within a one-year parole period. The majority of reconviction had taken place within a period

of two years following release on parole (56%), as well as a majority of recidivism resulting in reimprisonment (22%). The focus of the rest of the analysis was on the relationship of the risk measures, in particular, the PCL: SV and RoC*RoI, and serious recidivism. Serious reoffending was defined as those from the sample who within five years were reconvicted for offences that were subject to a sentence of imprisonment.

Reimprisonment group. When the sample was split into two groups, one being all those reimprisoned and the other being those not reimprisoned within a five year period following release, a significant difference in the distribution of PCL: SV total and factor scores was revealed. The reimprisonment group had a mean total score of 18.4 while the non-imprisoned group had a mean of 12.1. The PCL: SV manual states that those scoring 12 or lower can be considered non-psychopathic while those with a score of 18 or higher offer a strong indication of psychopathy (Hart et al., 1995). While this study is focused on risk prediction rather than diagnosis per se, the difference in these diagnostic cut-off scores does indicate two very different groups were present in the sample. The PCL: SV factor scores were also significantly higher for the reimprisonment group.

The score range for the reimprisoned group stopped at a lower limit of 7 supporting the belief that very low scores indicted no risk of reimprisonment within five years of release. The ability of the PCL: SV to indicate extremes of risk is in keeping with the reoffending failure rates for the PCL-R provided in a paper by Serin and Brown (2000). They found little violent recidivism for offenders with a total score of 15 or less. Therefore, while high PCL: SV scores are able to predict those who will

be convicted of serious recidivism, low scores also have the ability to identify low risk offenders.

The descriptive statistics for the RoC*RoI measure also reflected a large significant difference in mean scores between the two groups. The RoC*RoI scores for the reimprisonment group had a mean of .76 or 76% risk of serious recidivism while the non-reimprisonment group had a mean of .53 or 53% risk. While the PCL: SV and RoC*RoI measures revealed mean scores that differentiated between the groups, the RAI mean score difference was less significant ($p > .05$).

Risk measure cut-off scores. Based on the distribution of scores between the reimprisonment and non-reimprisonment groups, decision error estimates were established for the RAI, RoC*RoI, and PCL: SV for a range of cut-off scores. These estimates give the error rate for predicting reimprisonment for offenders based on actual rates from the validation study. For the PCL: SV a cut-off score of 16 or greater performed best. This criterion had a 76% prediction of reimprisonment with a 24% false negative rate and a 68% prediction of non-imprisonment with a 32% false positive rate. It is also important to note that scores in excess of the proposed 16 cut-off reflect a decreasing false positive error rate. The predicted reimprisonment outcome for those in the study with scores of 16 or greater was clearly shown in Figure 4.6. This survival graph showed that the high-risk group as defined by scores of 16 or greater had a high rate of reimprisonment, with the majority of this reoffending occurring within two years of release.

Predictive validity of the PCL: SV

The examination of the study sample to establish the accuracy of the measures first used discriminant function analysis. This approach found that the PCL: SV total score was a significant predictor of group membership by accurately placing participants into reimprisonment and non-reimprisonment groups. The PCL: SV accounted for most of the variance in determining group membership, but an examination of the contribution of the other two risk measures indicated that the RoC*RoI was also a significant predictor. The RAI was not found to be a significant predictor, accounting for only 1% of the effect size of the model containing the three measures. The use of stepwise regression analysis removed the RAI measure while retaining the PCL: SV and RoC*RoI measures. Both measures had very similar discrimination in regard to group membership with the PCL: SV only accounting for an extra 6% of the variance in membership. This provides support both for the PCL: SV as an accurate measure, but also for the RoC*RoI as a measure with a high level of convergent predictive validity.

While these measures were accurate in predicting reimprisonment, specific risk prediction requires judgements to be made on when such offending is likely to occur. While the follow-up time period for the study was at least five years after release, the Cox proportional hazard model enabled time to be included in the analysis of the predictive ability of the PCL: SV and RoC*RoI. This analysis confirmed that both measures were significant predictive variables when reimprisonment over time was considered. Scores on the two risk measures were then transformed into higher/lower

risk categories (PCL: SV ≥ 16, and RoC*RoI ≥ .67) based on the 'best balance' score cut-offs in relation to reimprisonment. The difference in rate of reimprisonment over time for both high and low groups from the two measures was again significant. The PCL: SV higher risk score group was found to have a slightly larger regression coefficient than the high risk RoC*RoI score group. Those with scores of 16 or more had a seven times higher level of reimprisonment than those reimprisoned with scores under the cut-off.

Another indication of the accuracy of a predictive instrument is to carry out odds ratio analysis. This approach found that offenders with a score above the mean score for the PCL: SV in this study (14.4) were approximately six times more likely than those below the mean to be reimprisoned within five years of release and eight times more likely to be reconvicted. Of the two comparison risk measures only the RoC*RoI was found to be able to generate valid odds ratios and this was for reimprisonment not reconviction.

Previous research into the ability of the PCL: SV to predict risk of reoffending for a forensic/psychiatric population found that those with total scores of 18 or over were ten times more likely to be arrested for a violent crime than those under this cut-off score (Douglas et al., 1997). Similar increases in risk for those with higher scores on the PCL: SV was found in a study into the predictive ability of the Historical, Clinical, and Risk Management violence risk assessment scheme (HCR-20) (Douglas et al., 1999). This instrument incorporates the PCL: SV as an item and the study found

that those scoring over the HCR-20 medium score were 6-13 times more likely to be violent.

In keeping with recent recommendations in relation to the analysis of risk prediction, ROC analysis was used in this study to provide an overall index of accuracy of the various measures (Quinsey et al, 1998; Rice, 1997). This analysis found similar results to the discriminant function analysis with the PCL: SV score indicating an 80% (AUC = .80) predictive accuracy (discrimination capacity).

The AUC identifies classification accuracy over a range of cut-off scores with the percentage indicating whether the PCL: SV as an actuarial measure of reimprisonment recidivism performs better than chance (50%). The AUC 80% value corresponds to the probability that the score of a randomly selected study offender who was reimprisoned exceeds the score of a randomly selected offender who was not reimprisoned (Swets, 1996).

Area Under the Curve values of .70 are considered moderate to large, and .75 and above are considered large (Swets, 1996). The RoC*RoI measure was also found to have a high AUC (.83), with a combined model that included the PCL: SV score raising the accuracy to .86 or 86% probability that the score of a randomly selected study offender who was reimprisoned exceeds the score of a randomly selected offender who was not reimprisoned.

Although other research with the PCL: SV has used forensic/psychiatric populations, the large area under the curve accounted for by the PCL: SV score in this study was in keeping with those investigations of predictive validity. Douglas et al.

(1999) found an AUC = .79 in predicting criminal violence and Doyle et al. (2002) an AUC = .76 in predicting violent behaviour with other studies using ROC analysis to establish the predictive accuracy of the PCL: SV in relation to violent institutional behaviour. This provides evidence of the PCL: SV's ability to support risk measures that rely on a limited number of static criminal history factors, such as the RoC*RoI. This finding is in keeping with other research into risk assessment in which combining static and dynamic factors increases predictive accuracy (Bonta, 2002; Brown, 2002).

Brown (2002) found in an extensive review of previous studies into the relationship between dynamic predictors and recidivism a number of factors that are also assessed by PCL: SV items but not by the RoC*RoI measure. These dynamic predictors with moderate to high relationships to recidivism were interpersonal deficits (in the areas of employment, marital/family, and community functioning), and deficits in emotional functioning. The unique contribution that the PCL instruments make to the assessment of risk, in particular violent recidivism, appear to relate to the Factor 1 items which assess an arrogant and deceitful interpersonal style and deficient affective experiences (Cooke & Michie, 1997).

Brown (2002) found that the best model of static predictors included the Statistical Information on Recidivism scale (SIR-R1) an instrument that measures similar criminal history risk variables to the RoC*RoI and frequency of recent institutional misconducts. These variables combined produced an AUC = .81 in predicting any recidivism. The PCL-R had been designated by the Brown as a static predictor but was not found to predict reconviction over time so was not included in

the static model. However, the 136 men in the sample used by Brown (2002) were younger, had less serious index offending in general, and 50% of their recidivism was for relatively minor parole violations. In comparison, the current study has found the PCL: SV was an accurate predictor of serious sexual/violent recidivism for those with chronic patterns of antisocial behaviour.

Brown (2002) found the best model of dynamic predictors included the following variable; employment problems, marital support, negative affect, perceived problem level, substance abuse, social support and expected positive consequences of crime. These dynamic variables when combined had an AUC = .83 in predicting any reoffending. Her study went on to combine the time dependant dynamic and static factors to produce a large increase in predictive accuracy for any reconviction (AUC = .89).

In summary, the PCL: SV's validity in predicting reimprisonment for a New Zealand sample of serious offenders has been established through a variety of established statistical approaches. However, the assumption has been made that reimprisonment meant serious violent crimes had been committed, as sentences of imprisonment in New Zealand are usual for violent offending.

Recidivism leading to reimprisonment

The reimprisonment group in this study within five years (N = 76) were found to be significantly both younger and more likely of Māori descent than those who were not reimprisoned. Virtually all (97.4%) were also originally sentenced to

imprisonment for violent and/or sexually offending. The offences that resulted in reimprisonment when placed into five categories indicated that 79% were convicted of violent or sexual offences. The majority of these were convicted of serious violent offences including a number of murder convictions with 7 receiving a sentence of preventive detention (indeterminate sentence with no entitlement to parole) for predatory sexual offending. This supports the assumption that the prediction of reimprisonment for the study sample was is in reality the prediction of serious violent or sexual recidivism.

Finally, this study identified a relationship between rape index offending and a high rate of violent recidivism. A majority of those who had an index offence for rape (62%) went on to commit further serious violent crimes, including two of the three murder offences. However, a more detailed analysis needs to be carried out to determine offence characteristics that could differentiate offenders within this apparent higher risk group. An example of the different offender pathways are those who committed an opportunistic rape offence while committing burglary versus an individual convicted of raping their partner. Generally, high scores on the PCL instruments have been found to have only a weak predictive relationship with sexual recidivism, with ROC analysis only yielding an AUC of .61 in a recent actuarial comparison study (Barbaree et al., 2001). This has been explained in terms of sexual offending being only one potential reoffending outcome for those identified as criminal psychopaths, a group typically defined as being criminally versatile (Hare, 1996).

The reimprisonment group were found to have moderate significant correlations for scores on the PCL: SV and RoC*RoI measures and a number of variables relating to recidivism. Recidivism variables included time to reimprisonment, actual sentence length and a seriousness rating based on average sentence length of the particular offence. The RoC*RoI score was found to have a moderate significant relationship, with the offence seriousness rating indicating that high scores on this measure related to more serious offences (based on number of days of imprisonment such offences typically received as a sentence). The PCL: SV Factor 2 score was also found to have a low/moderate relationship with the offence seriousness rating. A high correlation between the RoC*RoI and PCL: SV Factor 2 scores indicated that these measures assessed similar static factors relating to a pattern of previous antisocial behaviour. However, one measurement variable, the PCL: SV Factor 1 score was found to have the highest correlation with an important variable related to recidivism, and thus to parole decision making, time to reimprisonment.

Violent recidivism. The reimprisonment group was divided into those reimprisoned for violence versus those who were imprisoned for a non-violent crime. Between group tests of significant found that mean RoC*RoI scores and scores for the recidivism variables actual length of sentence and seriousness rating were significantly higher for the violent group. The PCL: SV total and factor scores were not found to be significantly different across these groups.

Multiple regression analysis of the risk measures and recidivism variables for the violent reimprisonment group found that only imprisonment sentence length and

time to reimprisonment had significant relationships with risk variables. For imprisonment sentence length the RoC*RoI score was found to have a significant relationship. This result was expected with the variance between the violent and non-violent reimprisonment groups relating to measures of previous antisocial behaviour, such as the RoC*RoI score. It was interesting that the PCL: SV Factor 1 score added to the predictive model when Forward Stepwise regression was used, suggesting that the interpersonal and affective deficits measured by this factor score added value to the static variables contained in RoC*RoI.

The unexpected result from the multiple regression analysis of recidivism for the selected imprisonment groups was for the variable, days to date of violent reimprisonment offence. When the correlation between the risk measures and the variable time to reimprisonment was examined, using stepwise regression, only one measure was found to be significant, Factor 1 score ($r = .41$). The other risk measures, as well as, the Factor 2 score did not add to the analysis of variance between the groups for this variable.

Speed of serious recidivism. The relationship between high PCL: SV Factor 1 scores (score range 8-11 for period of two years post release) to time to reimprisonment for the violent recidivism can be viewed as a relationship with speed of serious reoffending. The high correlation coefficient ($r = .41$) when subjected to a fixed effects model indicated that this one variable was responsible for 15% of the variance, a significant result. This was unexpected considering the serious nature of the offenders in the sample and the relatively small score range for Factor 1 items (0-

12). This relationship with time to reimprisonment was also found when the total study sample was grouped into low and high scores on Factor 1 with survival analysis clearly showing the speed and higher rate of serious reoffending for those with scores of 7 or greater.

The existence of a special relationship between Factor 1 scores and recidivism was also found in a previous study by Serin (1996) in which high PCL-R Factor 1 scores were a better predictor of violent recidivism (usually punished by reimprisonment) than the Factor 2 score. This was used to suggest it is the Factor 1 score that makes the unique contribution to the PCL instruments ability to predict violence.

The current studies finding provides further support for a unique relationship for Factor 1 with serious violent recidivism over and above the established static behavioural predictors assessed by the PCL-R and PCL: SV Factor 2 items. The relation of a past criminal lifestyle to future offending is conceptually based on criminal behaviour being a reflection of interactions with specific environmental and interpersonal influences rather than personality traits (Walters & Di Fazio, 2000).

No other studies have been found that directly report a relationship between PCL Factor 1 scores and speed of violent recidivism. However, previous researchers have used a variety of methods to control for the influence from Factor 2 items that measure past criminality, on the prediction of violent behaviour. A study by Hart, Kropp, and Hare (1988) eliminated PCL-R items relating to past criminal behaviour when examining the statistical relationship between psychopathy and risk of violence,

while Harris et al. (1993) controlled statistically for past crime. These studies demonstrated that the personality based items relating to interpersonal and affective deficits included in Factor 1 do predict violent behaviour. This indicates that the predictive ability of the PCL instruments is not solely due to the measurement of past criminality (Factor 2). This research provides support for this study finding that high Factor 1 scores were a strong significant predictor for speed of violent recidivism.

To understand the relationship between Factor 1 items and speed of serious recidivism it is important to recognise the stable nature of the interpersonal and affective deficits measured by the factor. Harpur and Hare (1994) found that PCL-R Factor 1 scores did not decline over time in contrast to Factor 2 scores relating to unstable, unsocialised lifestyle, or social deviance. PCL: SV Factor 1 items are designed to assess a collection of interpersonal and affective traits believed by many theorists to be fundamental to the construct of psychopathy (Cooke & Michie, 2001). Namely, a defensive and arrogant interpersonal style and emotional deficits (lack of empathy and remorse) that distort individuals' ability to perceive the effect of their antisocial behaviour on others, and support distorted beliefs relating to entitlement (Meloy, 1998). These psychopathic traits are also believed to be conductive to aggression and violence. While there has been only limited exploration of the psychological processes involved, the callous indifference to the feelings of others, a hostile cognitive appraisal has received some support rather than a focus on affective deficits (Blackburn, 1998).

In addition, Factor 1 items assess the level of deceitful behaviour displayed by the individual in relation to previous antisocial behaviour. Those with high scores on this item believe that they are able to avoid or escape the negative consequences of antisocial acts. Therefore, a high Factor 1 score can be seen as reflecting an offender's consistent disregard for the feelings and rights of others, a strong focus on rewards for themselves, no matter what the cost (Newman, 1998), and a belief that they are able in many cases to escape the negative consequences of their antisocial acts (Hazelwood & Michaud, 2001).

The pervasive nature of the interpersonal and affective deficits measured by Factor 1 items appears to explain why some offenders maintain a pattern of serious offending throughout their lives, with periods of imprisonment failing to impact on their risk of further violent offending. The introduction to this study discussed how this pattern of persistent antisocial behaviour by those with high scores on the PCL instruments, is also reflected in higher rates of institutional misconduct behaviour (Hare 1991; 2001), and poorer treatment outcomes. The recent research into why some treatment appears to increase the risk of violence by those assessed as psychopathic found that this only occurred when a high Factor 1 score was present.

Cookie and Michie (2001) have proposed a three-factor model rather than the two-factor explanatory approach used by Hare (1991). The three factor model did not include PCL-R items that failed to represent the proposition that models of abnormal personality are hierarchical, a maladaptive exaggeration of normal personality. This approach produced a model that relied heavily on Factor 1 items, splitting these into

two new factors, one titled arrogant and deceitful interpersonal style and the second, deficient affective experience. Factor 3 was made up of the items from the original Factor 2 explanatory model reflective of an impulsive and irresponsible behavioural style but that eliminated items indicative of previous criminal behaviour. This approach reflects the traditional European definition of social deviance (moral insanity) rather than the North American view that deviation is a specific antisocial type, criminal acts (Blackburn, 1998).

Hare (2003) in a critique of the three-factor model accepts that the new model captures basic core tendencies rather than characteristic behavioural (criminal) adaptations but points to information on criminal behaviour assisting in deciding if the personality pathology is really socially deviant. Factor 1 items relating so strongly in the current study to future serious violent behaviour provides support for Hare's argument that the interpersonal and affective deficits indicated by a high score for Factor 1 have a 'real world' meaning for the assessment of recidivism risk. What is important clinically is that the Factor 1 items have strong theoretical support in assessing domains of personality disposition, indicating personality pathology that is deviant by virtue of the characteristic violent behavioural (criminal) adaptation.

In clinical risk assessment, judgements are usually made that a high risk of reoffending relates to serious recidivism within a short time of release. The finding of a strong negative correlation with days to reimprisonment for violence based on actuarial data provides some objective measurement of this important aspect of prediction. This may have implications for Parole Act 2002 Section 107 hearings, in

which clinicians are required to provide an assessment not only of risk but also of the likelihood that serious violent recidivism would occur within the period left of an offenders' sentence.

In addition, when an offender assessed as high on Factor 1 is released, parole conditions can be imposed to aid Community Probation in providing strong external controls on his or her behaviour in an effort to reduce recidivism risk. Information on how to deal with the transference and counter-transference issues relating to offenders with a arrogant and deceitful interpersonal style may also assist Community Probation staff in effective management of parole conditions. While the discussion to date has focused on the pervasive nature of serious violent reoffending by those with high scores on the PCL: SV not all such individuals were reimprisoned after release.

PCL: SV False Positive Study

The detailed investigation of the false positive error sample ($N = 32$) from the main PCL evaluation study did reveal five offenders who were incorrectly classified as not being reimprisoned in the follow up period. Two died within the five year follow up period following release and three were found to have committed offending that resulted in reimprisonment that was not originally detected due to long remand periods and in one case a change in name. The identification of offenders that were incorrectly classified false positive reduced the error rate from 32% to 24%. This reduction increased the predictive accuracy of the PCL: SV in identifying those who would not be reimprisoned within five years of release.

The main legal challenge to risk assessments that incorporated measures such as the PCL: SV, is that a number of offenders classified as high risk do not actually go on to commit serious reoffending. This research into the false positive group from the PCL study reduced the false positive error rate even further leaving 24% falsely predicted to be reimprisoned within five years.

This study has established the overall predictive validity ability of the PCL: SV using discriminant function and ROC analyses. However, it is important in communicating the risk of recidivism an individual has if released, to refer to the actual decision error a score has in order to recognise the limits of risk prediction (Campbell, 2003). Citing an overall classification accuracy for the PCL: SV of AUC = .80 or 80% might leave judges, parole board members, or jurors favourably impressed. However, the frequency of false negative or positive classification based on an actual score may cause them to reconsider the value they place on the actuarial evidence. Ethical and practice guidelines for psychologists emphasise the need to communicate effectively with lay audiences. Decision error rates for a cut-off score are both a logical and accurate method in which to convey the limitations of a measure.

It was important in this study that the false positive error rate was not just accepted but rather was subject to further research to eliminate false prediction as much as possible. The reduction of the false positive rate has helped to address one of the concerns raised by Freedman (2001) about this decision error rate being too high to base decisions about life and liberty on. Thus, the reduction in the error rate provided

support for the appropriateness of this instrument in predicting serious recidivism risk for a New Zealand criminal population.

The only other major study into the clinical use of PCL instruments in risk assessment that reported on decision errors used the PCL-R (Serin & Brown, 2000). The best cut off scores found in this study for violent recidivism with a similar balance between error rates (PCL-R $\geq$ 24) had a false positive rate of 32.4% and a false negative rate of 29%.

Reoffending by the false positive group. The false positive group was not a 'pure' non-recidivist group. Almost all of the men in the error sample were reconvicted of an offence within five years of release from prison. Zamble and Quinsey (1997) reported considerable difficulties in finding a non-recidivist sample in their recidivism study using prisoners who had previously served at least one year in prison before release. This selection difficulty increased for the current study sample that used offenders who had serious index offences with sentences of seven years or more. From a risk assessment viewpoint, parole authorities and the public are most concerned about serious violent or sexual recidivism rather than reoffending in general, making an apparently high risk group with no reimprisonment an important group to study.

While half of the sample had fewer than five reconvictions, at least eight of the false positive sample had more, with the most frequent reconviction being for driving while intoxicated. In addition, a number of those who agreed to be interviewed

revealed historical serious reoffending after release, which if subject to conviction was likely to have resulted in reimprisonment.

Falsely identified as high risk? In addition to the PCL: SV and RoC*RoI measures both indicating high risk for the false positive group, LSI-R scores were collected from those in the false positive group who agreed to interview (n = 14). The LSI-R ratings were based on static criminal history predictors and dynamic predictors from interview and collateral review. Only one interview participant was found to be classified by the LSI-R as at low/moderate (31%) risk of recidivism with all others rated as at moderate (48%) up to high risk (76%) of reoffending within 12 months. The LSI-R total and sub-scale mean scores for the interview group were similar to a Canada federal prison sample of repeat violent offenders. It is important to note that unlike the other risk measures in the study that utilised information on risk factors up until release on parole, the LSI-R rating were generated from information at interview, at least five years, if not longer after release.

Therefore, little evidence appeared to be found for the assumption that the false positive group were low risk offenders who were falsely classified as high risk by the PCL: SV cut-off score of 16. However, the assessed high risk may reflect that the majority of the risk variance for this group was accounted for by static risk variables instead of dynamic predictors. Both the PCL: SV Factor 2 items and RoC*RoI rely on static predictors with many researchers in the area of risk classifying psychopathy as a static factor (Hemphill, Hare, & Wong, 1998). However, an examination of the many dynamic risk factors in the LSI-R found that the risk for the group was high for

dynamic variables; finance, family/marital, leisure/recreation, antisocial companions, alcohol/drug abuse, and procriminal attitudes. Therefore, there is evidence that the group was assessed as high risk based on a combination of static and dynamic predictors.

Interview group. The task of finding the current whereabouts of the subjects from the false positive group proved to be very difficult. If not for the considerable time and financial resources allocated to this research by the Corrections Department many would not have been found or interviewed. These were older offenders with long histories of offending (half for murder) and contact with the 'system' who were suspicious and not motivated to volunteer to have further contact with the Corrections Department. My ability to travel to see the participants who agreed to interview, often considerable distances, and to see them when and where they felt most comfortable was important in their decisions to decide to take part. In addition, when the aims of the study were explained they appreciated the value of the research and the opportunity to talk about their experiences post release. This was a unique opportunity to talk with a group of offenders who typically do not participate in research.

Recidivism risk factors for those interviewed. The dynamic risk domains identified from the LSI-R assessment were: Poor education/employment outcomes, difficulties with finance, living in unsatisfactory accommodation, and a lack of engagement in structured leisure activities. As the majority of the interview group were unemployed it was not surprising that they also indicated difficulties with finances and in finding suitable accommodation. As to time spent in structured

activities, the use of avoidance as their main coping strategy meant that most subjects limited engagement in activities away from their 'safe' home environment. Another factor to be considered was that half the sample had been released after a minimum of ten years in prison serving sentences for murder, an environment in which activity options were limited, and where solitary activities were functional in avoiding prison politics and feuds!

Another factor that has been associated with the maintenance of recidivism risk is having a reward dominant learning style. The interview group were found using the BAS/BIS scale to have high scores for the BAS (Behavioural Activation Scale) component. Such scores are related to reward dominance, in other words when faced with a situation they regard as rewarding that also attracts a punishment they tend to focus on the reward. However, it should be pointed out that the BAS/BIS scale is an experimental measure and that no appropriate normative sample was available for comparison.

The group was not found to have significantly elevated levels of anger, either trait or state based on their scores on the STAXI-2, or to indicate any severe personality pathology or the presence of severe clinical disorder on the MCMI-III. The IM-P was interpreted in a descriptive fashion but did reveal that two groups could be identified among those who were interviewed. The group of most interest were three participants who had high IM-P scores who also scored in the medium/high risk category of the LSI-R. My own clinical judgement after interviewing these individuals

was that they were a high-risk group who were likely to meet the diagnostic criteria for criminal psychopathy using the PCL-R.

Qualitative Interview Results

The psychological mechanisms responsible for desistance from criminal behaviour have not been widely explored. While the current study interview sample only involved fourteen participants it was hoped that this opportunity would increase knowledge of what characterises those who desist from crime. With the exception of the study by Zamble and Quinsey (1997), the few other studies in this area have involved small sample sizes, with the recent study by Haggard et al. (2001) having only 4 participants. An analysis of the qualitative information from the interviews with participants in the false positive follow up study found the following themes.

Dynamic risk factors. The majority of the sample was unemployed (64%) when interviewed. While for two participants this was by choice, for the rest enfeeblement from sickness or injury prevented their engagement in gainful employment. When questioned about unemployment increasing their risk of recidivism they all felt that they had accepted that they needed to survive on their current limited income. Only one of those interviewed was living in conditions that I assessed as 'poor' with this assessment based on him having no power, with few material belongings. This low level of employment was not found in the largest previous study of recidivism by Zamble and Quinsey (1997). However, their non-

recidivism sample did not have the pervasive antisocial history of those in the current study.

The recent study by Haggard et al. (2001), while having a very small sample, had participants with chronic offending histories and high PCL-R scores that indicated half had a 68% risk, and half a 96% risk of violent recidivism. This study also found poor employment outcomes with only one being in full employment, two with part-time community supported employment, and one unemployed. A study of New Zealand offenders by Leibrich, (1993) also found only 46% of her sample was in full or part-time employment when interviewed.

The majority of those interviewed in the current study stated that they continued to have procriminal thoughts. The continued ability to plan, in an academic sense, criminal activity was viewed with pride by participants with the skills involved continuing to be valued as a 'survival' option. Zamble and Quinsey (1997) also found that non-recidivist offenders in their study continued to have instrumental thoughts about criminal activity but at a significantly lower rate than the offenders in this study, providing further evidence that increased thoughts about crime were related to the higher rate of general reconviction by the false positive group. Haggard et al. (2001) also reported continued thoughts of crime by his sample, as well as undetected minor offences, even after participants in his study reported strong commitments to desisting from a criminal lifestyle. Leibrich (1993) found the majority of her sample had continued to committed further offences, in the main minor, with high rates of

continued minor drug and driving offences and that only 23% committed crimes categorised as serious.

Resilience factors for interview group. The area of most interest for this study was the possible identification of resilience factors for those classified as high risk who did not in fact go on to commit serious recidivism. For while they revealed continued instrumental thoughts about criminal activity and had in fact engaged in further offending, this had been of a far lower severity than predicted by the PCL: SV and the other risk measures. When asked about what had stopped them from acting on their procriminal thoughts those interviewed in general made attributions indicating a greater value was now placed on retaining partners and freedom. All mentioned the aversiveness of returning to prison. Many felt they would not be released if they returned and that being older and possible enfeebled in prison greatly increased the punishing aspects of imprisonment. While this may not appear to 'fit' with the reward dominant style endorsed by this group there is research showing that very salient punishments that are constantly cued will inhibit antisocial behaviour by those categorised as psychopathic (Newman, 1998). According to Lykken (1995), for example, "*the psychopath is perfectly capable of learning to avoid what he really wants to avoid but he is likely not to bother to avoid eventualities to which he is indifferent*" (p. 149). In the current study it was apparent that those interviewed were not indifferent to the consequence of reimprisonment.

In relation to increased impulse control, none of the interview group revealed any significant mental health issues, high levels of substance abuse, or difficulties with

anger. There was also no disclosed significant depression and all expressed confidence about the future and their ability to keep out of prison. This was also found to be present in the non-recidivist group in Zamble and Quinsey's (1997) study. They related these factors to the positive prosocial way non-recidivists deal with the development of life problems and negative emotion. However, in the current study the primary strategy endorsed to reduce recidivism risk was avoidance of high-risk situations. Evidence of this came from geographic isolation in many cases (57%) and in actively distancing themselves from contact with antisocial peers (78%). They all had strong beliefs about their risk of reoffending being increased when they associated again with antisocial associates. To distance themselves some had cut off contact with family close friends and several moved considerable distances to avoid contact.

A similar pattern of avoidance was identified by Haggard et al. (2001) where three out of his four participants lived an isolated way of life both socially, as well as geographically, with this avoidance being a conscious strategy. The powerful influence of antisocial associates as an environmental criminogenic factor for offenders viewed as 'lifelong criminals' has been supported by research into dynamic risk predictors (Andrews & Bonta, 1998; Brown, 2002).

A pattern of avoidance was also endorsed by the interview group as their primary strategy to deal with problems, often relying on the superior skills of partners to solve difficulties. While avoidance is generally viewed as a short-term strategy in terms of effectiveness, these offenders had managed to use it to prevent serious recidivism for a number of years. In keeping with both behavioural and cognitive

theories on avoidance it would be expected that over time when the offender 'slipped' and engaged in antisocial behaviour and was not punished with further imprisonment avoidance responding would gradually deteriorate (Mazur, 1994). From the interviews it was clear that these men had used geographic and social isolation to reduce potential opportunities for 'slips'.

Evidence in support of this view comes from the interview carried out with Case 3 where my notes disclose an incident where he had been considering moving back to a more populated area where he would have increased contact with former antisocial associates. However, within a period of only a few days in the new location he became involved in an impulsive violent assault that could have, and in his opinion should have, resulted in reimprisonment rather than a non-custodial sentence. This man immediately moved back into geographic/social isolation and stated that he has accepted that he may never be able to change this strategy. While Zamble and Quinsey (1997) postulate a model of maturation where improved problem solving, prosocial conflict resolution, and increased emotional control are involved, there is some growing evidence that for some serious offenders social and geographic isolation is a successful reintegration strategy. The difficulty is that release conditions often stipulate that offenders classified as at high risk of reoffending must reside in an area in which the Community Probation Service can monitor them.

The other most endorsed factor during the interviews was the association of the released offender with a prosocial stable partner after release. They made statements such as "*Having a partner who sticks by me, she also handles all the stuff that*

frustrates me"..." meeting my wife prior to release, she was a very religious woman". My impression from meeting some of the partners who accompanied study participants agreeing to interview was that they had indeed taken a strong interest in helping their partners stay out of prison. This improved social support has also been found in other studies (Leibrich, 1993; Zamble & Quinsey, 1997).

Most of those interviewed stated that they had reduced their substance abuse but all admitted to continued drug and or alcohol use. They said that this no longer involved 'bingeing' and tended to be carried out at home with only close prosocial friends or partners present. However, it should be pointed out that the most common reconviction for this group was for driving while intoxicated, many being convicted more than once for this offence since release. Therefore, while the reduction in substance abuse was expected to increase their self-control by improving awareness of consequences, this did not apply to offences with a low detect rate, such as driving while intoxicated.

Finally, in looking at resilience factors this study found high levels of enfeeblement among those who were interviewed. It was expected that some offenders due to age and lifestyle would not longer have the capacity to actively engage in previous patterns of violent behaviour. What was unexpected was that 64% would reveal significant problems in this area. While those who agreed to interview form a very small sample it certainly points to enfeeblement being a factor in reducing violent recidivism. It also increased awareness of the likelihood that they could become victims rather than predators if they were to return to prison. My impression

was that the chronic antisocial lifestyle they had experienced resulted in serious health related consequences when they reached late middle age. The study of Haggard et al. (2001) of high-risk chronic offenders also found a high level of physical disability with two of his four participants classified as disabled. This finding has also been confirmed in other research into the impact of old age on late criminal lifestyles (Hare et al, 1988; Harpur & Hare, 1994; Moffit, 1997).

In looking at the similarities with Leibrich's (1993) study the current research confirmed high rates of health difficulties and unemployment and better strategies for reducing the influence of antisocial associates. What was not found was evidence of shame being an important factor in motivating a reduction in offending. This may have been due to Leibrich's sample being younger and including women offenders. In addition, the emotion of shame would be regarded as contrary to the self centred, reward dominant style of many of the interview group.

In conclusion, it is clear from this study that this small group of offenders assessed as high risk were not a homogenous group. While this study has provided support for actuarial assessment of risk with instruments such as the PCL: SV it has also hopefully pointed to clinical factors that should be incorporated into a comprehensive risk assessment. Risk assessment without consideration of protective factors that may reduce risk or manage risk factors perpetuates the overemphasis on risk as a result of the availability heuristic. This bias occurs when the more available a representative category is (in this case information of recidivism risk), the greater the likelihood of classifying events using that category (Campbell, 2003). This does not

mean that risk assessment should ignore predictions of recidivism from actuarial measures such as the PCL: SV, rather that an effort should be made to be aware of possible protective factors to provide a balanced assessment.

Limitations of the Study

This validation study was designed to investigate the validity of the PCL:SV as a reliable and valid measure for predicting serious recidivism. The follow-up of the false positive error group has provided accurate information on the decision errors that accompany the use of specific risk based score cut-offs.

Although the PCL: SV was not originally developed as a risk appraisal instrument, this has become, as in the case of the PCL-R, the main applied use of the instrument (Bonta, 2002; Ogloff & Lyon, 1998; Serin & Brown, 2000). With the widespread use of the PCL instruments in risk assessment there is a need for clinicians and parole authorities to be aware of the limitations of the instruments (standard error of measurement, decision error rates, and appropriate validation samples). Any actuarial measure of risk used in judicial settings, such as assisting parole decision-making, or sentencing options will attract legal and ethical challenge to its use. Therefore, clinicians or parole authorities that use the results from this study for risk assessment need to attend to a series of best practice guidelines to reduce such challenge.

These guidelines have been outlined for the applied use of the PCL-R in risk prediction by Serin and Brown (2000) and for recidivism assessment in general in a

recent paper by Bonta (2002). The first guideline is that risk assessment should be based on actuarial measures of risk rather than clinical judgement or unstructured or untested measures (Bonta, 2002). In fact, it is becoming established that risk assessment that fails to incorporate such measures may even be regarded as unethical or unprofessional (Grove & Meehl, 1996; Quinsey et al., 1998).

Bonta (2002) points to actuarial measures being defined by being structured, quantitative, and empirically linked to a relevant criterion, in the case of this study serious recidivism. The next guideline proposed by Bonta is that any measure used to for risk assessment must demonstrate predictive validity. In other words it must be evaluated as in the current study on its ability to predict particular recidivism outcomes such as reimprisonment. In addition, such validation should have been carried out using an offender population (age, ethnicity, index offending etc) that is applicable to the one to whom you propose to administer the PCL: SV (Serin & Brown, 2000). Bonta (2000) states that risk measures should not be used that were not specifically designed to predict criminal/violent behaviour, such as the MMPI or MCMI-III. However, it was acknowledged by Bonta that the PCL instruments are designed to assess antisocial traits (Factor 1) and behaviours (Factor 2). In addition, Bonta confirmed that the PCL instruments have theoretical support from a perspective with the most empirical support, the personality and social model of criminal behaviour (Andrews & Bonta, 1998).

As it is accepted that criminal behaviour has many causes (Andrews & Bonta, 1998), it is unlikely that any one risk appraisal instrument will apply equally for all

offenders and predicted outcomes (Serin & Brown, 2000). Therefore, comprehensive multi-domain assessment should be the norm in risk assessment (Bonta, 2002). The PCL: SV should not be the only measure or aspect considered in assessing an individual offender's risk of recidivism. While it does access multiple domains, interpersonal and affective deficits related to antisocial personality and previous criminal/antisocial history, it does not assess many other domains associated with criminal behaviour (Bonta, 2002). In particular, the PCL: SV does not directly assess a number of dynamic risk/resilience predictors such as family/marital support, substance abuse, employment, antisocial associates, and deviant arousal. However, the use of multi-instrument assessment does not necessarily mean increased precision as the inter-correlation between such measures is high leading to possible bias from shared method variance (Serin & Brown, 2000).

This leads on to my final point in relation to applying the results of this validation study to risk prediction, namely, that the PCL: SV scores should only be used to support conditional risk prediction statements. No one is at risk of committing any offence, twenty-four hours a day, in all settings (Ogloff, 1995). In interpreting a high score on the PCL: SV no static predictions of risk should be made, for example, 'John' will always be at high risk of violent reoffending. Risk is not a static entity and a number of dynamic predictors and clinical factors exist that identify exacerbating and resilience factors and situations (Andrews & Bonta, 1998).

Conclusion

The study was designed to investigate the validity of the PCL: SV as a reliable and valid measure for predicting serious recidivism for a New Zealand adult male offender sample. The study data supported the reliability and validity of the PCL: SV in predicting serious violent/sexual recidivism that is punished by reimprisonment. However, further study should be undertaken to validate the PCL: SV for other criminal populations, such as female offenders and youth offenders. In addition, the false positive study identified that the high-risk population is heterogeneous and that successful strategies to reduce risk may differ from those typically shown to be effective for lower risk criminal groups. Therefore, further research should occur with high-risk offenders who have successfully reintegrated back into the community after release in order to increase our understanding of how to integrate these factors into risk assessment.

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Appendices

Appendix A: PCL: SV Study Database

AGE	RAI	ROC	ROI	RECON 1=Yes	ROCROI	RECON TIME	REIMP 1=Yes	REIMP TIME	PCL TOTAL	F1	F2
29	49.8	0.8427	0.6406	1	0.539834	187	1	906	13	7	6
24	47.2	0.6751	0.5599	0	0.377988	4957	0	4532	4	4	0
46	64	0.9719	0.9154	1	0.889677	518	1	518	11	5	6
48	17.6	0.5031	0.2526	1	0.127083	444	1	786	12	9	3
31	49.6	0.9469	0.8041	1	0.761402	120	0	4532	4	2	2
41	34.4	0.6371	0.4695	1	0.299118	1116	0	4532	15	9	6
50	17.6	0.3105	1	0	0.3105	3830	0	4532	2	1	1
27	44.4	0.7999	0.9562	0	0.764864	2065	0	4532	6	2	4
31	65.8	0.8958	0.8149	1	0.729987	272	1	272	14	6	8
39	27.6	0.7974	0.9998	0	0.797241	4801	0	4532	1	1	0
29	67.6	0.9535	0.7552	1	0.720083	866	1	1319	13	6	7
38	34.8	0.695	0.7923	1	0.550649	518	1	3991	10	7	3
22	56.2	0.8526	0.4123	1	0.351527	184	0	4532	14	4	10
42	38.4	0.5222	0.5989	1	0.312746	1863	0	4532	3	1	2
22	79.2	1	1	1	1	116	1	116	21	9	12
69	16.8	0.3862	0.285	1	0.110067	831	0	4532	15	7	8
33	43.2	0.8622	0.4129	1	0.356002	700	1	1009	9	6	3
43	71.4	0.8255	0.4958	1	0.409283	449	0	4532	11	5	6
26	80.4	0.9885	0.8467	1	0.836963	147	1	147	19	8	11
26	56.8	0.991	0.8443	1	0.836701	280	0	4532	16	7	9
49	64	0.7541	0.3159	1	0.23822	382	1	1456	22	11	11
45	17.6	0.21	0.5833	0	0.122493	5167	0	4532	7	4	3
27	44.4	0.714	1	0	0.714	4472	0	4532	8	3	5
56	20.4	0.2445	0.9381	0	0.229365	4592	0	4532	3	2	1
27	78.4	0.9585	0.6554	1	0.628201	110	0	4532	20	9	11
32	78.2	0.8919	0.6732	1	0.600427	1852	0	4532	24	12	12
27	85.8	0.8983	0.7319	1	0.657466	26	1	1682	22	10	12
41	82	0.4033	0.6496	0	0.261984	2556	0	4532	8	6	2
25	77.2	0.8408	0.8816	1	0.741249	601	0	4532	16	8	7
42	57.2	0.5599	0.5293	1	0.296355	1196	1	1196	17	10	7
34	48.4	0.4755	0.9819	0	0.466893	3052	0	4532	4	1	3
36	32.8	0.965	0.8389	1	0.809539	102	0	4532	14	7	7
39	67.8	0.9063	0.7234	1	0.655617	661	1	1479	19	8	11
27	74.4	0.8418	0.6375	1	0.536648	415	0	4532	8	1	7
35	64.8	0.7574	0.4472	1	0.338709	1939	0	4532	17	12	5
25	73.2	0.9941	0.9502	1	0.944594	65	1	65	24	12	12
40	68.6	0.4463	1	0	0.4463	3758	0	4532	11	5	6
38	57.6	0.8906	0.7378	0	0.657085	3984	0	4532	16	6	10
54	71	0.9512	0.7783	1	0.740319	797	0	4532	23	12	11
29	67.8	0.9156	0.7647	1	0.700159	154	1	154	22	12	10
39	70.2	0.9952	0.9481	1	0.943549	110	1	1525	23	12	11
48	29.8	0.3344	0.1782	1	0.05959	768	0	4532	4	2	2
35	34.2	0.8915	0.8134	0	0.725146	4537	0	4532	4	2	2
46	59.8	0.7991	0.4085	1	0.326432	127	1	196	19	10	9
28	60.2	0.9807	0.8285	1	0.81251	440	1	1338	18	8	10
29	85.4	1	1	1	1	215	1	2256	23	12	11
37	58.6	0.8212	0.645	1	0.529674	251	1	554	20	8	12

AGE	RAI	ROC	ROI	RECON 1=Yes	ROCROI	RECON TIME	REIMP 1=Yes	REIMP TIME	PCL TOTAL	F1	F2
34	34.2	0.7012	0.8646	1	0.606258	940	0	4532	4	1	3
30	32.6	0.6487	1	0	0.6487	4425	0	4532	7	4	3
43	69.6	0.9829	0.9312	1	0.915276	536	1	882	22	12	10
61	15.2	0.7977	0.9887	0	0.788686	3725	0	4532	12	9	3
45	71.4	0.9639	0.7447	1	0.717816	518	0	4532	20	8	12
31	69	0.9739	0.8563	1	0.833951	245	1	1682	14	5	9
27	35.8	0.9744	0.7484	1	0.729241	188	0	4532	23	11	12
37	91.8	0.3862	0.9835	0	0.379828	3494	0	4532	3	2	1
53	27.2	0.5557	0.9028	1	0.501686	973	0	4532	15	9	6
41	51.2	0.3917	1	0	0.3917	5205	0	4532	7	5	2
38	78	0.9646	0.8571	1	0.826759	521	1	521	15	7	8
40	50.8	0.8452	0.533	1	0.450492	2702	0	4532	23	11	12
38	64	0.9575	0.8368	1	0.801236	126	1	126	22	12	10
87	46.8	0.256	0.2353	0	0.060237	2260	0	4532	13	10	2
44	80.4	0.8713	0.7525	0	0.655653	2034	0	4532	12	6	6
28	67.8	0.5241	0.9246	0	0.484583	4347	0	4532	3	1	2
31	59.4	0.9971	0.9155	1	0.912845	258	1	258	22	11	11
39	41.8	0.7388	0.7408	0	0.547303	2504	0	4532	18	11	7
36	72.2	0.7931	0.5153	1	0.408684	369	0	4532	6	3	3
24	35.8	0.961	0.9354	0	0.898919	3157	0	4532	10	3	7
22	63	0.9795	0.8553	1	0.837766	509	1	806	19	7	12
37	51.8	0.689	0.3557	1	0.245077	138	0	4532	10	5	5
24	49	0.9942	0.8268	1	0.822005	162	0	4532	16	8	8
29	78.6	0.8438	0.8302	0	0.700523	2737	0	4532	14	5	8
27	63.4	0.91	0.5965	1	0.542815	1680	0	4532	21	10	11
32	34.4	0.9673	0.7597	1	0.734858	1	1	2032	24	12	12
25	60.6	1	0.9999	1	0.9999	26	1	82	24	12	12
33	47.8	0.8977	0.6002	1	0.5388	410	0	4532	20	11	8
26	68.2	0.9938	0.896	1	0.890445	25	1	387	22	10	12
60	55.6	0.8187	0.8236	0	0.674281	2178	0	4532	11	8	2
27	78.2	0.9587	0.6797	1	0.651628	140	1	1568	17	8	9
23	36.4	0.9934	0.8743	1	0.86853	143	1	182	16	8	8
32	74.4	0.9555	0.6675	1	0.637796	467	0	4532	17	8	9
46	86.6	0.5028	0.2239	1	0.112577	2685	0	4532	11	4	7
23	40.6	0.9578	0.6764	1	0.647856	441	0	4532	22	10	12
26	29	0.9878	0.8948	1	0.883883	98	1	528	21	11	10
29	53.4	0.9609	0.6862	1	0.65937	237	0	4532	23	11	12
32	65.2	0.9797	0.7881	1	0.772102	715	0	4532	22	11	11
31	44.2	0.9942	0.9306	1	0.925203	42	1	436	22	10	12
33	68	0.509	0.2328	0	0.118495	5167	0	4532	10	6	4
27	84.6	0.9848	0.9828	1	0.967861	1042	1	1648	14	6	8
36	34.6	0.5039	0.9817	0	0.494679	2190	0	4532	12	9	3
29	23.8	0.4781	0.3415	1	0.163271	3318	0	4532	4	1	3
37	23.2	0.6114	0.544	0	0.332602	4017	0	4532	6	5	1
44	28.8	0.6548	0.8546	1	0.559592	383	1	2155	1	1	0
43	66.4	0.6176	0.2999	1	0.185218	1716	0	4532	10	5	5
27	55.4	0.9601	0.8681	1	0.833463	115	1	115	23	12	11
35	35.2	0.9067	0.5703	1	0.517091	350	1	350	20	10	10
31	78.4	0.9323	0.6327	1	0.589866	39	1	1287	20	7	12
44	45.8	0.603	0.9694	1	0.584548	1805	0	4532	21	12	8
32	24.4	0.9426	0.7073	1	0.666701	881	1	1388	10	3	7
28	26.6	1	1	1	1	137	1	137	23	12	11
24	66	0.9509	0.801	1	0.761671	421	1	470	21	10	11
30	78.4	0.6391	0.9722	1	0.621333	1983	0	4532	1	1	0

AGE	RAI	ROC	ROI	RECON 1=Yes	ROCROI	RECON TIME	REIMP 1=Yes	REIMP TIME	PCL TOTAL	F1	F2
32	49	0.7853	0.8482	1	0.666091	1672	0	4532	13	8	5
26	32.6	0.9876	0.9012	1	0.890025	17	1	1045	17	8	10
31	51.2	0.938	0.6323	1	0.593097	276	0	4532	15	4	11
30	91.6	0.9748	0.7718	1	0.752351	294	0	4532	15	6	9
35	41.6	1	1	1	1	4048	0	4532	9	3	6
37	46.8	0.6793	0.5193	1	0.35276	1044	0	4532	10	7	3
38	58.4	0.6922	0.4632	0	0.320627	3448	0	4532	2	2	0
27	38	1	1	1	1	226	1	226	23	12	11
27	77.2	0.9859	0.8874	1	0.874888	609	1	3101	20	11	9
59	80.8	0.457	0.6709	0	0.306601	3038	0	4532	6	1	5
37	32.6	0.986	0.9338	1	0.920727	259	1	259	24	12	12
29	50.6	0.9219	0.4854	1	0.44749	322	0	4532	14	4	10
43	55	0.4989	0.9792	0	0.488523	2975	0	4532	14	8	6
44	24	0.591	0.7221	0	0.426761	2517	0	4532	15	7	8
24	66	0.9997	0.9902	1	0.989903	107	1	107	23	11	12
29	18.8	0.8979	0.5759	1	0.517101	646	0	4532	10	7	3
33	53.6	0.9795	0.9187	1	0.899867	168	1	744	23	12	11
33	69.8	0.6285	0.8359	0	0.525363	3409	0	4532	6	3	3
42	31	0.7346	0.7171	0	0.526782	4116	0	4532	4	0	5
35	37.6	0.6265	0.5576	1	0.349336	4312	0	4532	10	6	4
50	39.2	0.5117	0.2546	1	0.130279	1251	0	4532	4	2	2
27	79.6	0.9855	0.7664	1	0.755287	237	0	4532	17	6	12
31	69.6	0.9999	0.9932	1	0.993101	165	1	599	22	11	11
43	80.4	0.8982	0.8285	1	0.744159	4927	0	4532	21	12	9
29	60.4	0.8942	0.9204	0	0.823022	2006	0	4532	8	3	5
23	30.2	1	1	1	1	107	1	200	16	7	9
31	81.8	0.977	0.7903	1	0.772123	91	1	91	17	9	8
27	38.2	0.9541	0.8187	1	0.781122	121	1	500	19	7	12
29	60.8	0.9237	0.62	1	0.572694	1178	0	4532	11	5	6
40	38	0.5786	0.6602	0	0.381992	2386	0	4532	2	1	1
38	20.8	0.9296	0.7845	1	0.729271	764	1	2341	15	5	10
23	83	0.9439	0.8998	1	0.849321	110	0	4532	14	7	7
45	52.4	0.5768	0.9473	0	0.546403	1842	0	4532	3	2	1
30	22.4	0.9274	0.6486	0	0.601512	1982	0	4532	22	12	10
81	74.2	0.3608	0.5769	1	0.208146	425	1	425	16	8	7
46	41.8	0.278	0.907	0	0.252146	1784	0	4532	13	9	4
28	66.8	0.7771	0.2759	1	0.214402	1772	0	4532	16	5	11
25	92.4	0.984	0.7845	1	0.771948	171	1	247	21	11	10
29	36.8	0.9676	0.7823	1	0.756953	275	1	3962	22	11	11
40	46.8	0.9747	0.8395	1	0.818261	253	1	2145	19	9	10
31	97.2	0.999	0.945	1	0.944055	106	1	384	23	12	11
44	53	0.9393	0.6349	1	0.596362	90	0	4532	22	10	12
38	80.4	0.411	0.9951	0	0.408986	2018	0	4532	14	11	3
30	29.4	0.7374	0.3799	1	0.280138	182	1	880	18	8	1
37	26	0.7099	0.6816	1	0.483868	344	0	4532	5	3	2
33	48	0.8203	0.555	1	0.455267	347	0	4532	4	1	3
	26	0.9961	0.8999	1	0.89639	1155	0	4532	8	3	5
26	83.8	0.9893	0.846	1	0.836948	77	1	318	21	9	12
32	56.2	0.7767	0.9853	1	0.765283	119	1	457	13	8	5
53	50.8	0.2994	1	0	0.2994	4963	0	4532	4	4	0
33	78	0.7313	0.3689	1	0.269777	806	0	4532	19	10	9
33	29.4	0.9503	0.9019	1	0.857076	1966	0	4532	19	11	8
22	68	0.9798	0.9145	1	0.896027	221	1	354	16	8	8
22	68.2	0.9804	0.8088	1	0.792948	107	1	107	19	11	8

AGE	RAI	ROC	ROI	RECON 1=Yes	ROCROI	RECON TIME	REIMP 1=Yes	REIMP TIME	PCL TOTAL	F1	F2
39	52.8	0.9323	0.7911	1	0.737543	392	1	1667	22	11	11
49	50.6	0.1502	0.5633	0	0.084608	4929	0	4532	8	2	6
31	17.6	0.6781	0.7104	1	0.481722	137	0	4532	13	6	7
21	67	0.9612	0.6586	1	0.633046	659	1	2003	17	7	10
31	17.6	0.6781	0.7104	1	0.481722	137	0	4532	13	6	7
27	63.4	0.9314	0.7221	1	0.672564	360	1	2605	20	11	9
33	35.6	0.9233	0.7019	1	0.648064	753	1	1797	15	6	9
32	25.8	0.946	0.6889	1	0.651699	159	0	4532	23	11	12
28	66	0.9846	0.889	1	0.875309	147	1	374	18	8	10
29	84.2	0.8996	0.8267	1	0.743699	347	1	347	21	10	11
28	76.4	0.9488	0.877	1	0.832098	467	1	467	19	8	11
32	66.2	0.9966	0.9371	1	0.933914	308	1	308	22	11	11
26	42.2	0.9464	0.8299	1	0.785417	295	1	3392	9	5	4
49	82.8	0.5551	0.3918	1	0.217488	178	1	178	14	7	7
31	47.6	0.7224	0.9874	1	0.713298	1983	0	4532	9	7	2
25	58.6	0.7161	0.9055	0	0.648429	2435	0	4532	10	5	5
27	40.4	0.928	0.7632	0	0.70825	2234	0	4532	15	5	10
41	40.8	0.6403	0.759	0	0.485988	2253	0	4532	8	3	5
22	52.8	0.9885	0.9094	1	0.898942	771	1	771	12	1	10
36	45.6	0.9984	0.9678	1	0.966252	393	1	986	20	8	11
24	81	0.8871	0.7819	1	0.693623	92	1	2445	21	11	11
35	48	0.4074	0.9974	0	0.406341	3129	0	4532	5	5	0
35	57	0.9727	0.8602	1	0.836717	1078	0	4532	19	10	9
26	46.2	0.9234	0.5336	1	0.492726	64	0	4532	9	4	5
48	60.4	0.8451	0.792	1	0.669319	945	1	945	20	8	12
26	55.4	0.8296	0.409	1	0.339306	1076	0	4532	7	3	4
38	53.6	0.908	0.7096	1	0.644317	391	1	391	22	12	10
50	73	0.6834	0.2663	1	0.181989	607	0	4532	17	10	7
37	26.2	0.8051	0.5815	1	0.468166	747	1	747	7	5	2
27	32.6	0.9037	0.6673	1	0.603039	802	1	802	8	3	5
39	60.2	0.8478	0.5667	1	0.480448	407	0	4532	18	10	8
28	62.2	0.9939	0.858	1	0.852766	149	1	1759	23	11	11
36	87.2	0.572	0.8435	1	0.482482	2821	0	4532	8	4	4
31	19.6	0.8089	0.6613	1	0.534926	405	0	4532	12	5	7
63	31.2	0.0368	0.5555	0	0.020442	4506	0	4532	9	5	4
31	27.8	0.5584	0.7641	1	0.426673	691	0	4532	10	7	3
74	13.2	0.1934	1	0	0.1934	4857	0	4532	13	11	2
30	56.8	0.9956	0.9536	1	0.949404	370	1	370	20	10	10
25	22.2	1	0.997	1	0.997	172	1	411	18	8	10
36	68.2	0.991	0.9352	1	0.926783	139	1	667	21	10	11
38	22.2	0.9871	0.7952	1	0.784942	475	1	1661	7	2	5
27	43.6	0.9244	0.6777	1	0.626466	71	0	4532	16	4	12
26	76.8	0.9999	0.9927	1	0.992601	347	1	347	20	8	12
31	45.8	0.9548	0.8969	1	0.85636	666	1	1752	9	4	5
32	57.2	0.9918	0.8862	1	0.878933	223	0	4532	16	9	7

Appendix B: Psychopathy Checklist: Screening Version

For copyright reasons the Psychopathy Checklist Screening Version (PCL: SV) cannot be reproduced here. However, a summary of the instrument is provided below

The PCL: SV (Hart, et al., 1995) consists of 12 items assessed using collateral review and a structured interview format. The items are listed below:

1. Superficial
2. Grandiose
3. Deceitful
4. Lacks Remorse
5. Lacks Empathy
6. Doesn't Accept Responsibility
7. Impulsive
8. Poor Behavioral Controls
9. Lack Goals
10. Irresponsible
11. Adolescent Antisocial Behavior
12. Adult Antisocial Behavior

The items are of a standard format with the assessor asked to rate the participant on the strength of credible evidence for or against the items using a three point ordinal scale (0, 1, 2) with total, and two factor scores produced. Factor 1 is items from 1-6 and Factor 2 items 7-12. The score range is 0-24.

The manual states that the PCL:SV total score should be interpreted as a dimensional measure of how much an individual matches the 'prototypical' criminal psychopath. For diagnostic purposes a cut-off score of ≥ 18 is recommended, this has a sensitivity of 100%, in other words this scores includes all those who if subject to a full PCL-R assessment would meet the diagnostic criteria. However, this cut-off score also has a specificity of only 82%, thus a false positive decision error rate whereby 18% would not meet the diagnostic criteria of the PCL-R.

Specimen item scoring description:

Item 2: Grandiose

"Individuals who score high on this item are often described as grandiose or as braggarts. They have an inflated view of themselves and their abilities. They appear self-assured and opinionated in the interview (a situation where most people are somewhat reticent or deferential). If they are in hospital or prison, they attribute their unfortunate circumstances to external forces (bad luck, the "system") rather than themselves. Consequently they are relatively concerned about their present circumstances and worry little about the future.

Appendix C: Chapter Four Results

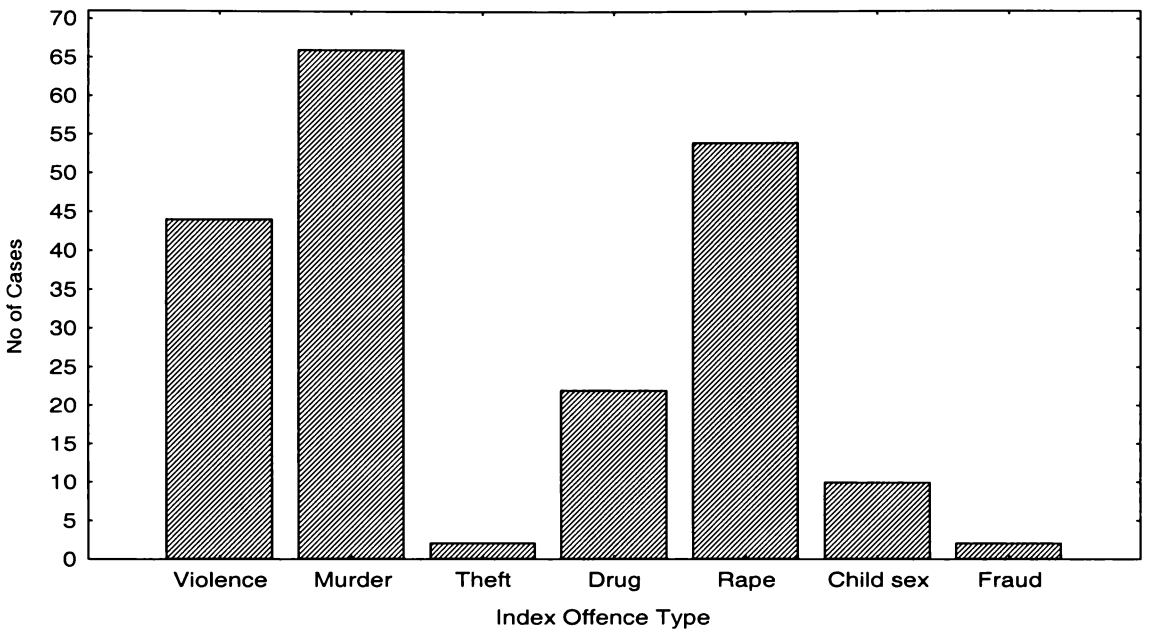


Figure C1. Distribution of index offence for all participants involved in the PCL study

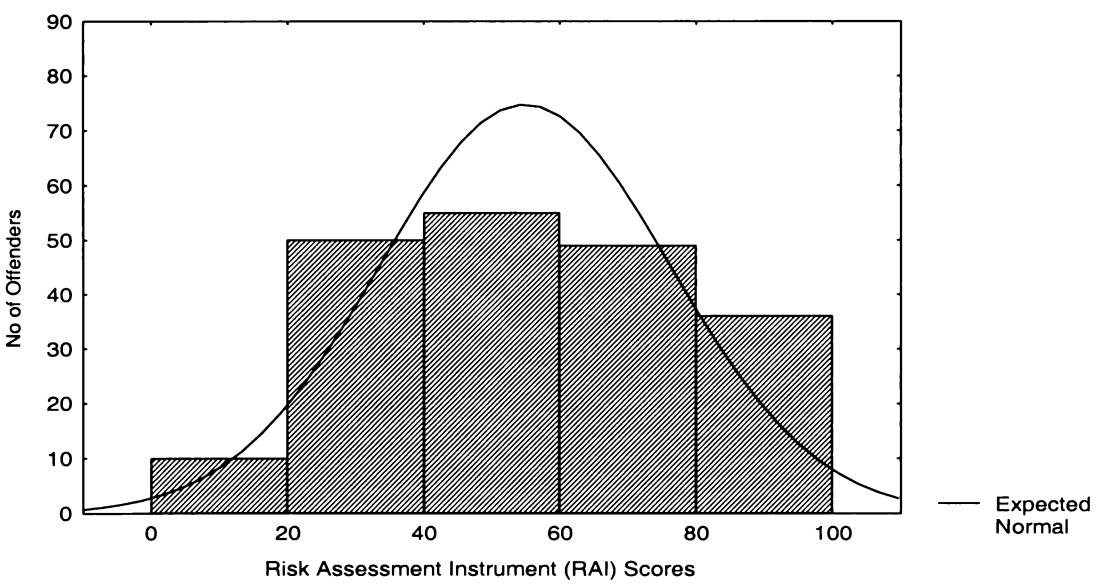


Figure C2. Distribution of RAI scores for all participants involved in the PCL: SV study

Table C3.
Cumulative Frequencies for RoC*RoI Scores from all Participants Involved in the Study

RoC*RoI Score	Count	Cumul Count	Percent	Cumul Percent
-.01454<x<=.055426	1	1	0.50	0.50
.055427<x<=.125395	7	8	3.52	4.02
.125395<x<=.195363	6	14	3.01	7.03
.195363<x<=.265331	8	22	4.02	11.05
.265332<x<=.335300	11	33	5.53	16.58
.335300<x<=.405268	10	43	5.02	21.61
.405269<x<=.475237	12	55	6.03	27.64
.475237<x<=.545205	20	75	10.05	37.69
.545205<x<=.615173	13	88	6.53	44.22
.615174<x<=.685142	22	110	11.05	55.28
.685142<x<=.755110	19	129	9.55	64.82
.755111<x<=.825079	21	150	10.55	75.38
.825079<x<=.895047	21	171	10.55	85.93
.895047<x<=.965015	15	186	7.54	93.47
.965016<x<=1.03498	13	199	6.53	100

Table C4.
Cumulative Frequencies for RAI Scores from all Participants Involved in the Study

RAI Score	Count	Cumul Count	Percent	Cumul Percent
10<x<=16	2	2	1.00	1.00
16<x<=22	11	13	5.53	6.53
22<x<=28	13	26	6.53	13.06
28<x<=34	15	41	7.54	20.60
34<x<=40	16	57	8.04	28.64
40<x<=46	16	73	8.04	36.68
46<x<=52	20	93	10.05	46.73
52<x<=58	19	112	9.55	56.28
58<x<=64	18	130	9.04	65.32
64<x<=70	25	155	12.56	77.90
70<x<=76	9	164	4.52	82.41
76<x<=82	22	186	11.00	93.50
82<x<=88	9	195	4.52	98.00
88<x<=94	3	198	1.51	99.50
94<x<=100	1	199	0.50	100
Missing	0	199	0	100

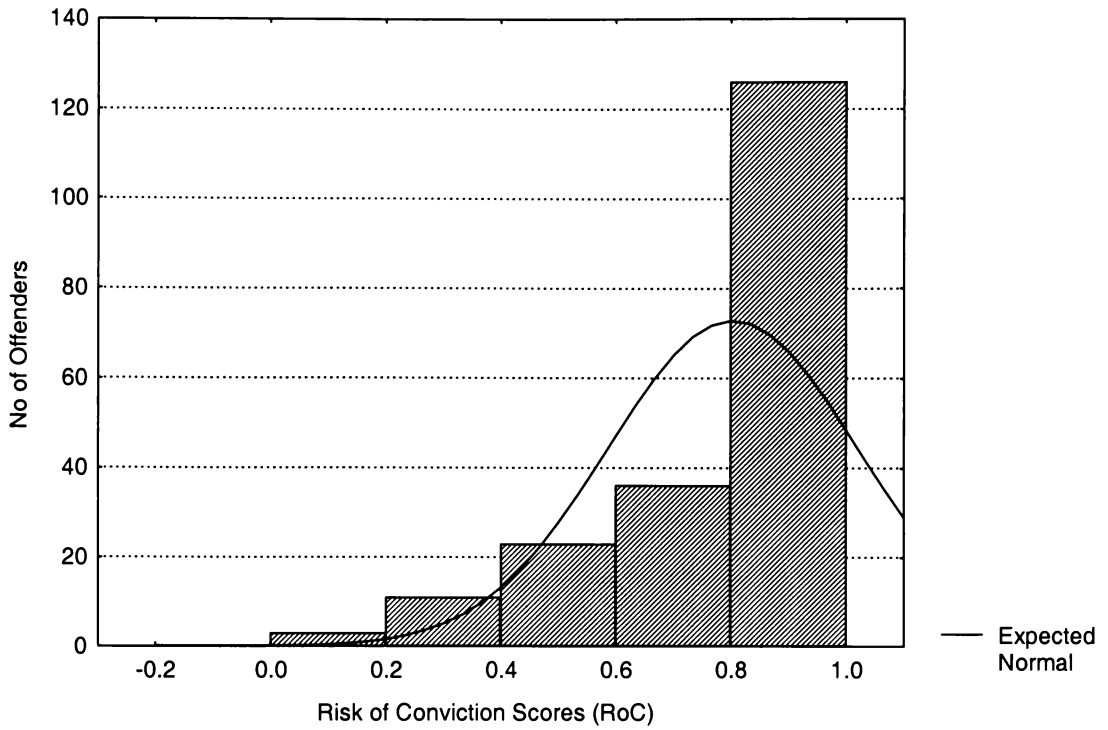


Figure C5. Distribution of RoC scores for all participants involved in the PCL:SV study

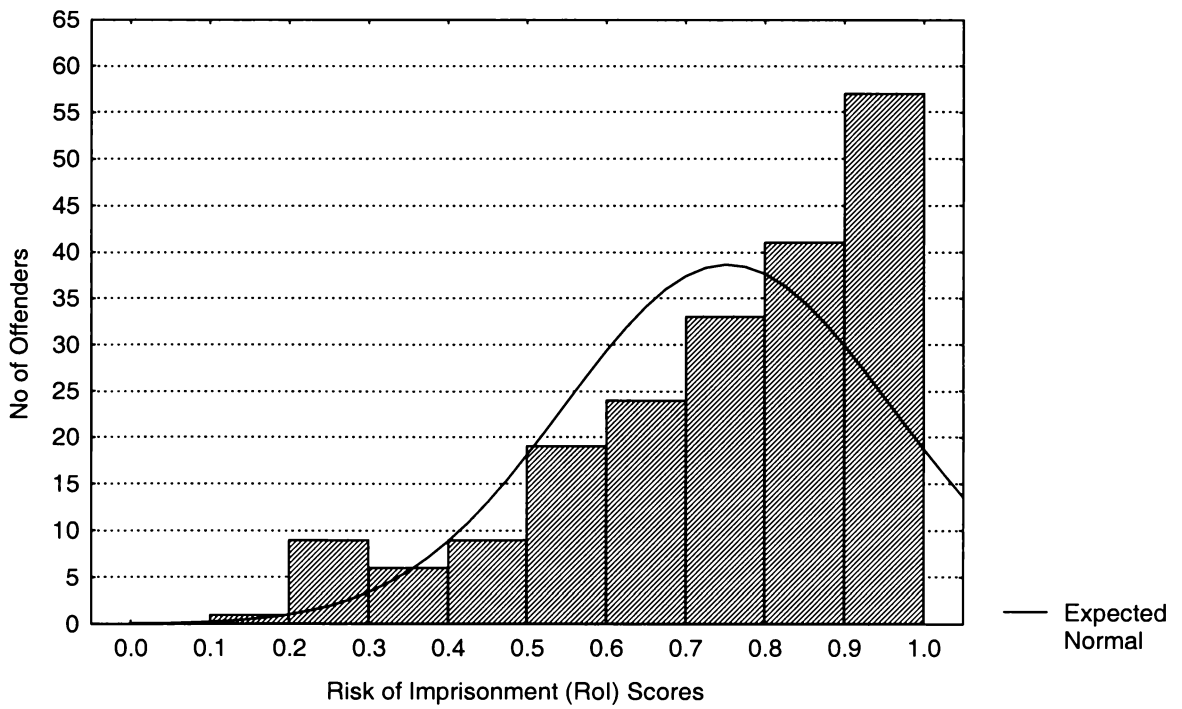


Figure C6. Distribution of RoI scores for all participants involved in the PCL:SV study

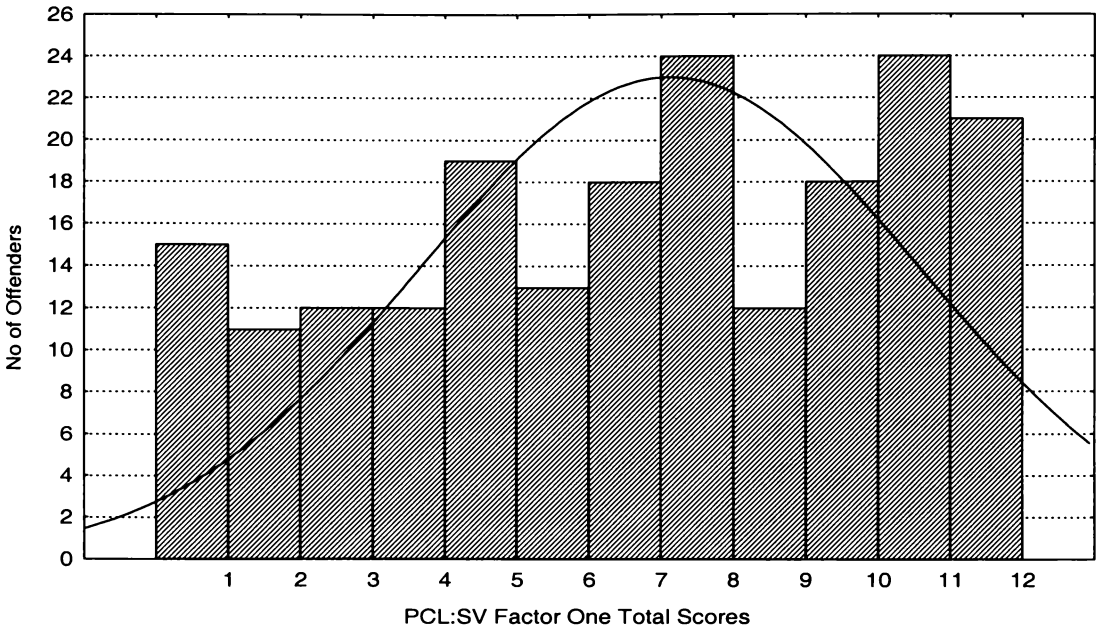


Figure C7. Distribution of PCL: SV Factor 1 scores for all participants involved in the study

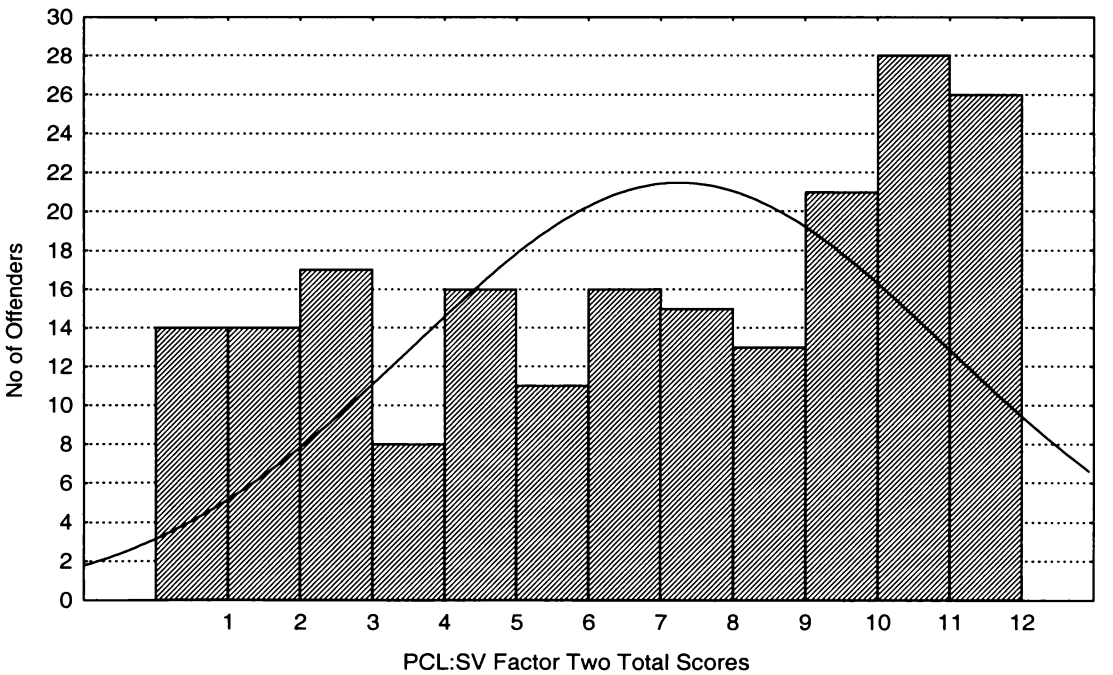


Figure C8. Distribution of PCL: SV Factor 2 scores for all participants involved in the study

Table C9.

Cumulative Frequencies for PCL: SV Scores from all Participants Reimprisoned

PCL: SV Score	Count	Cumulative	Percentage	Cumul %
7	2	2	2.70	2.70
8	1	3	1.35	4.05
9	2	5	2.70	6.76
10	1	6	1.35	8.11
11	1	7	1.35	9.46
12	2	9	2.70	12.16
13	3	12	4.05	16.22
14	4	16	5.40	21.62
15	2	18	2.70	24.32
16	4	22	5.40	29.73
17	4	26	5.40	35.13
18	4	30	5.40	40.54
19	7	37	9.45	50.00
20	7	44	9.45	59.46
21	7	51	9.45	68.92
22	12	63	16.21	85.13
23	8	71	10.81	95.94
24	3	74	4.054	100

Table C10.

Cumulative Frequencies for PCL: SV Scores from all Participants Not Reimprisoned

PCL: SV Score	Count	Cumulative	Percentage	Cumul %
1	3	3	2.4	2.4
2	3	6	2.4	4.8
3	5	11	4.0	8.8
4	11	22	8.8	17.6
5	2	24	1.6	19.2
6	5	29	4.0	23.2
7	4	33	3.2	26.4
8	8	41	6.4	32.8
9	5	46	4.0	36.8
10	10	56	8.0	44.8
11	5	61	4.0	48.8
12	4	65	3.2	52.0
13	5	70	4.0	56.0
14	7	77	5.6	61.6
15	8	85	6.4	68
16	7	92	5.6	73.6
17	5	97	4.0	77.6
18	2	99	1.6	79.2
19	4	103	3.2	82.4
20	5	108	4.0	86.4
21	4	112	3.2	89.6
22	5	117	4.0	93.6
23	6	123	4.8	98.4
24	2	125	1.6	100

Appendix D: Participant Information and Permission Form

Study into those who successfully reintegrate after prison
Participants Information and Permission Form

Researcher contact details: Nick Wilson
Senior Psychologist
Corrections, Psychological Service
P O Box 19 003 Hamilton
Phone (07) 834 7086
(025) 296 2005

The Corrections Department has started a research project into how offenders released by the National Parole Board successfully reintegrate ('fit back') into the community. This is viewed as very important because in general offenders who have served long prison sentences are at high risk of reimprisonment within five years of release into the community. You have been selected to take part because Corrections records indicate that you have not been reimprisoned during the first five years following your release from prison. Therefore, your experiences and knowledge are viewed as very valuable by the Corrections Department. The information we get from these follow up interviews will be used to provide information to the Corrections Department of New Zealand about what helps to reduce the risk of reoffending for offenders. The information will be used in a research study approved by Waikato Universities ethical procedures for research: Contact about this research can also be made with my supervisor:

Supervisor contact details: Dr Ian Evans
Waikato University
(07) 838 44 66 Extn 8298

If you agree to take part in an interview as part of this study, the researcher, Senior Psychologist, Nick Wilson will travel to your area to speak with you. Please feel welcome to invite a support person to be present for the interview. It is expected that the interview will take approximately 2 hours of your time. You will be asked questions and given questionnaires about the following areas:

Life in the community (relationships, work, time use, concerns);
Problems and coping (how many, type of problems, when and why, how you coped);
Emotions (self report on your mood, any anxiety, down moods, stress, alcohol and drug use);
Thoughts (about money, drug or alcohol abuse, good or bad about the future, for or against crime);
Discussion on the thing happening before and after any minor convictions during the period following your release.

Please note that you will be offered the choice of seeing Nick Wilson at a local Community Probation Office or a neutral (another) venue, this can be discussed later.

A $20.00 petrol voucher will be supplied to you to help with expenses.

Your name will not be used to record information. Instead only a number will identify any information you give during interview or on questionnaires. All personal information that you give will not be told to anyone so nobody can know that what you wrote or said came from you. No information that would identify you will be published or made available to Corrections Department staff, or anyone else. There is no (deception) tricks involved in this study. A brief summary of information from these interviews will be sent to you for your information when the project is completed.

There is one situation when information about you may be reported and that is if we receive information that someone plans to harm themselves or someone else. In that case we may have to pass that information on to make sure no one is hurt.

Doing this interview is strictly voluntary (that is you only do it if you want to) and will have no effect, good or bad, on any aspect of your interactions with the Department of Corrections.

You are free to withdraw from the evaluation at any time without penalty of any kind!

Next Step: Please note that you do not have to do anything else at this stage. You will be contacted by phone (or a further letter if this is not possible) and asked if you wish to participate. Any questions you may have will be answered and an appointment arranged at your convenience.

Consent

Signing this form before the start of the interview provides permission for Nick Wilson, Senior Psychologist, Corrections Psychological Service to conduct an interview to discuss my reintegration into the community after my release from Prison. I understand that I may decide not to go ahead with the interview and there will be no questioning of my actions.

I _____ have read (or have had read to me) and understand the above and agree to take part in this study.

Participants' signature:_____ Date:_____

Appendix E. FReMO Focus Group Meeting PCL Research Year Two

Framework for reducing Maori reoffending (FReMO) focus group meeting: PCL Research Year Two

25 January 2001

Researcher: Nick Wilson
Senior Clinical Psychologist
Department of Corrections
Psychological Service
Hamilton
P O Box 19 003
Direct dial (07) 834 7086
E-mail nick.wilson@corrections.govt.nz

Background to the proposed research and the FReMO process

Year Two PCL project research

This research is part of a large study into the relationship between a personality style associated with lifelong offending, namely, criminal psychopathy and reoffending risk. The literature reports that offenders assessed as criminal psychopathic/severely antisocial do not change and continue to reoffend usually within a short time of release. These offenders have typically not responded to current treatment programmes or rehabilitation initiatives. However, overseas research into similar offenders identified a sub-group assessed as psychopathic and thus high risk who do not return to prison. Research I carried out in 1999-2000 (Year one PCL research) confirmed that psychopathy was the best available reoffending risk factor, especially for serious violent offending for offenders released by the Parole Board. In addition, this research also identified a small group (a total of 32 offenders) who based on their score for psychopathy, were regarded as at high risk of serious reoffending. This group of offenders over a period of at least five years following release were not reconvicted for serious offences. It should be noted that over 80% were reconvicted for minor offences.

The explanation as to why these offenders stop what appears to be a stable consistent pattern of antisocial behaviour varies from they were wrongly assessed as psychopathic to they have left the country or died. Explanations from those involved in their supervision speak of "finding a good woman...landing a good job"...stopping substance abuse" etc. However, as yet no systematic research has looked at the reasons these men have changed often lifetime patterns of criminal behaviour. With the large amount of evidence that our current treatment approaches are not successful with offenders deemed psychopathic there is a need to look at the small group who appear to be 'denying the odds' to perhaps learn from them strategies and conditions that could help similar offenders.

FReMO Process

The '*Framework for Reducing Maori Offending*' (FReMO) was developed by Maori Clinical Psychologist, Garry McFarlane-Nathan (1999). This structured approach is all about achieving quality in services and policy in order to reduce Maori offending. FReMO seeks to access information from Maori concepts in order to enrich the knowledge base that can then guide initiatives such as the proposed research into the recidivism process. With respect to the proposed research, FReMO is about enhancing existing Western methodology and knowledge by accessing Maori perspectives and concepts to ensure that key areas of knowledge are not missed and that the gathering and analysis of data is not biased or misused.

A focus group comprising key Maori stakeholders (therapists, Probation Officers, offenders, elders) was seen to be one way of gathering this critical information prior to the development of the data gathering method.

The year two PCL research at this stage will consider gathering information on the following areas already identified as significant from previous studies into the process of reoffending:

Personal history

Age at release

- School achievement (and problems)
- Stability (longest time): In same residence; same job; sexual relationship
- Family members with criminal history
- History of psychological problems
- Suicidal attempts or thoughts
- Level Service Inventory-Revised (total and subscales)

Criminal history

- Total prior offences
- Total violent prior offences
- Age when first in trouble with the law
- Security level prior to last release
- Number of institutional misconduct's during last period imprisonment

Lifestyle after release

- Employment (both paid and voluntary)
- Marital/De facto status
- Living in familiar residential area
- Main source of income
- Satisfaction with employment/income
- Criminal Socialisation Scale
- Social Isolation Scale: Millon Clinical Multiaxial Inventory-Version III (MCMI-III)
- Active associate/member of gang
- Time spent in activities: Family; cultural: hobbies; listening to music; TV; physical activity; sport; casual socialising; self-improvement.

- Time Use/Time Framing Scale

Parole period

- Length of parole
- Release conditions
- Relationship with Probation Officer
- Cultural/gender/age match Probation Officer and parolee
- Violation of release conditions

Substance abuse

- Frequency of drug use (days/month
- Choice and number of drugs used
- Frequency and quantity of alcohol use
- Usual effects of alcohol use; increases violence; social activity; conflict
- Alcohol and drug abuse scales from the MCMI-III

Post-release problems experienced and coping strategies

- Specific problems plotted on a time line
- Problem seriousness rating
- Coping Situations Questionnaire
- Relationship between problems and feelings

Emotional regulation

- Beck Depression Inventory-II
- State Trait Anxiety Inventory
- State Trait Anger Expression Inventory
- Depressive Personality; Dysthmia; Major depressive episode scales from the MCMI-III

Cognitions (Thoughts/Beliefs)

- Rating of quality of life in the period following release; break into six months after release; 1 year; two years; five years.
- Confidence of success in preventing serious antisocial behaviour
- Thoughts about reoffending on a timeline covering at least five years
- Social Desirability Scale (could use the desirability scale from the MCMI-III)

Offending following parole

- Type of new offence and sentence received
- Number of new offences. Plot on time line for the five years following release
- Days to first new offence following parole
- Thoughts and behaviour and environmental events prior to reoffending
- Coping strategies? If used what were they
- Recall of decisions made that lead up to reoffending.

Possible Focus Group Questions

The questions listed below are to help the focus group think about what has changed for offenders in this study regarded as at high risk of serious reoffending from a measure of criminal psychopathy. What has aided them in not committing further serious offences over the five years since their release from prison?

Was it finding employment?

Finding a stable relationship?

Is it developing a strong cultural identity?

Is it being able to gain control over substance dependence?

Is it having strong whanau support where they live?

Was it just good luck?

Did gaining religious faith change their engagement in criminal activity?

Was it spiritual knowledge, or belief?

Was it the influence of someone they respected?

In addition to looking at possible reasons for a reduction in criminal behaviour I would like you to think about how this information should be gathered.

Consider the method of gathering this i.e., from probation files, interview of the offenders, having the offenders answer questionnaires etc and the cultural bias of the researcher in both gathering data and later analysis.

What can I do to prevent error and maximise this opportunity?

Appendix F. FReMO focus group meeting on the non-recidivists study – PCL:SV Research Year Two

Summary of FReMO Focus Group Meeting on the Non-recidivists Study (PCL Year Two)

Held: 25 January 2001, 9.30am-12.00pm

Location: Community Probation Office, Papakura Auckland

Present: Nick Wilson Senior Psychologist; Bxxx (ex offender); Tony Iwikau, Probation Officer; Txxxx (ex offender) Ratapu Rangiawhia, Program Manager, Montgomery House; apologies from Jill Parsons (Raukura Hauora o Tainui)

Introduction: Karakia used to start consultation meeting followed by whakawhanaunagatanga. Nick then spoke about his research and gave those gathered an idea about the FReMO process and how this would guide the proposed study. A handout was given to all participants detailing the project and the FReMO process.

Notes on meeting:

Bxxxx began by discussing why he had decided not to return to crime after release, he said he had young kids and his wife had been forced to work while he had been in prison. His family had waited for him while he was in prison and he was able to get back with them after release. He added his reasons for going straight were he wanted to be around for them; did not want them to suffer financially or from the stigma his offending brought; and that he loved his family.

Tony then spoke about Txxxx (ex-offender). He said that Txxxx had been separated from his whanau but his participation in 'Straight Thinking' had lead to prosocial changes. He added that Txxxx had been able to successfully reunite with his family because of the new skills he had learnt. Namely, being able to negotiate, display empathy, and take responsibility for his behaviour. Nick asked Tony why he thought Txxxx had done "Straight Thinking". Tony replied that it was part of his condition but that Txxxx had also been influenced by a Maori peer (both Black Power members) who had been through the treatment programme.

General Question to group: *What would cause Maori to change?* Answers were; involvement of elders in supervision; use of Maori process in Probation Service; some Maori more organised and that lead to change. Ethnicity of the Probation Officer; Bxxxx said that non-Maori PO's often did not listen to what he said, were blunt, to the point; ignorant, treated it just as a job, no use doing a job like PO if you don't feel for it. Ratapu mentioned education but that it had to be followed by application to become habit forming. He went on to discuss the role that wairua played, he spoke of the men from the Rimutaka Maori focus unit who had come to Montgomery House, he said these men had the education on Maori but this had only been applied within the unit, "they became like robots" but did not have the wairua. Tony talked about the balance between the Maori and Pakeha world. Discussion then on makutu (bewitch, curse) the need to 'ghost bust' these to bring about change. Tony discussed psychiatric disorders, told of client, young boy. He said he spoke to boy's kuia, she had told him that boy had broken a sacred object in her home and that this had

resulted in his disturbed behaviour. Discussion then moved to the appropriateness of Nick asking questions about this area (Txxxx arrived at meeting). Statements made about people how Maori just seeing them as evil, Maori intuitive about where other Maori are, able to do the basics (cultural process), need to happen first. This establishes rapport with the client and even though the client may not be "tuturu Maori", they have a respect for tikanga and its place within themselves.

Txxxx then spoke about a man he knows who has stopped crime. He said this man is his own boss now (can't steal from self), and has staff and responsibilities. Txxxx said this man had also done the programme (ST) but before this while in prison a Maori person in a church had spoken to him, even though it was a church thing it was the wairua, (Ratapu added, any indigenous people without wairua struggle and generally learn by rote.)
Txxxx went on to say his friend had also got back into Maoritanga and also back with family. He said when you look at him now he has a glow, it's just like he woke up. Ratapu commented, if you have knowledge of things Maori, that's good but no understanding it's no good. Txxxx made a comment that setting goals had been very important for him to stop offending.

Tony went on to say that Maori have a strong sense of knowing when they get the 'bone' pointed at them, they believe it suppresses their wairua and consequently they become sick, hence "Mate Maori". Ratapu talked about Tike and Poona, Tike being external and Poona internal, and that PONO is the key for real change. Tony talked about a man, programme after programme, but no change, something missing. What it boiled down to was he was Maori and there was hidden offending against family, trauma affecting the wairua. Ratapu spoke of a cousin, who committed a murdered last year, kaumatua said it was always going to happen, it was part of the man's whakapapa. Ratapu said, there was a need to be able to awhi, care, touching, with porangi (crazy), always someone taking care of them and about finding them potential in the person to build them up. Txxxx mentioned that after his release he had injured his leg, had nothing better to do so started treatment in ST, became engaged when he saw the value of the programme.

Ratapu mentioned he had to leave, decision made to bring meeting to an end, karakia said, participants then invited to have a cup of tea and some food. Nick told group notes would be typed up and after checking with Tony would be sent out for their approval. He also added that he was open to hearing from them about any ideas that they had that came to them after the meeting.

Summary of Meeting (by Nick)

- Having links to whanau who wanted them back was indicated as important factor in stopping offending.
- Strong positive influence provided by other Maori offenders who had decided to change.
- Influence of kaumatua helps motivation to address offending.
- Maori Probation Officers viewed by offenders as able to hear them.
- Good working knowledge of Tikanga to assist in the healing process.
- Cultural or prosocial knowledge without wairua not viewed as effective in changing behaviour. Rote learning without 'depth'. Pono (internal change necessary).

- Need to assess and address makutu to reduce risk for some Maori offenders. This assessment and treatment can only be carried out by experienced Maori Probation staff or therapist.

Appendix G: Interview Guide – PCL: SV False Positive Study

Interview Guide (PCL Y2 Study)

Name: Date:

Interviewer: Nick Wilson, Senior Psychologist, Psychological Service

Other present:

Setting:

Start by going through LSI-R

Personal history

(all the information in this section will be gathered by administration of the LSI-R)

- Age at release
- School achievement (and problems)
- Stability (longest time): In same residence; same job; sexual relationship
- Family members/friends with criminal history
- History of psychological problems
- Medical History, does the participant have ongoing problems
- Suicidal attempts or thoughts

Criminal history

(note I already have this data from file info so will not seek details from interview).
Please note I will ask the following general questions:

Q "What age did you first start getting into trouble with the Police?"

Q "What comments would you make about your history of offending?"

Q "Were there difficulties with Prison rules during your imprisonment?"

- **Q**: What was your security level prior to last release?

Get below from file information

- Total prior offences
- Total violent prior offences
- Age when first in trouble with the law
- Number of institutional misconduct's during last period imprisonment

Lifestyle after release. The section will all be answered from interview. Questioning to start with

***Q**. Many men have problems fitting back into the community after release, how has this been for you?*

Follow-up questions will then be asked around the specific areas listed below.

- Employment (both paid and voluntary)
- Marital/De facto status
- Living in familiar residential area
- Main source of income
- Satisfaction with employment/income
- Interpersonal functioning: Administer *Millon Clinical Multiaxial Inventory-Version III* (MCMI-III)
- Active associate/member of gang
- Time spent in activities: Family; cultural: hobbies; listening to music; TV; physical activity; sport; casual socialising; self improvement.

Parole period

- Length of parole (information gained from file info)\
- Release conditions (information gained from file info) Check during interview
- Relationship with Probation Officer

- **Q** "*was your relationship with your Probation Officer a positive or negative experience?*" This question will then be followed by further investigation of what made it positive or negative).

- Cultural/gender/age match Probation Officers and parolee (**Q** "*Describe your Probation Officers* ?...use specific questions to elicit answers to main demographic areas)

- Violation of release conditions (from file information)

Substance abuse

Questioning to start with

Q "*Many men have problems with alcohol and drugs after release, has this been a problem for you?*"

- Frequency of drug use (days/month)
- Choice and number of drugs used
- Frequency and quantity of alcohol use
- Usual effects of alcohol use; increases violence; social activity; conflict

Post-release problems experienced and coping strategies

Questioning to start with

Q *Many men find they have lots of problems after release, please tell me about what if anything has happened for you?*

Q Using this time line can you show when they occurred?

- Specific problems plotted on a time line marked 6 months, 1 year, 2 year, 3 year, 4 year, 5 year.

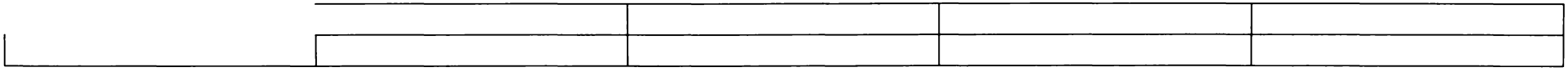
See attached time line next page

- Problem seriousness rating

- *Q Please indicate on a scale 1-10 how serious the problems were for you?*

1	2	3	4	5	6	7	8	9	10
Not serious				Serious					Very Serious

Problems Timeline



0 _____ 6 Months_____1 yr

_____ 2 yrs _____ 3 yrs

Coping Situations Questionnaire

Administer this if time permits

Q How do you generally cope with problems?

(look for positive structured approach v/s negative reactive, impulsive approach.

Emotional regulation

- ***Administer*** *State Trait Anger Expression Inventory-II*
- ***Administer*** *BIS/BAS scales*
- ***Administer*** *Interpersonal Measure- Psychopathy (after interview)*

Cognition's (Thoughts/Beliefs)

Questions:

Q *"I would like to ask you about the thoughts/beliefs you have had over the last five years about keeping out of trouble*

Q what did you think about you ability to stay straight when you were first released?"

- Rating of quality of life in the period following release; break into six months after release; 1 year; two years; five years. Use rating of 1-10, greatest to really bad.

Six months

1	2	3	4	5	6	7	8	9	10
The worst				Reasonable					The greatest

One year

1	2	3	4	5	6	7	8	9	10
The worst				Reasonable					The greatest

Two years

1	2	3	4	5	6	7	8	9	10
The worst				Reasonable					The greatest

Five years

1	2	3	4	5	6	7	8	9	10
The worst				Reasonable					The greatest

- **Confidence of success in preventing serious antisocial behaviour.**

  Use rating 1-10.

When released?

1	2	3	4	5	6	7	8	9	10
Not confident				Moderate					Very confident

Now?

1	2	3	4	5	6	7	8	9	10
Not confident				Moderate					Very confident

- Thoughts about reoffending on a timeline covering at least five years. Exploratory, use the time line and important events (from information on file and from the interview) to elicit thoughts over time,

See separate time line

Q have they changed?, stayed the same?

Offending following parole

Questions:

Q *"I notice from your file that you had some more trouble with the law after your release, can you tell me why you believed this happened?"*

Further questions if needed to elicit the information needed to answer the areas listed below.

- Type of new offence and sentence received (On file)
- Number of new offences. Plot on time line below for the five years following release

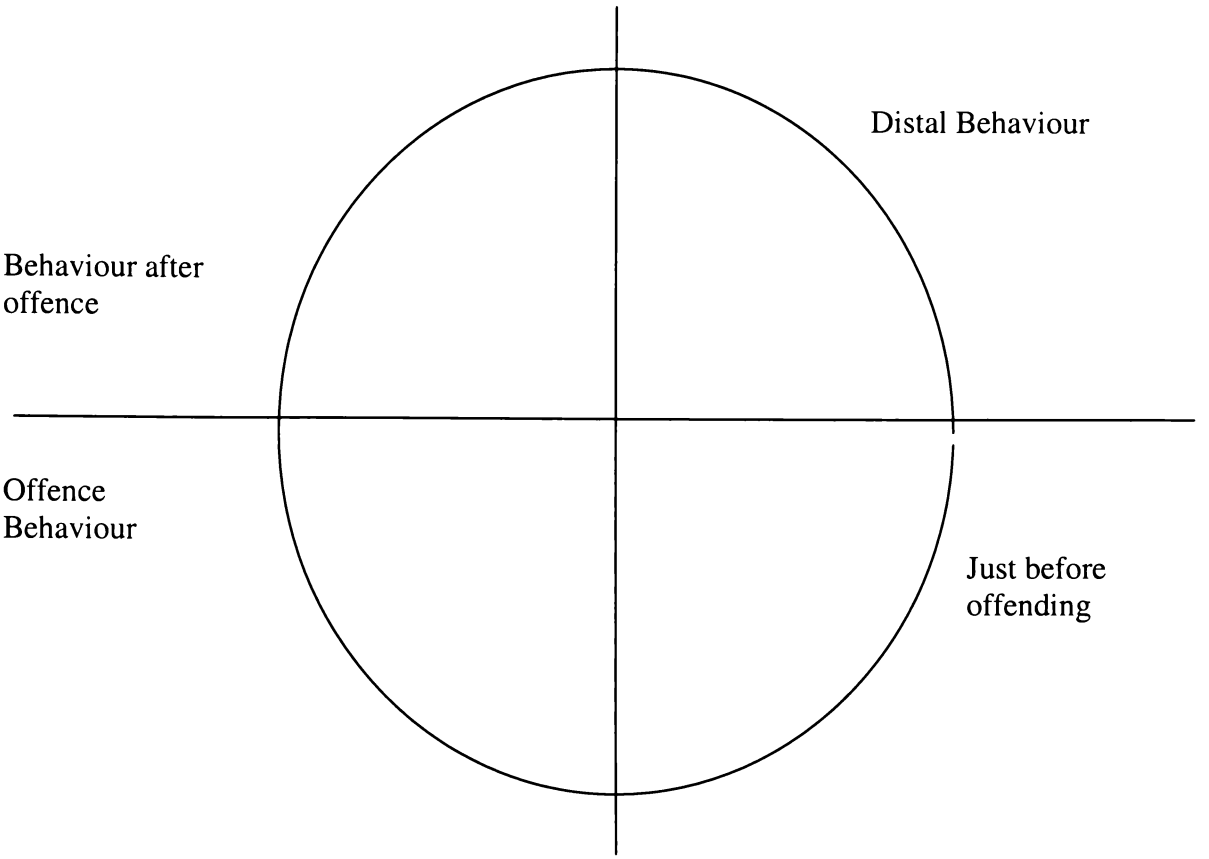
0_____6 months_____1 yr

_____2 yrs _____3 yrs

_____ 4 yrs _____ 5yrs

- Days to first new offence following parole (on computer system)
- Thoughts and behaviour and environmental events prior to reoffending

Use an offence mapping approach to explore this: (see next page)



Coping strategies?
If used what were they? Recall of decisions made that lead up to reoffending.

- Any particular factors they believe changed their lives, prevented serious reoffending (reimprisonment), i.e., gaining religious faith, going to a particular place, influence of someone they respect.

Cultural factors

Question:

Q *"Many men find that cultural and spiritual factors help them to keep out of trouble after release, how have these affected you?"*.

Further questions if necessary to answer the areas listed below.

- Knowledge of cultural identity (protocols, language)
- Iwi/Hapu/Whanau support where they live
- Received treatment/therapy from traditional healer
- Had spiritual experience

NB: This section will only be applied if the participant agrees to the researcher asking these (researcher has participated in Psychological Service training in bicultural therapy approaches), Cultural consultant will be used if requested and if researcher feels unable to gather data due to ignorance!

Appendix H. Level of Service Inventory-Revised (LSI-R)

For copyright reasons the Level of Service Inventory-Revised (LSI-R) cannot be reproduced here. However, a summary of the instrument is provided below.

The LSI-R (Andrews & Bonta, 1995) is designed to assess the established predictors of criminal conduct. The focus of the instrument is on: antisocial attitudes, antisocial associates, antisocial personality, a history of antisocial and problematic behaviour at home, school, work, and leisure. The LSI-R samples many of the major and minor risk factors in order to provide a comprehensive risk/needs assessment. The sub-scales are indicators of major risk factors identified by theory and research. The sub-scales also describe dynamic risk factors that can be targeted in treatment. The items are grouped into ten scales: These are listed below:

- Criminal History
- Education/Employment
- Financial
- Family Marital
- Leisure/Recreation
- Companions
- Alcohol/Drug Problem
- Emotional/Personal
- Attitudes/Orientation

The 54 items are of a standard format with the interviewer provided with a semi-structured interview schedule with items scored as yes or no or 3, 2, 1, 0 with higher scores indicating more endorsement of the item for the individual. A scoring form is provided that translates these into a 1 or 0 score. The LSI-R has five recidivism estimate categories for prison inmates based on total scores with these ranging from Low Risk/Needs (11.7% risk) to High Risk/Needs (76.0% risk).

Specimen items

Item 18: How do you do in your job? [Do you like your work? Does your boss compliment you on your work?]

Item 23. Are you dissatisfied with your marital or equivalent situation?

Appendix I. Millon Clinical Multiaxial Inventory-III

For copyright reasons the Millon Clinical Multiaxial Inventory-III (MCMI-III) cannot be reproduced here. However, a summary of the instrument is provided below

The MCMI-III (Millon, et al., 1997) is an evolving assessment tool designed to be refined and informed by the developments in theoretical logic, research data and professional nosology. In terms of other personality measures it is distinguished by its relative brevity (175 items), its theoretical anchoring (evolutionary personality theory), multiaxial format (Axis I and Axis II), use of base rate rather than standard scores, and interpretative depth (diagnosis, clinical dynamics). The items are grouped into a number of scales based on a multiaxial format: These are listed below:

Clinical Personality Patterns (Axis 1

1 Schizoid
2A Avoidant
2B Depressive
3 Dependant
4 Histrionic
5 Narcissistic
6A Antisocial
6B Sadistic (Aggressive)
7 Compulsive
8A Negativistic (Passive-Aggressive)
8B Masochistic (Self-Defeating)

Severe Personality Pathology

S Schizotypal
C Borderline
P Paranoid

Clinical Syndromes

A Anxiety
H Somatoform
N Bipolar: Manic
D Dysthymia
B Alcohol Dependence
T Drug Dependence
R Post-Traumatic Stress Disorder

Severe Clinical Syndromes

SS Thought Disorder
CC Major Depression
PP Delusional Disorder

Modifying Indices

X Disclosure

Y Desirability'
Z Debasement
V Validity

The items are of a standard format with the participant asked to rate themselves as true or false on whether the item applies to them. Raw scores are calculated then transformed into Base Rate scores (BR) with male and female BR scores available. Adjustments to BR scores are then made for the following aspects: Disclosure too high or low; Presence of Anxiety/Depression; person is an inpatient; elevation on scales reflecting denial or complaint. In addition a validity scale (three items) is scored with a score of 20 or more rendering the profile invalid. Two BR generated cut off scores are used in interpretation, 75-84 indicating the presence of a syndrome or trait, and 85 and above prominence.

Specimen items

Item 1: Lately, my strength seems to be draining out of me, even in the morning.
(*Scale CC Major Depression*)

Item 27. When I have a choice, I prefer to do things alone.
(Scale 1 Schizoid)

Item 113. I've gotten into trouble with the law a couple of time.
(Scale 6A Antisocial)

Appendix J: State-Trait Anger Expression Inventory-2 (STAXI-2)

For copyright reasons the State-Trait Expression Inventory-2 (STAXI-2) cannot be reproduced here. However, a summary of the instrument is provided below

The STAXI-2 (Spielberger, 1999) consists of 57 items designed to provide a self-report objective measure of the experience, expression, and control of anger for adolescents and adults. The items are organised into six scales and five subscales and an Anger Expression Index (Combination of AX-O and AX-I scores). The items are scored on a four point scale ranging from an indication that the item does not apply to the item applies the most. The scales/subscales are listed below with an example item for each:

State Anger Scale (S-Ang)
S-Ang/F (subscale)
Example item: "Feel irritated"
S-Ang/V (subscale)
Example item: "Feel like shouting out loud"
S-Ang/P (subscale)
Example item: " Feel like hitting someone"

Trait Anger (T-Ang)
T-Ang/T (subscale)
Example item: "Have a fiery temper"
T-Ang/R (subscale)
Example item: "Furious when criticized in front of others"

Anger Expression-Out (AX-O)
Example item: "Argue with others"

Anger Expression-In (AX-I)
Example item: "Boil inside but don't show it"

Anger Control-Out (AC-O)
Example item: "Am patient with others"

Anger Control-In (AC-I)
Example item: "Take a deep breath and relax"

The manual states that the PCL:SV total score should be interpreted as a dimensional measure of how much an individual matches the 'prototypical' criminal psychopath. For diagnostic purposes a cut-off score of ≥ 18 is recommended, this has a sensitivity of 100%, in other words this scores includes all those who if subject to a full PCL-R assessment would meet the diagnostic criteria. However, this cut-off score also has a specificity of only 82%, thus a false positive decision error rate whereby 18% would not meet the diagnostic criteria of the PCL-R.

Appendix K: Behavioural Inhibition System/Behavioural Activation System (BIS/BAS) Scale

The following items have been designed to assess the sensitivity of the two neurological systems proposed by Gray (1972) that regulate aversive motivation and appetitive motivation. The BIS is sensitive to signals of punishment, non-reward, and novelty. Inhibiting behaviour that may lead to negative or painful outcomes. The BAS is believed to be sensitive to signals of reward, non-punishment, and escape from punishment. Activity in this system is believed to increase behaviour towards goals. The BAS is presumed related to positive affect and the BIS to negative affect. The sensitivities are believed to be orthogonal. Extremely elevated scores on the BAS are believed to underlie psychopathic personality and elevations for BIS to anxiety and depressive disorders.

The scale uses 20 items scored using a Likert-type format using a 4-point response scale with 1 indicating strong agreement and 4 indicating strong disagreement (no neutral response). BIS items, reference potentially punishing events and asks how the participant responds to them by measuring their anxiety response. A different strategy is used to assess BAS sensitivity using three approaches. Item statements reflect: strong pursuit of appetitive goals (Drive), responsiveness to reward, seeking new potentially rewarding goals (Fun seeking), and tendency to react quickly in pursuit of goals (Reward responsiveness).

Scoring

Subscale scores are calculated by summing items. Note two items in the BIS scale are reverse scored (-)

BIS		**BAS (Drive)**		**BAS (Fun seek)**		**BAS (Reward Resp)**	
Item	Score	Item	Score	Item	Score	Item	Score
1		4		6		2	
5		9		15		8	
7		12		3		11	
10		20		19		13	
14 (-)		----		----		17	
16		----		----		----	
18 (-)		----		----		----	
Total BIS		**Total**		**Total**		**Total**	
		Total BAS =					

BIS/BAS SCALES

The following statements ask about your thoughts and feelings for a variety of situations. For each item, indicate how well it describes you by **circling the appropriate number** on the scale 1, 2, 3, or 4. When you have decided on your answer, circle the number on the scale under the statement. READ EACH STATEMENT CAREFULLY BEFORE RESPONDING. Answer as honestly and accurately as you can. Thank you.

1. If I think something unpleasant is going to happen I usually get pretty "worked up"

1	2	3	4
Strongly Disagree			Strongly Agree

2. When I get something I want, I feel excited and energised

1	2	3	4
Strongly Disagree			Strongly Agree

3. I'm always willing to do something new if I think it will be fun

1	2	3	4
Strongly Disagree			Strongly Agree

4. When I want something I usually go all-out to get it

1	2	3	4
Strongly Disagree			Strongly Agree

5. I worry about making mistakes

1	2	3	4
Strongly Disagree			Strongly Agree

6. I will often do things for no other reason than that they might be fun

1	2	3	4
Strongly Disagree			Strongly Agree

7. Criticism or scolding hurt me quite a bit

1	2	3	4
Strongly Disagree			Strongly Agree

8. When I am doing well at something, I love to keep at it

1	2	3	4
Strongly Disagree			Strongly Agree

9. I go out of my way to get the things I want

1	2	3	4
Strongly Disagree			Strongly Agree

10. I feel pretty worried upset when I think or know someone is angry at me

1	2	3	4
Strongly Disagree			Strongly Agree

11. When good things happen to me, it affects me strongly

1	2	3	4
Strongly Disagree			Strongly Agree

12. If I see a chance to get something I want, I move in on it right away

1	2	3	4
Strongly Disagree			Strongly Agree

13. It would excite me to win a contest

1	2	3	4
Strongly Disagree			Strongly Agree

14. Even if something bad is about to happen to me, I rarely experience fear or nervousness

1	2	3	4
Strongly Disagree			Strongly Agree

15. I crave excitement and new sensations

1	2	3	4
Strongly Disagree			Strongly Agree

16. I feel worried when I think I have done poorly at something

1	2	3	4
Strongly Disagree			Strongly Agree

17. When I see an opportunity for something I like, I get excited right away

1	2	3	4
Strongly Disagree			Strongly Agree

18. I have few fears compared to my friends

1	2	3	4
Strongly Disagree			Strongly Agree

19. I often act on the spur of the moment

1	2	3	4
Strongly Disagree			Strongly Agree

20. When I go after something I use a "no holds barred" approach

1	2	3	4
Strongly Disagree			Strongly Agree

Appendix L: Interpersonal Measure of Psychopathy
D.S. Kosson
Version 2.0

Subject#:_____ Date:_____ Rater:_____ Interviewer Observer
Score:_____

General Instructions: Please rate each item by circling the extent to which each behavior or trait describes your interaction with the subject. A few possible examples of most items are also listed. Please check any of the examples that apply and feel free to note other manifestations of these traits in the blank space. Please note that a characteristic will frequently describe an individual even if none of the examples are relevant to the individual.

1) Interrupts describes this subject
not at all----------somewhat----------very well----------perfectly
(check all that apply)
_____ interrupted interview
_____ interrupted interviewer
_____

2) Refuses to tolerate interruption describes this subject
not at all----------somewhat----------very well----------perfectly
(check all that apply)
_____ continued speaking
_____ increased rate or volume of speech
_____

3) Ignores professional boundaries describes this subject
not at all----------somewhat----------very well----------perfectly
(check all that apply)
_____ called interviewer by first name without permission
_____ asked for something interviewer had in his/her possession
_____

4) Ignores personal boundaries describes this subject
not at all----------somewhat----------very well----------perfectly
(check all that apply)
_____ touched or tried to touch interviewer
_____ leaned very far forward
_____ stared at part of interviewer's body (other than face)
_____

5) Tests Interviewer describes this subject
not at all----------somewhat----------very well----------perfectly
(check all that apply)
_____ asked about interviewer's credentials
_____ asked general psychology or other questions unrelated to current protocol
_____ asked to see identification
_____

6) Makes personal comments describes this subject
not at all----------somewhat----------very well----------perfectly
(check all that apply)
_____ insulted the interviewer
_____ commented on interviewer's dress or manner
_____ praised the interviewer
_____

7) Makes request of interviewer describes this subject
not at all----------somewhat----------very well----------perfectly
(check all that apply)
_____ requested something small/tangible (e.g., cup of coffee, pen etc)
_____ requested something large (e.g., letter, recommendation, copy of file)
_____

8) Tends to be tangential describes this subject
not at all----------somewhat----------very well----------perfectly
(check all that apply)
_____ provided very lengthy answers
_____ changed answer in middle of explanation
_____ difficulty staying with the question asked
_____

9) Fills dead space describes this subject
not at all----------somewhat----------very well----------perfectly
(check all that apply)
_____

10) Unusual calmness or ease describes this subject
not at all----------somewhat----------very well----------perfectly
(check all that apply)
_____ subject put his feet up
_____ subject stretched often
_____ subject moved around the room
_____

11) Frustration with argument avoidance describes this subject
not at all----------somewhat----------very well----------perfectly
(check all that apply)
_____ repeatedly tried to begin an argument with interviewer
_____ became angry or frustrated when interviewer agreed with him
_____

12) Perseveration describes this subject
not at all----------somewhat----------very well----------perfectly
(check all that apply)
_____ subject returned often to one event
_____ subject returned often to one theme (e.g., winning, intelligence, the system, alcohol)
_____

13) Ethical superiority describes this subject
not at all----------somewhat----------very well----------perfectly
(check all that apply)
_____ expressed overt desire to help others
_____ made reference(s) to own truthfulness
_____ indicated that others are not as "good" as he was
_____

14) Expressed narcissism describes this subject
not at all----------somewhat----------very well----------perfectly
(check all that apply)
_____ superiority
_____ grandiosity
_____ uniqueness
_____

15) Incorporation of interviewer into personal stories describes this subject
not at all----------somewhat----------very well----------perfectly
(check all that apply)
_____ personal stories in which the interviewer is a peer/friend/intimate
_____ personal stories in which interviewer is in one-down position (e.g., victim, employee, customer)
_____

16) Seeking of alliance describes this subject
not at all----------somewhat----------very well----------perfectly
(check all that apply)
_____ excessive smiling
_____ verbal expression of commonality
_____ sought interviewer's agreement on his views
_____

17) Showmanship describes this subject
not at all----------somewhat----------very well----------perfectly
(check all that apply)
_____ subject displayed large gestures
_____ subject used voice inflection to emphasize points
_____ subject used dramatic language
_____

18) Angry describes this subject
not at all----------somewhat----------very well----------perfectly
(check all that apply)
_____ angry facial expression(s)
_____ angry tone of voice
_____ clenched fists
_____

19) Impulsive answers describes this subject
not at all----------somewhat----------very well----------perfectly
(check all that apply)
_____ subject changed answers after stating them
_____ subject answered quickly but did not change answers
_____

20) Expressed toughness describes this subject
not at all----------somewhat----------very well----------perfectly
(check all that apply)
_____ subject referred to himself as tough or dangerous
_____ subject threatened interviewer
_____ subject referred to himself as brave
_____

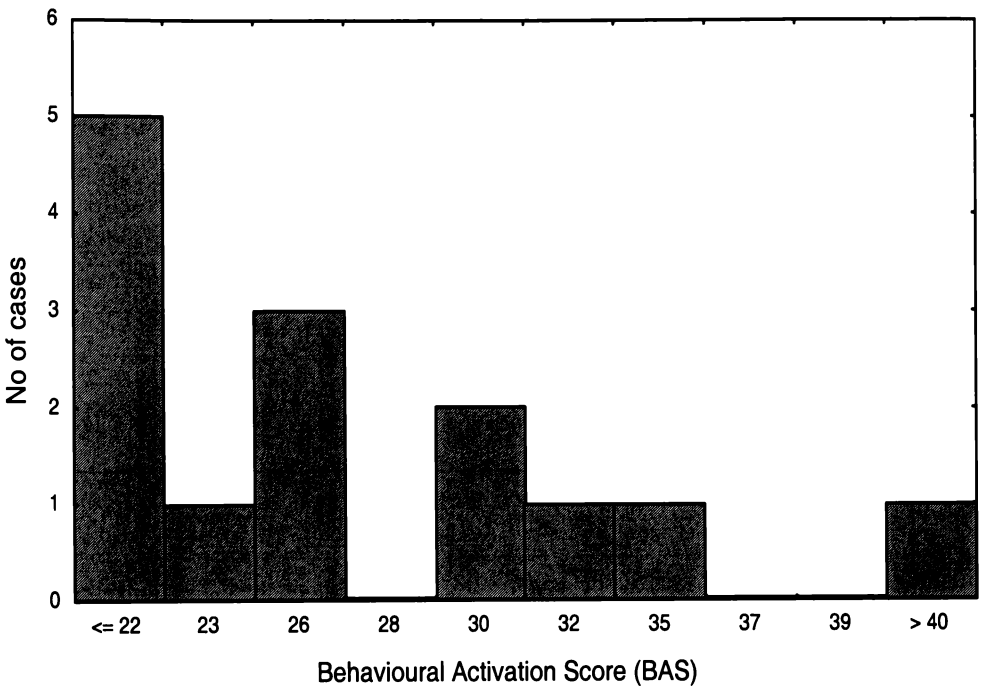
21) Intense eye contact describes this subject
not at all----------somewhat----------very well----------perfectly
(check all that apply)
_____ subject engaged in almost constant eye contact
_____ subject looked to observer when interviewer looked away
_____ subject made more eye contact when listening than normal
_____

Original scale developed by Kosson, Kirkhart, & Steuerwald (1993).

Appendix M. Distribution of PCL:SV scores for revised reimprisonment group

PCL:SV Decision Error	N	False Negative Rate %	False Positive Rate %
Reimprisonment			
11 ≤	68	9	49
12 ≥	6	10	46
13 ≥	8	13	42
14 ≥	11	16	36
15 ≥	10	22	28
16*≥	11	24	24
17 ≥	8	30	20
18 ≥	5	35	19
19 ≥	11	41	16
20 ≥	12	49	14
21 ≥	11	71	11
22 ≥	17	86	7

Appendix N. Distribution of Behavioural Activation Scores (BAS) for the false positive interview group (n = 14)



Appendix O. IM-P scores for false positive interview group.