EFFECTIVENESS OF THE PROBATION AND PAROLE SERVICE DELIVERY MODEL (PPSDM) IN REDUCING RECIDIVISM

A Thesis Submitted to the College of

Graduate Studies and Research

in Partial Fulfillment of the Requirements

for the Degree of Master of Arts

in the Department of Psychology

University of Saskatchewan

Saskatoon

By

Terri Leigh Simon

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ABSTRACT

In 2001, the province of Ontario implemented a new policy aimed at incorporating “best practices” from the literature into probation and parole services. This new policy, named the Probation and Parole Service Delivery Model (PPSDM), has several objectives, including: a) employ assessment-based decisions; b) assume a case management approach in probation and parole supervision; c) consider risk to reoffend and criminogenic needs in intervention and supervision; d) reserve the highest level of supervision for those most at risk to reoffend; and, e) use the least intrusive levels of intervention necessary while ensuring public safety. The policy also included the development of five supervision “streams” based on risk level, criminogenic needs, and other factors, for which supervision and intervention standards differ (Coté, 2003). A random sample of 200 from each of the five streams was chosen from 2004 and 2005 and matched to a sample supervised prior to PPSDM implementation (from 1998) resulting in an overall sample of 2890 offenders. The groups were compared on various measures of recidivism to determine whether the PPSDM has been effective in reducing recidivism. No significant differences in recidivism rates were found between the comparison and PPSDM groups. However, the recidivism was marginally less severe for the PPSDM groups, along with higher rates of “fail to comply” type offences. These results suggest possible increased enforcement of technical violations, which may have contributed to the lack of significant differences in recidivism rates. Results are discussed in relation to effective correctional practices and policy implementation.

ACKNOWLEDGEMENTS

First, I would like to thank my supervisor, Dr. J. Stephen Wormith for his guidance and expertise in developing this thesis. I would also like to thank my committee members, Dr. Gerald Farthing and Dr. Stephen Wong for their valuable feedback and interest in making this thesis a solid piece of research. Thanks go out to the staff in the Program Effectiveness, Statistics and Applied Research unit of the Ontario Ministry of Community Safety and Correctional Services, including Dr. Lina Girard, Kathy Underhill, Cheryl Miller, Nathan Cadeau, and especially Paula Davis, for compiling and continually producing additional data for this thesis. I would like to thank my family for understanding my disappearing for long periods of time. Special thanks to Jennifer Millard for helping me edit this thesis. Finally, I must thank the friends who supported me throughout the writing of this thesis, Nicki, Ken, Jaime, and especially Jen and Kari, who saved my sanity more times than I can count.

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LIST OF ABBREVIATIONS

AD	Administered Designation stream
BORS	Behavioural Observation Rating Scale
CEP	Collaborative Evaluation Process
CSC	Correctional Service of Canada
ECI	Effective Correctional Intervention
ISP	Intensive Supervision Program
LSI	Level of Service Inventory
LSI-OR	Level of Service Inventory – Ontario Revision
MCS	Ministry of Correctional Services
MCSCS	Ministry of Community Safety and Correctional Services
OTIS	Offender Information Tracking System
PPO	Probation and Parole Officer
PPSDM	Probation and Parole Service Delivery Model

1.0 INTRODUCTION

Supervising offenders in the community is one of the primary mandates of Western criminal justice systems, as well as an important strategy intended to reduce recidivism. Statistics Canada reports that 100,343 offenders were released to the community in 2003/2004 provincially, and an additional 7,875 were released from federal institutions (Statistics Canada, 2007). In the United States, nearly 650,000 offenders are released from state and federal prisons each year (Office of Justice Programs, 2007). Most of those released will be under some form of correctional supervision.

Offender supervision in the community began in the 18th century in the United States (Caplan, 2006), and in the late 19th century in Canada (Griffiths & Verdun-Jones, 1994), having been imported from England (Petersilia, 2003). The original conceptualization of probation and parole consisted of an offender giving his or her promise of good conduct to avoid imprisonment. Throughout the history of community supervision, correctional agencies have struggled with how to best supervise offenders. Developments in correctional research and the political realm have influenced what were considered "best practices" at the time.

When community supervision began in the 18th century, crime was commonly believed to be the result of illness (Caplan, 2006). The primary approach to supervising offenders in the community used casework and treatment programs to help the offender rehabilitate and become an upstanding citizen (Caplan, 2006; Seiter & Kadela, 2003; Petersilia, 2003). However, this casework approach lost its popularity in the 1970's after an article by Martinson (1974) reported there were little or no positive effects found on a

large-scale review of correctional programs. This was widely interpreted as “nothing works” for rehabilitating offenders, and so the casework/helping model was largely abandoned (Caplan, 2006; Petersilia, 2003).

At the same time, a conservative political shift was occurring in the United States, with politicians campaigning on “tough on crime” and “making streets safer” platforms (Caplan, 2006; Petersilia, 2003). As rehabilitation was rejected, punishment, deterrence, and “just desserts” emerged as the primary goals of community supervision. A new surveillance approach developed to closely monitor probationers and parolees in order to ensure public safety, while integrating the aforementioned goals (Listwan, Cullen & Latessa, 2006; Lawrence, 1991). Intensive supervision programs, or ISPs, are an example of a popular strategy borne out of the surveillance approach (Cullen, Wright & Applegate, 1996; Petersilia & Turner, 1993). In more recent times, some jurisdictions have adopted a risk management approach to community supervision, which incorporates aspects of both the casework and surveillance models (Wilson, Stewart, Stirpe, Barrett & Cripps, 2000).

Contrary to the political will of the mid 1970’s, some in the correctional research field reacted differently to Martinson’s (1974) article. Palmer (1975) disagreed with Martinson’s assertion that one particular type of treatment should work for all offenders, and instead advocated treating offenders differentially. Researchers began exploring ways to group offenders based on various characteristics, in order to prescribe services that would be most effective for each type of offender. Some of these classification systems were designed to aid correctional staff in offender management in the

institution, while others were intended to produce the largest reductions in recidivism for each group once released.

One example of a classification system desired to assist with differential treatment is the Level of Service Inventory (LSI), developed by a group of Canadian researchers, namely Andrews and colleagues. The LSI, along with the principles of Effective Correctional Intervention (ECI), has a large body of supportive literature and is used in many jurisdictions, including Canada, the United States, Britain, Europe, Australia, and New Zealand (Ward, Melser & Yates, 2006). Recently, the province of Ontario used the LSI and the principles of Effective Correctional Intervention to modify their prior classification and supervision practices. The resulting policy was the Probation and Parole Service Delivery Model (PPSDM), which was implemented in Ontario in early 2001. The current study will examine the PPSDM, and whether it has been effective in reducing recidivism among the Ontario offender population.

1.1 Approaches to Offender Supervision in the Community

1.1.1 Casework Approach

Under the casework approach, criminal behavior is generally considered the result of illness, and it is assumed that offenders need rehabilitation (Caplan, 2006; Petersilia, 2003). Probation and parole officers utilize casework, advocacy and treatment to help offenders reintegrate into the community. Prison programs intended to prepare inmates for release and increase the chance of successful community reintegration are an important part of correctional operations. Programs addressing a variety of needs, such as education, employment and substance abuse, are also offered in the community. Parole boards carefully review inmates' release plans, and may refer those with inadequate plans

to halfway houses, where further assistance can be provided. The prison-to-community transition is recognized as a difficult time, so offenders can often access services for housing, employment, mental health, substance abuse, and family relationships (Caplan, 2006; Seiter & Kadela, 2003; Petersilia, 2003; Lawrence, 1991). The casework approach was prevalent in the United States from the inception of parole in the 18th century until the 1970's (Caplan, 2006; Petersilia, 2003; Lawrence, 1991).

1.1.2 Surveillance/Policing

Contrary to the casework model, the surveillance/policing approach assumes criminal behavior is a conscious decision (Petersilia, 2003). Therefore, rehabilitation is not a pertinent goal of community supervision. Rather, deterrence, just desserts, and punishment are the rationales for probation and parole, along with surveillance to ensure public safety (Listwan, Cullen & Latessa, 2006; Lawrence, 1991). Probation and parole officers act primarily as law enforcement, ensuring compliance with conditions through means such as drug testing, frequent unannounced home and work visits, and community service (Travis & Petersilia, 2001; Gendreau, Cullen & Bonta, 1994; Lawrence, 1991). The surveillance/policing model is currently in use in most American states, and has remained so since the casework approach lost popularity in the 1970's.

1.1.2.1 Intensive Supervision Programs. Cullen, Wright, and Applegate (1996) refer to Intensive Supervision Programs (ISP's) as a type of intermediate sanction, which are intended to help reduce prison overcrowding and the cost of incarceration, while still providing enough surveillance to preserve public safety. In addition, the threat of punishment is expected to deter offenders from further criminal activity. The defining feature of ISP's is an increased number of contacts between officers and clients, yet there

is ample variation in what each jurisdiction considers “intensive”. For example, the ISP in Ohio requires officers to have four contacts per month with their clients for a period of one year, while Georgia requires its officers to see intensive clients five times per week for six weeks, with reductions in visits for good offender behavior. Along with increased officer-client contact, some programs employ additional strategies, such as electronic monitoring, police contacts, community service, curfews, fines or restitution orders, and drug testing. The types of offenders referred to ISP’s also varies by jurisdiction. Some ISP’s are intended to be a form of diversion, for probationers, while others aim to reduce prison crowding, and use ISP as a form of parole. Selection criteria are also disparate, with some jurisdictions using ISP’s for high-risk offenders, whereas others may screen out high-risk cases.

Despite early optimism regarding the effectiveness of ISP’s, the use of intensive supervision strategies for the purposes of deterrence and punishment have not proven effective. Petersilia and Turner (1993) used a randomized experimental design to evaluate 14 ISP’s in nine states, including over 2,000 offenders. Overall, the ISP’s did not reduce recidivism, defined as frequency and seriousness of new arrests. The researchers discovered some negative, unintended program effects as well. For example, offenders in ISP’s received more technical violations due to the close monitoring, which led to more jail terms. This resulted in increased court and incarceration costs, which is contrary to the program’s intent. In fact, it has been estimated that ISP’s may cost three times more than regular probation (Gendreau, Paparozzi, Little & Goddard, 1993). More recently, Gendreau, Goggin, and Fulton (2000) conducted a meta-analytic review of ISP evaluations that included 47 effect sizes and 19,403 offenders. The mean treatment effect

was a phi coefficient of .00, indicating no difference in the recidivism rates between the ISP and regular probation groups.

On the other hand, when rehabilitation is included as an important part of an ISP, reductions in recidivism can be realized. Recognizing the appeal and popularity of intensive supervision, despite its ineffectiveness, Gendreau, Cullen, and Bonta (1994) proposed including treatment programs within ISP's. As previously mentioned, early evaluations had found no reductions in recidivism for ISP's overall, yet offenders who had received more or better quality services did have lower recidivism rates (Petersilia & Turner, 1991; Byrne & Kelly, 1989, as cited in Gendreau, Cullen & Bonta, 1994). The Gendreau, Goggin and Fulton (2000) study supported the earlier findings, in that intermediate sanction programs that claimed to have a treatment component, even when the "treatment" was poorly defined, reduced recidivism by 10 percent. Bonta, Wallace-Capretta, and Rooney (2000) conducted a quasi-experimental evaluation of an intensive rehabilitation supervision program delivered in Newfoundland and found reductions in recidivism for higher-risk offenders. Finally, the evaluation of an ISP in New Jersey found that reductions of recidivism could be realized under certain conditions, including providing more treatment services to higher-risk offenders, employing parole officers whose orientation is balanced between law enforcement and social work, and operated within a supportive organization (Paparozzi & Gendreau, 2005).

1.1.3 Risk Management

In practice, the risk management approach to community supervision shares some similarities with the casework and surveillance approaches. Probation and parole officers refer offenders to rehabilitative programs as well as conduct unannounced home and

work checks and may also test for drugs. However, this approach differs from the previous two in its rationale; all supervision activities are intended to manage the risk each offender poses, rather than making offenders feel better or punishing them. As explained by Clipson (2003), "[Risk management] involves the question of what it would take to prevent (or significantly reduce the likelihood of) a particular event occurring" (p. 157). Four general principles for managing offender risk are outlined by Motiuk, Belcourt and Bonta (1995): 1) offender risk must be comprehensively assessed, and reassessed over time, 2) risk factors that are related to an offender's criminal behavior and are amenable to change (also called dynamic risk factors, or criminogenic needs) should be targeted for intervention, 3) offenders should be monitored in the community at a level commensurate with their level of risk, and 4) appropriate information should be shared among supervisory staff, treatment staff, and collaterals.

Risk management is the approach used by the Correctional Service of Canada (Correctional Service of Canada, 2007a). If assessed as an acceptable risk to manage in the community, offenders are granted conditional release as an incentive to make positive changes in their lives (Correctional Service of Canada, 2007c). Rehabilitation is an important goal, but available treatment programs are generally limited to those that target criminogenic needs. Reductions in recidivism are sought through addressing the characteristics of offenders that are related to their criminal behavior, hence contributing to public safety (Correctional Service of Canada, 2007b).

1.2 Offender Classification Systems and Differential Treatment

Offenders are a heterogeneous group, thus there have been theoretical and practical reasons for subdividing them into meaningful categories. Classification systems

serve to parcel individuals into clusters or subgroups that share common characteristics, such as symptomology, etiology, personality traits, behavioral attributes, or other relevant features. The resulting clusters or subgroups then call for differing responses from the criminal justice system (Clements, 1996). A review of the classification literature by MacKenzie, Posey, and Rapaport (1988) demonstrated a shift away from a medical model in which classification was primarily diagnosis, toward multi-dimensional systems in which there are four major purposes of classification: understanding, treatment, prediction, and management. Management has been the dominant purpose of classification in recent times due to the drastic increase in the prison population and scarce resources (Clements, 1996). Considering its utilitarian focus, management will always be a primary goal, but classification for the purpose of treatment is growing in popularity due to the burgeoning literature on the effectiveness of differential treatment.

The investigation into the differential treatment of offenders began in earnest in the mid-1970's, after a crisis in correctional intervention. Martinson (1974) conducted a review of the correctional programs at the time, and concluded that the studies reviewed:

> …give us very little reason to hope that we have in fact found a sure way of reducing recidivism through rehabilitation. This is not to say that we found no instances of success or partial success; it is only to say that these instances have been isolated, producing no clear pattern to indicate the efficacy of any particular method of treatment (p. 49).

This statement was widely interpreted as "nothing works" with regards to rehabilitating offenders. Palmer (1975) then conducted a review of the studies included in Martinson's article, and provided a different interpretation. Given that offenders are a heterogeneous

group, Palmer disagreed with the idea that any one treatment modality should be expected to work for all offenders. Instead, he asserted that certain types of interventions may work differentially for different offenders, and he found ample evidence to support his assertion in Martinson's (1974) article. Accordingly, offender classification for the purpose of treatment involves the design of assessment tools to place offenders into groups or clusters in order to determine the services that will produce the largest reductions in recidivism for each group. Some examples of offender classification tools that have utility for differential treatment are the MMPI-based typology (Megargee & Bohn, 1979), the I-Level (Jesness, 1988), Adult Internal Management System (AIMS; Quay, 1984), the Wisconsin Case Management Classification System (CMCS; Baird, 1981), and the Level of Service Inventory (LSI; Andrews, 1982; Andrews & Robinson, 1984).

Megargee developed a 10-fold offender typology based on the Minnesota Multiphasic Personality Inventory (MMPI). The types are correlated with behavioral and adjustment profiles, and management recommendations have been developed based on these. Megargee's typology is typically used for inmate classification (Bonta & Motiuk, 1992), and has been used to train staff and reorganize living units in institutions so as offenders with similar profiles reside together (Clements, 1996). In a Florida federal institution, this approach resulted in a 50 percent reduction in assault rates after one- and two-year follow-up periods (Bohn, 1979). It has also been used to match individual offenders with treatment resources in the community, including what kind of treatment programs and supervision styles are most effective (Enos & Southern, 1996). However, the Megargee MMPI typology has not demonstrated good predictive validity for

recidivism (Motiuk, Bonta & Andrews, 1986), which is not entirely surprising, as the MMPI was not designed for this purpose (Bonta, 2002).

The Interpersonal Maturity Level Classification System, or I-Level, is based on theories of personality development. Cognitive complexity, personal integration, and interpersonal maturity are aspects of personality development that can be used to classify individuals on their current level of development, ranging from an infantile state to the highest levels of social and moral reasoning of an adult (Enos & Southern, 1996). The I-Level was developed with adolescents, and therefore has been primarily used with a young offender population, but has been adapted and used with adults (Jesness, 1988). The original system was based on a clinical interview (Sullivan, Grant & Grant, 1957), but was later developed into a self-report inventory (Jesness, 1988). The Jesness Inventory version has shown good construct validity, with subtype classification accounting for a significant percentage of the variance in variables such as school attitudes (21%), classroom misbehavior (14%), confidence (21%), delinquent peers (20%), and self-reported delinquency (21%). The I-Level was designed to distinguish among delinquent types to help in treatment planning, but it has demonstrated some predictive validity as well (Jesness, 1988).

The Adult Internal Management System (AIMS) by Quay (1984) is a behavioral classification system, in which institutional staff complete two rating instruments on each offender. The first instrument is called the Checklist for the Analysis of Life Histories, which considers the psychosocial histories of offenders. Through observation of each offender's behavior in the institution, staff also complete the Correctional Adjustment Checklist (Enos & Southern, 1996). Similar to the Megargee system, AIMS is primarily

used to assign offenders to housing units, in order to keep disciplinary problems in check and protect vulnerable inmates by keeping them separate from predatory offenders (Clements, 1996). The five personality types of the AIMS can also be used to suggest the treatment options that will be most effective for each type (Enos & Southern, 1996).

The Wisconsin Classification System is used in probation and parole classification, to determine the level and strategy of supervision for each client. It consists of three components, including a risk scale, a needs scale, and a Client Management Classification (CMC). Through structured interviews, the CMC places offenders into one of five differential treatment or management strategies (Baird, 1981; Clements, 1996; Andrews & Bonta, 2003). The management protocols provide descriptions of the subtype, along with recommendations for treatment goals and programs, client/staff relationships, housing, peer relationships, and readjustment expectations (Clements, 1996). The risk scale has good predictive validity for recidivism, but there is little evidence for the predictive validity of the needs scale. Combining the risk and need scales has resulted in predictive validity estimates of .27 (mean Pearson r; Gendreau, Little & Goggin, 1996) and an Area Under the Curve (AUC) value of .67 (Andrews & Bonta, 2003).

The Level of Service Inventory (LSI) is one of the most well-researched and popular risk/needs assessment instruments (Gendreau, Little & Goggin, 1996; Gendreau, Goggin & Smith, 2002; Andrews & Bonta, 2003; Girard & Wormith, 2004). It is theoretically and empirically based, and was initially designed for probation officers to assist in determining the level of supervision required for each offender, as well as services needed. There have been several versions developed, including the Level of

Service Inventory-Revised (LSI-R; Andrews & Bonta, 1995), the Young Offender Level of Supervision Inventory (YO-LSI; Shields, 1990; Shields & Simourd, 1991), the Youth Level of Service/Case Management Inventory (YLS/CMI; Hoge & Andrews, 2000) the Level of Service Inventory-Ontario Revision (LSI-OR; Andrews, Bonta & Wormith, 1995), and the Level of Service/Case Management Inventory (LS/CMI; Andrews, Bonta & Wormith, 2004). The LSI-OR, in particular, was developed for use in Ontario because the Ministry of Correctional Services of Ontario wanted a common assessment tool for institutions and the community to ensure continuity of care (Girard & Wormith, 2004). Therefore, it is a multipurpose tool that not only classifies offenders as to risk and need level, but also serves as a data collection tool for institutional adjustment, responsivity considerations, and other client issues (i.e. financial problems, homelessness, health problems, etc.). Girard and Wormith (2004) conducted a study on the predictive validity of the LSI-OR, and found correlations of .39, .28, and .41 between the General Risk/Need section and general recidivism, violent recidivism, and new offence severity, respectively. They also demonstrated predictive validity for male and female offenders, as well as special groups such as sex offenders, domestic violence offenders, and offenders with mental health problems. In addition, a meta-analysis by Gendreau and colleagues demonstrated that the LSI-R has a stronger correlation with recidivism than the Wisconsin Classification System (.35 versus .27; Gendreau, Little & Goggin, 1996).

1.3 Effective Correctional Intervention

Don Andrews, James Bonta and Robert Hoge introduced the concept of Effective Correctional Intervention (ECI) in 1990 and have continued to develop the approach through numerous studies and meta-analyses over the last two decades. The ultimate goal

of Effective Correctional Intervention is to reduce recidivism through rehabilitation (Andrews, Bonta & Hoge, 1990). A cornerstone of the approach is the empirical investigation and continuous evaluation of correctional policies and programs to ensure effectiveness (Andrews & Bonta, 2003), which most often refers to reductions in recidivism. ECI has contributed to changes in correctional policy, development of assessment tools (e.g., LSI-OR), treatment programs, supervision policies and training guidelines for correctional staff. Over time, the ECI approach has gained popularity and is currently used in most of Canada, Britain, Europe, Australia, and New Zealand (Ward, Melser & Yates, 2006).

In their article, "*Classification for effective rehabilitation: Rediscovering psychology*" (Andrews, Bonta, & Hoge, 1990), the authors describe four principles that should be followed for direct correctional service with offenders, such as supervision, counseling and treatment. Services are to be provided to offenders differentially, based on the individual differences and circumstances of each offender. The first three principles risk, need and responsivity, are applicable to supervision and treatment. Meanwhile, the fourth principle, professional override, is most pertinent to assessment.

The first, the risk principle, has two aspects. The first aspect is that criminal behavior can be predicted (Andrews & Bonta, 2003). The second aspect states that the amount and intensity of services should be matched to the risk level of offenders. Accordingly, the most intensive programs should be reserved for high-risk cases, and offenders who are low risk should receive minimal intervention, or no intervention at all.

Numerous research studies, including meta-analyses, have supported the risk principle. An example of a study that demonstrates the importance of the risk principle is

the evaluation of an intensive rehabilitation supervision program by Bonta, Wallace-Capretta, and Rooney (2000). When the treated and untreated groups were compared on post-program recidivism, there were no significant differences (32.4% vs. 31.0%), indicating the treatment program was ineffective. However, when each group was divided into low- and high-risk categories, an interaction between treatment and risk level was found. The high-risk untreated group had a recidivism rate of 51.1 percent, while the high-risk treated group recidivated at a lower rate of 31.6 percent, suggesting treatment was effective for the high-risk offenders. Conversely, the low-risk treated group's recidivism rate was higher than that of their untreated counterparts (32.3% vs. 14.5%). This finding would imply that treating the low-risk offenders actually increased their reoffending, and this result has been found in other studies (Andrews, Bonta & Hoge, 1990; Lowencamp & Latessa, 2005). There is no clear explanation for this finding, but it is possible that associating with the high-risk offenders exposes the low-risk group to additional criminal attitudes and behavior, or that the supervision conditions imposed disrupt low-risk offenders' prosocial community ties (Bonta, Wallace-Capretta & Rooney, 2000; Lowencamp & Latessa, 2005; Lowencamp, Latessa & Holsinger, 2006). In addition to countless primary studies, meta-analytic reviews have confirmed the importance of the risk principle (Andrews & Dowden, 2006; Lowenkamp, Latessa & Holsinger, 2006; Andrews & Dowden, 1999; Dowden & Andrews, 1999a; Dowden & Andrews, 1999b; Andrews, Zinger, Hoge, Bonta, Gendreau, & Cullen, 1990).

Second, the need principle, states that correctional services should focus on criminogenic needs (Andrews, Bonta & Hoge, 1990; Andrews & Bonta, 2003). Criminogenic needs are those that contribute to an individual's risk of offending, and are

amenable to change through intervention. For this reason, they are also often referred to as dynamic risk factors, as opposed to static risk factors such as age and criminal history, which cannot be changed. Criminogenic factors must be distinguished from non-criminogenic factors, which are needs the offender may have that are also amenable to change, but are not (or weakly) related to recidivism (i.e. self-esteem, physical activity).

Andrews and Bonta (2003) describe a meta-analysis by Dowden (1998), in which 225 treatment studies were reviewed, and 374 effect sizes calculated. Treatment programs that targeted non-criminogenic factors showed no effect, or even slight increases in recidivism rates. To the contrary, programs targeting criminogenic needs showed reductions in recidivism, with the most important criminogenic factors including antisocial attitudes, self-control, and social support for criminal activity. Further, when a program targets multiple criminogenic needs, larger reductions in recidivism are realized (Andrews, Bonta & Wormith, 2006). Support for the need principle has also been shown by numerous meta-analyses (Andrews & Dowden, 2006; Dowden & Andrews, 2000; Andrews & Dowden, 1999; Dowden & Andrews, 1999a; Dowden & Andrews, 1999b; Andrews et al., 1990).

Responsivity is the third principle, and there are two types: general and specific responsivity. General responsivity refers to modes and styles of service that work best with offenders in general. In terms of intervention programs, those that are based on social learning theory and use cognitive behavioral approaches have been shown to be the most effective in reducing recidivism (Andrews & Dowden, 2006; Andrews & Bonta, 2003; Andrews, Bonta & Hoge, 1990). In terms of correctional staff, those who are interpersonally warm, use a “firm but fair” approach, use prosocial modeling and positive

reinforcement are most effective in eliciting change in their clients. Specific responsivity refers to matching the modes and styles of service to the idiosyncratic characteristics of individual offenders. Some examples of important specific responsivity considerations are cognitive ability, language proficiency, motivation level, culture, mental illness, and personality (Andrews & Bonta, 2003; Andrews, Bonta & Hoge, 1990).

The responsivity principle is the least researched, specific responsivity in particular, and much more work is needed in this area (Andrews, Bonta & Wormith, 2006; Andrews & Bonta, 2003). Research has been undertaken in areas such as stages of change (Prochaska & DiClemente, 1986), increasing motivation for change (Miller & Rollnick, 1991), working alliance (Taft, Murphy, Musser, Remington, 2004), psychopathy (Wong & Hare, 2005), culture (Zellerer, 2003), and attrition (Wormith & Olver, 2002), but this research is in its early stages. There has yet to be a meta-analytic review exploring specific responsivity in relation to effective correctional intervention (Dowden & Andrews, 2000).

The fourth principle is that of professional discretion and override in assessment. Andrews and Bonta (2003) acknowledge that though the principles of risk, need and responsivity provide an empirical basis for the assessment of offenders, cases that do not fit the formula will occur. Nonetheless, the authors caution against using professional overrides haphazardly or more often than necessary, as clinical judgement has proven to be notoriously unreliable (Andrews, Bonta & Wormith, 2006). Professional overrides should not be the preferred method of prediction, but considered a tool to improve assessment technology. As such, the use of overrides should be systematically examined,

in hopes of discovering additional principles that may improve the predictive validity of assessment tools (Andrews & Bonta, 2003).

In addition to investigations of individual principles, meta-analyses have examined ECI as a whole. Several meta-analyses have coded the number of principles adhered to by each program, and found that the reductions in recidivism increase for each additional principle adhered to (Andrews et al., 1990; Dowden & Andrews, 2000; Lowencamp, Pealer, Smith & Latessa, 2006). The study by Lowencamp et al. (2006) was specific to community supervision-based programs, including intensive supervision probation, electronic monitoring, day reporting, and work release programs. In conclusion, though it is not free of criticism (see Ward, Melser & Yates, 2006), there is a large body of evidence that supports Effective Correctional Intervention.

1.4 Context of the Current Study

1.4.1 The Probation and Parole Service Delivery Model (PPSDM)

The Probation and Parole Service Delivery Model (PPSDM) was developed based on the aforementioned literature to reflect an offender management model in which the principles of Effective Correctional Intervention would be integrated into the day-to-day practices of probation and parole officers (PPOs). Historically, Ontario's community supervision standards were highly defined and mandated, with frequency of contact as the basis of differential treatment. The classification system was based on the LSI-OR, with the assessment phase generally taking place over the course of the supervision term. Minimum, medium, and maximum categories indicated the prescribed supervision level (Côté, 2003; Ministry of Correctional Services, 2002; Ministry of Correctional Services, 2000; Ministry of Correctional Services, 1999b).

Development of the Probation and Parole Service Delivery Model (PPSDM) was intended to reflect current research and best practices regarding what is most effective in reducing offender recidivism. The model emphasizes Probation and Parole Officers (PPO's) dual roles of intervention and supervision. Service delivery under the PPSDM is to follow several key premises, including: a) supervision standards and services provided are to focus on the *type* of offender contact, rather than the frequency, b) comprehensive risk/needs assessment is the key to effective intervention, and so assessment should be completed at the beginning of the supervision period. In addition, decisions regarding the offender should be assessment-based, c) resources and level of supervision is focused on high-risk offenders, and/or those having medium to high criminogenic needs, d) offenders shall be matched with appropriate programs, e) programs and services provided address criminogenic needs, f) incorporate LSI-OR risk management and treatment guidelines, g) use a case management approach, and h) follow the principle of least intrusive intervention consistent with public safety (Côté, 2003; Ministry of Correctional Services, 2002; Ministry of Correctional Services, 2000; Ministry of Correctional Services, 1999b).

Core correctional programs were also developed and implemented under the PPSDM. The Ministry chose to first implement three program areas based on common criminogenic needs in their population, including substance abuse, anger management, and procriminal thinking. In addition, programs for two special populations were added, for sex offenders and partner abusers. Each core program has two intensity levels that differ in the length and duration of the program. Offenders are referred to each level based on their risk level, level of criminogenic need, and stage of change. The shorter,

less intense version of each program is often intended to motivate offenders to take the intensive programs. The programs are intended for offenders who are medium to high risk and have an identified criminogenic need in that area (Ministry of Correctional Services, 2002). Offenders with non-criminogenic needs are to be referred to other agencies in the community (Ministry of Correctional Services, n.d.).

A new classification system was also developed to reflect the principles of the new model. The LSI-OR is the primary risk/needs assessment tool used in the new classification system. Four intervention/service "streams" were developed: Basic Service, Rehabilitative Group Service, Individual Service, and Intensive Supervision. Streaming decisions are to be determined through: a) consideration of public safety, b) risk of recidivism, c) criminogenic needs, and d) the principle of least intrusive intervention consistent with public safety (please see Appendix A for Initial Stream Placement Criteria).

The case management standards for the Basic stream state that only lower risk offenders under a probation order may be managed in this stream. Therefore, neither parolees, nor offenders on conditional sentence can be streamed to Basic. In addition, sex offenders, and offenders with a pattern of violent behavior are excluded. There are three sub-categories in the Basic stream, including court-ordered task completion (e.g., community service order, restitution), alternative group reporting, and brokerage service (i.e. condition of probation service requires a referral). As these offenders are low risk, they should require minimal intervention. Once the requirements of the probation order conditions are completed, and no criminogenic targeting is necessary, the PPO is to consider Administered Designation. Under Administered Designation (AD), the offender

does not need to report, and will have very little, if any contact with their PPO. The offender is still required to report any changes in address or employment. This designation reflects the principle of least intrusive intervention (Ministry of Correctional Services, 2002).

Offenders who are assessed as medium to high risk, and as having moderate to high need levels in one of the core programming areas are managed in the Rehabilitative stream. While the offender is attending programming, the PPO is expected to contact program staff and document compliance. If the offender completes the programming and the criminogenic need has been reduced to a satisfactory degree, the offender may be subsequently managed in the Basic stream. However, if the offender has outstanding criminogenic needs that require intervention, he/she will continue to be managed in the Rehabilitative stream and referred for further programming. The Individual stream is similar to the Rehabilitative stream in that offenders managed in this stream should be medium to high risk and have moderate to high levels of at least one criminogenic need. However, offenders in the Individual stream require individual counseling or supervision, for various reasons. First, the offenders may be unsuitable for group programs due to responsivity issues (e.g., mentally ill, interpersonally anxious, language barriers, cognitively impaired). There may be no programs available for the offender's particular criminogenic needs (i.e. reside in a remote area where programming is not offered), or they may have multiple needs. If the offender is attending programming, the PPO is required to contact program staff to monitor compliance. In addition, the main focus of each PPO/client interview should be criminogenic needs (Ministry of Correctional Services, 2002).

Finally, the Intensive stream is intended for offenders who are high risk and are likely to commit offences causing serious bodily harm or death. To ensure this type of offender is effectively managed in the community, protocols between each probation and parole office and the police have been developed to outline a cooperative strategy in monitoring Intensive clients. Rehabilitative programming is strongly encouraged to reduce criminogenic needs. Monitoring and reporting frequency is driven by the risk/needs assessment, and conditions that relate to public safety are to be strictly enforced. In addition, appropriate and sufficient collateral contacts must be made by the PPO to ensure compliance with conditions (Ministry of Correctional Services, 2002).

The PPSDM was phased in over a period of two years, beginning in early 1999. All PPOs underwent a five-day training program to learn about the new model, in which they were introduced to theories of criminal behavior, such as social learning and differential association theories. PPOs also received training on the four principles of Effective Correctional Intervention, stage of change theory, motivational strategies, and cognitive behavioural approaches such as effective prosocial modeling, effective reinforcement, effective disapproval, and relapse prevention. All offices were fully trained by March, 2001, with PPOs expected to begin implementing the new case management standards immediately after training (Côté, 2003; Ministry of Correctional Services, 2002; Ministry of Correctional Services, 2000; Ministry of Correctional Services, 1999b).

1.4.1.1 Collaborative Evaluation Process (CEP). The Ontario Ministry of Correctional Services (MCS) developed the Collaborative Evaluation Process (CEP) in order to track the progress of PPSDM implementation. In particular, the CEP assesses

behavioral changes of PPO's resulting from PPSDM training and promotion. Several assessors travel to each Probation and Parole office to complete the CEP, which consists of two parts, a file review as well as behavioral observations of the PPOs.

In the file review part of the CEP, assessors compile a list of all client files in the office, and select every tenth file to review. Each file is evaluated on a set of 31 criteria under six subsections, including Assessment, Offender Management Plan, Special Groups, Case Records, Case Review, and Enforcement. Examples of these criteria may be whether the LSI-OR was completed, whether the Offender Management Plan developed is appropriate given the assessment on file, whether special groups such as sex offenders and/or partner abusers were streamed properly, and whether an appropriate rationale enforcement decisions is recorded (for the entire set of criteria, see Appendix B). The scores for each file are averaged together to create an overall office score. The file review is worth 40 percent of the overall CEP score for the office. As PPOs are expected to keep records of all of their interactions with their clients and their supervision plans, the files are a source of information regarding the extent of the PPO's fidelity to the PPSDM.

In the behavioural observation part of the CEP, assessors sit in on PPO - client interviews and rate the PPO on a skill set gained through the PPSDM training. The particular interviews observed by the assessors are chosen by the PPOs and are evaluated by the Behavioural Observation Rating Scale (BORS – Ministry of Correctional Services, 2001). The BORS contains 48 items under five subscales, including general Interviewing Skills, Adherence to PPSDM Standards, Motivational Interviewing skills, Cognitive Interventions, and Relapse Prevention (for the entire set of criteria, see Appendix B).

Similar to the file review, the scores for each PPO are averaged together to create an overall office score. These behavioural observations make up 60 percent of the office's total CEP score. Observing PPOs actual interactions with clients allows for the direct assessment of PPOs' PPSDM-related skills, including whether they are using them, as well as their level of skill (Wright, Mazaheri, Sinclair, Sauvé-Thompson, & Côté, 2001).

1.4.2. Objectives of the current study

The primary objective of the current study was to investigate whether the PPSDM is effective in reducing recidivism for offenders in Ontario. In order to accomplish this objective, a comparison group was constructed. Consequently, the second objective of this study was to create descriptive profiles of both the PPSDM groups and the comparison group, as well as for each of the streams. The profiles were developed to provide information on whether the PPSDM groups and the matched group are appropriate to compare. They will also be informative for future research in this field, as other jurisdictions investigate "what works" with similar types of offenders.

1.4.2.1 Preconditions, exploratory questions and primary hypothesis. Several preconditions had to be met before the main hypothesis of the study could be tested. In addition, several exploratory questions were asked.

Precondition 1 – Matching. The comparison group will be well-matched to the PPSDM groups, as indicated by no significant differences on several important variables, such as risk (General Risk/Need score, Specific Risk/Need score, and subscale scores of the LSI-OR, age at admission, first disposition length, and first offence severity).

Precondition 2 – General Risk-Need level. Given that risk is an important streaming criterion, it was predicted there would be significant differences between

streams on risk, as measured by the LSI-OR. For the General Risk/Need scale, the Intensive, Individual, and Rehabilitative streams are expected to have higher scores than the Basic and AD streams.

Exploratory question 2a – General Risk-Need level. The preceding information regarding streaming criteria provides no clear direction for predicting whether significant differences should exist between the Intensive, Individual and Rehabilitative streams, or between the Basic and AD streams. As such, differences are explored herein.

Exploratory question 2b – Specific Risk-Need level. It is also expected that the Intensive and Individual streams may have higher scores on the Specific Risk/Need scale than the Rehabilitative, Basic and AD streams. Again, whether additional differences exist between streams on this scale are explored.

Precondition 3. Given that risk is expected to be different among streams, recidivism rates are also expected to differ. As in precondition 1, Intensive, Individual and Rehabilitative streams are expected to have higher recidivism rates than the Basic and AD streams.

Exploratory question 3 – Recidivism. As in exploratory question 2, additional differences in recidivism between streams were explored.

Precondition 4 - LSI-OR predictive validity. LSI-OR General Risk-Need score will predict recidivism for both the comparison and PPSDM groups. This is expected for both the overall sample and the stream comparisons.

Exploratory question 4 – LSI-OR predictive validity. Whether the predictive validity of the LSI-OR is higher for the comparison group than for the PPSDM groups is explored. In explanation, the LSI-OR assessments were completed prior to the PPSDM

intervention. If the PPSDM is more effective than the services received by the comparison group, offenders' risk to recidivate will be reduced. As such, the LSI-OR will actually be predicting overestimates of recidivism for the PPSDM groups.

Primary hypothesis. The PPSDM groups are expected to have significantly lower recidivism rates than the comparison group. This is expected for both the overall sample (i.e. PPSDM groups versus non-PPSDM comparison group) as well as for each of the streams (e.g. Intensive PPSDM groups versus Intensive non-PPSDM group). However, as per the risk principle, the reductions in recidivism are further expected to be greater for the higher risk groups, and/or nil in the low risk groups.

2.0 METHOD

2.1 Participants

Participants were randomly selected from all offenders who had received a supervision order to be administered by the Ministry of Community Safety and Correctional Services (MCSCS) of Ontario during 1998, 2004, and 2005 (from January 1st to December 31st of each respective year). Samples were drawn from these three particular years to allow for two years at risk of recidivism for each cohort. The comparison sample was drawn from the year 1998 because the PPSDM had not yet been implemented. Earlier years were not chosen to keep historical differences between the groups to a minimum. The PPSDM sample was drawn from those receiving a supervision order in 2004 and 2005 to allow as much time for PPSDM implementation to mature, while allowing at least two years of time at risk for recidivism. Two PPSDM samples were drawn (one from each year 2004 and 2005) to provide some time series perspective.

A total of 2890 participants were selected, 906 from 1998, 1000 from 2004, and 984 from 2005. Two hundred participants were sampled from each of five pre-defined groups (Intensive, Individual, Rehabilitative, Basic, and Administrative Designation), identified from all community admissions in 1998, 2004, and 2005. The full 200 participant sample could not be drawn from the Basic and Administrative Designation (AD) streams of the 1998 sample, as 200 participants from each group did not meet the matching criteria. The comparison group samples for the Basic and AD groups consist of 172 and 134 participants respectively. In addition, only 184 participants were available in the AD stream for the 2005 sample.

This resulted in 15 groups of participants, one for each stream that had been supervised under the PPSDM for 2004 and 2005, and a matched-control group for each stream who were supervised prior to PPSDM implementation. Participants are supervised either on a probation order, conditional sentence order, or parole. Both male and female participants are included in the sample.

2.2 Measures

2.2.1 LSI-OR

The LSI-OR is a theoretically and empirically based risk/need assessment instrument designed to predict an offender's risk to reoffend, as well as to identify criminogenic needs that can serve as treatment targets. The General Risk/Need Factors section contains 43 items that are each scored dichotomously (given a score of 0 or 1, such that 0 = not present, 1 = present), and pertain to the history and characteristics of an offender. The items are subsumed under eight subscales: Criminal History (8 items), Education/Employment (9 items), Family/Marital (4 items), Leisure/Recreation (2 items), Companions (4 items), Procriminal Attitude/Orientation (4 items), Substance Abuse (8 items), and Antisocial Pattern (4 items). The Specific Risk/Need Factors section contains two subscales, Personal Problems with Criminogenic Potential (14 items) and History of Perpetration (9 items), which are scored in the same manner. These items are intended to identify additional risk factors, criminogenic needs and responsivity issues, as well as guide the assessors in deciding whether to override the original risk level. There are three additional sections of the LSI-OR that are intended to guide case management, including, Institutional Factors (10 items), Other Client Issues (18 items), and Special Responsivity Considerations (8 items) (Girard & Wormith, 2004).

2.2.2 Recidivism

Recidivism was defined as: a) any criminal offence for which an offender is returned into the MCSCS system, b) either to sentenced incarceration or community supervision, c) within two years of their index offence supervision start date. For each offender, the follow-up period was truncated at exactly two years after the supervision start date. Therefore, the follow-up period is equal for all participants in the sample. Criteria a) and b) are used by MCSCS to define and collect recidivism data, and hence were used for the current study as all data was extracted from MCSCS databases. The definition is somewhat limited, such that offences committed in other provinces are not included, nor are offences receiving a sentence besides incarceration or community supervision (e.g. fines, suspended sentences, alternative measures). These types of offences were not available, likely because they are not worth collecting for a provincial correctional agency, primarily mandated to manage offenders within institutions and the community.

Three measures of recidivism were analyzed. The first is a simple categorical yes/no recidivism measure. The second is time to recidivate, measured in days, used in survival analysis. The third is a measure of offence severity. Offence severity was coded based on categories developed by the Research Department of the Ministry of Correctional Services of Ontario in 1982. Each category represents offences that are similar in nature, as well as in sentence type and length. The 26 categories are rank-ordered by seriousness as defined by the average sentence length imposed by Ontario courts on those sentenced in each category (see Appendix C), such that the higher the severity code, the more serious the offence (e.g. 2 = municipal bylaw offences, 26 =

homicide and related offences) and 0 = no recidivism. The average sentence lengths were calculated from sentences given to 60,000 offenders in one year (Stasiuk, Winter & Nixon, 1996).

2.2.3 Collaborative Evaluation Process (CEP)

The Collaborative Evaluation Process (CEP) instrument was developed by the Ministry of Correctional Services (MCS) as a means of conducting a systematic process evaluation in Ministry Probation and Parole offices. It was designed to monitor the implementation of the PPSDM, and highlight areas that needed improvement. It has two sections, File Review and Behavioural Observation Rating Scale (BORS). The File Review section comprises 40 percent of each Probation and Parole Office's total CEP score, while the BORS makes up 60 percent. The File Review section contains 31 items under six subsections, including Assessment (11 items), Offender Management Plan (5 items), Special Groups (4 items), Case Records (3 items), Case Review (4 items), and Enforcement (4 items). Some items in the file review are worth one point, while others are worth two points, for a possible range of zero to 47 points (for all criteria and point value, see Appendix B). The BORS contains 48 items under five subscales, including general Interviewing Skills (12 items), Adherence to PPSDM Standards (9 items), Motivational Interviewing skills (9 items), Cognitive Interventions (9 items), and Relapse Prevention (9 items). Each item is rated on a three-point Likert scale (0 = unsatisfactory, 1 = satisfactory, 2 = excellent, as well as N/A = not applicable), which results in a possible range of scores from zero to 96. The scores are converted into percentages, and then all of the scores from the File Review section are averaged to provide an office score, as are all of the BORS scores. The Ministry of Correctional Services considers

office scores at 65 percent and below as “unsatisfactory”, scores between 66 percent and 80 percent “satisfactory”, and scores above 80 percent “very satisfactory” (Program Effectiveness, Statistics, and Applied Research Unit, 2004). CEP data was included in the present study to provide some insight into the level of PPSDM implementation, which could have a moderating effect on any differences in recidivism between the comparison and PPSDM groups.

2.3 Procedure

2.3.1 Matching procedure

As the current classification system did not exist prior to the PPSDM implementation, comparison groups for each of the PPSDM streams were constructed post-hoc by matching on stream characteristics. First, 200 participants were randomly selected from all participants in each stream in 2004. Frequencies were subsequently run on each 2004 stream. Any variable for which 75 percent or more of the 2004 group possessed the characteristic was chosen as a matching criterion for the 1998 stream group, as it was considered a defining characteristic of the stream. For example, 95.7 percent of the 2004 Basic sample had an LSI-OR Total score between 0 and 14, so 1998 Basic comparison group members would only be chosen if their LSI-OR score was less than 15. Comparison group matches for each stream were then drawn from the 1998 total sample, based on a) the case management standards for each stream, b) the LSI-OR items related to the case management standards (see Table 1), and c) supplemental criteria not related to the case standards, but were common to the stream (at least 75 percent of the 2004 group possessed the characteristic; see Table 2). One variation on the preceding criteria applies to the Individual stream. One case management standard for the

Individual stream is that they cannot be managed in the Rehabilitative stream, often due to responsivity issues. Therefore, LSI-OR items that were common in the 2004 Individual sample and related to these issues were considered. As there are a variety of reasons an offender may be streamed to the Individual group, frequencies on any given item did not reach 75 percent. So, to be selected for the 1998 Individual comparison group, the participants must have had one or more of these LSI-OR items: Problem solving/self-management skill deficits, Poor social skills, Underachievement, Health problems, Physical disability, Low self-esteem, Shy/withdrawn, Diagnosis of psychosis, Learning disability, Victim of neglect, and Low intelligence.

Table 1. Matching criteria – Case standards and related variables**.**

Stream	Case Management Standards	Related Variables
Intensive	High risk Likely to commit serious bodily harm or death	LSI-OR General Risk/Need score > 18 Violent offender alert*
Individual	Medium to high risk Moderate to high level of need in core programming area Require individual counseling or supervision due to: multiple needs, no access to programs, or unsuitable for group programs Most offenders with mental disorders with criminogenic potential	LSI-OR General Risk/Need score < 27 Presence of one or more LSI-OR items: Problem solving/self-management skill deficits, Poor social skills, Underachievement, Health problems, Physical disability, Low self-esteem, Shy/withdrawn, Diagnosis of psychosis, Learning disability, Victim of neglect, Low intelligence
Rehabilitative	Medium to high risk Moderate to high level of need in core programming area	LSI-OR General Risk/Need score < 26 Procriminal Attitude/ Orientation < 4 Substance Abuse < 7
Basic	Lower risk Probation order only No sex offenders No offenders with pattern of violent behaviour	LSI-OR General Risk/Need score < 15 None of: Inappropriate sexual activity, History of sexual assault (intra- or extra-familial), History of assault on authority figure
AD	Lower risk	LSI-OR General Risk/Need score < 12

* 47% of Intensive stream in 2004 sample had a violent offender flag in OTIS, 1998 Intensive sample was selected to be within 5%, resulted in 43% 1998 sample with violent offender flag.

Table 2. Matching criteria - Supplemental items**.**

Stream	Supplemental Matching Criteria (LSI-OR items)
Intensive	Criminal History score > 4
	Three or more adult/youth dispositions = 1
	Education/Employment score > 3
	Family/Marital score > 0
	Leisure/Recreation score > 0
	Companions score > 0
	Procriminal Attitude/Orientation > 0
	Antisocial Pattern score > 0
	Personal Problems with Criminogenic Potential score > 0
Individual	N/A
Rehabilitative	N/A
Basic	No partner abusers*
	Family/Marital score < 4
	Companions score < 3
	No-anti-criminal acquaintances = 0
	No anti-criminal friends = 0
	Procriminal Attitude/Orientation score < 3
	Supportive of crime = 0
	Personal Problems with Criminogenic Potential items:
	Diagnosis of psychopathy = 0
	History of Escapes/UAL = 0
	Other Client Issues items:
	Other evidence of emotional distress = 0
AD	Criminal History items:
	Two or more prior adult/youth dispositions = 0
	Three or more present offences = 0
	Family/Marital score < 4
	Companions score < 4
	No-anti-criminal acquaintances = 0
	No anti-criminal friends = 0
	Procriminal Attitude/Orientation items:
	Supportive of crime = 0
	Personal Problems with Criminogenic Potential score < 3
	Clear problems of compliance = 0
	Diagnosis of psychopathy = 0
	Diagnosis of other personality disorder = 0
	Inappropriate sexual activity = 0
	History of sexual assault (extra- or intra-familial) = 0
	History of escapes/UAL = 0
	Other Client Issues items:
	Homeless or transient = 0
	Diagnosis of psychosis = 0

* Alert in OTIS, not an LSI-OR item

2.3.2 Data collection

After the participants were identified using the aforementioned matching techniques, data were collected for each participant. This included demographic information (e.g. birth date, gender), details regarding their index offence and disposition (e.g. most serious index offence, supervision start and end dates, stream placement), LSI-OR scores, as well as information about each participant's first reoffence (e.g. most serious offence, new admission date, disposition), if available. The LSI-OR scores were collected from the Electronic LSI-OR database, which is maintained by the MCSCS. The remainder of the data was collected from the Offender Tracking Information System (OTIS), which is also maintained by MCSCS. OTIS tracks all offender movement, including admissions to MCSCS institutions and probation offices in Ontario. Correctional professionals, including correctional officers and Probation and Parole Officers (PPO's) enter data regarding offenders into OTIS and the Electronic LSI-OR database. The CEP database is maintained by a Program Effectiveness Analyst with MCSCS. All data was extracted by a Statistics Officer of the MCSCS and sent electronically to the primary researcher.

2.4 Research Design/Data Analysis

This study used a retrospective, quasi-experimental design to evaluate the effectiveness of the PPSDM in reducing recidivism. For this purpose, a comparison group has been constructed by selecting offenders supervised in Ontario prior to the PPSDM implementation. Selection criteria for the comparison group included PPSDM case management standards for each stream and related indicators, to ensure that participants in the comparison group were a suitable match for those in the PPSDM groups. Data

analysis first focused on examining whether the groups were properly matched, whether the preconditions were met, and then the primary hypothesis was tested. Post-hoc analyses were then conducted to more fully investigate the preceding results.

2.4.1 Matching

Analyses were conducted to examine whether the groups were properly matched. Comparisons were made between the PPSDM 2005 group, the PPSDM 2004 group and the Comparison group overall, as well as each of the streams (e.g. PPSDM 2005 Basic stream versus PPSDM 2004 Basic stream versus Comparison Basic stream). MANOVA and Scheffe multiple comparisons were used to compare the three groups on: a) LSI-OR scores, including General Risk/Need score, subscale scores (e.g. Criminal History, Education/Employment, etc.), and Specific Risk/Need score; b) age at index offence; c) length of index disposition; and d) index offence severity. All scores above were positively skewed, and $\log^{10}$ transformations were performed to normalize their distributions. In the following results, raw means and standard deviations are reported for ease of interpretation, while results of significance testing are reported from the transformed variables. Chi-square analyses were also used to compare the categorical variables, particularly the gender of offender and type of legal document (i.e. probation, parole, or conditional sentence). ANCOVAs were also used for Basic and Intensive streams to examine further differences in risk and age at admission between groups. Finally, the data was split by gender, and ANOVA was used to compare the groups on LSI-OR General Risk/Need scores for males and females separately. This was done to explore whether the groups were appropriately matched when looking at males and females respectively.

2.4.2. Precondition 2 and Exploratory Questions 2a and b - Risk

To investigate the relationships between stream membership and risk as in precondition 1, one-way ANOVAs were carried out on the General Risk/Need and Specific Risk/Need scores of the LSI-OR for each PPSDM group (i.e. 1998, 2004, and 2005 samples). Scheffe multiple comparisons were used to explore any significant differences (at $p<.10$ level). The Scheffe multiple comparison was chosen due to the high level of power in the study (resulting from the large sample size), which allowed for a conservative test. Chi-square was also used to compare the proportion of offenders in each risk category by stream.

2.4.3. Precondition 3 and Exploratory Questions 3 - Recidivism

In order to test whether there are differences in recidivism between streams, several analyses were conducted. First, crosstabs with chi-square and ANOVA were used to examine the relationship between stream membership and the categorical yes/no recidivism variable. Scheffe multiple comparisons were used to explore any significant differences. Next, an ANOVA was used to compare the streams on severity of new offences, and survival analysis with pairwise comparisons was used to examine time at risk amoung streams.

2.4.4. Precondition 4 and Exploratory Questions 4 – LSI-OR Predictive Validity

Correlational analyses were carried out to investigate precondition and exploratory question 3, that the LSI-OR will predict recidivism. In particular, Pearson *r* correlations were run between the categorical yes/no recidivism variable and General Risk/Need scores. Pearson *r* was used instead of non-parametric correlations as it is robust and is the convention used in the literature. To investigate differential predictive

validity for males and females, the sample was split by gender and the correlational analyses re-run.

2.4.5. Primary Hypothesis

To test the primary hypothesis, that the PPSDM groups will have lower recidivism rates than the comparison group, similar analyses to precondition 3 were conducted. However, the comparisons were between the PPSDM groups and the comparison group, overall and by stream. First, crosstabs with chi-square and ANOVA were used to examine the relationship between group membership (i.e. Comparison 1998 versus PPSDM 2004 versus PPSDM 2005) and the categorical yes/no recidivism variable. In particular, a 3 (Comparison 1998 versus PPSDM 2004 versus PPSDM 2005) by 5 (Stream) ANCOVA with LSI-OR General Risk/Need total score as a covariate was run. Next, a 3 (Comparison 1998 versus PPSDM 2004 versus PPSDM 2005) by 5 (Stream) by 2 (males versus females) ANCOVA with LSI-OR General Risk/Need total score as a covariate was run to investigate differences in recidivism by gender. A 3 (Comparison 1998 versus PPSDM 2004 versus PPSDM 2005) by 5 (Stream) ANCOVA with LSI-OR General Risk/Need total score as a covariate was then run to compare recidivists on the severity of their new offence. Cox Regression Survival Analysis was also run, with LSI-OR General Risk/Need total score as a covariate to examine differences in time at risk to reoffend.

The most serious offence was recorded for each offender, and the offences were coded into 17 categories. The frequencies of these offence categories were examined for the Comparison 1998 group and the PPSDM groups. Chi-square analysis was used to examine if there were significant differences in the proportion of failure to comply type

offences between groups. A 3 (Comparison 1998 versus PPSDM 2004 versus PPSDM 2005) by 5 (Stream) ANCOVA with LSI-OR General Risk/Need total score as a covariate was run with failure to comply type offences filtered out (recoded as not recidivated) to determine if there were significant differences in recidivism rates between groups with these offences excluded. Scheffe multiple comparisons were used to explore any significant differences.

The Intensive stream was further explored by splitting this stream only into thirds based on LSI-OR General Risk/Need total scores and then running a 3 (Comparison 1998 versus PPSDM 2004 versus PPSDM 2005) by 3 (Low, Medium, or High risk level) ANOVA on the yes/no recidivism variable.

2.4.6 CEP Data

To examine whether the level of PPSDM implementation by Probation and Parole Office had a moderating effect on recidivism, the sample was divided into low, medium and high groupings by dividing the sample into thirds for the CEP Total score, CEP File Review section score, and the CEP BORS section score. Then cross-tabs were run to compare the low, medium, and high CEP score groups on the categorical (yes/no) recidivism variable.

3.0 RESULTS

3.1 Precondition 1 – Matching

To help with interpretation of the tables below, Table 3 is a summary of the range of scores possible for each scale and subscale. All risk scales are coded such that a higher score indicates higher risk, and similarly, the offence severity scale is coded such that the higher the score, the higher the severity of the offence (i.e. drug possession offences = 12, assault and related offences = 16, homicide and related offences = 26; for the full coding list, please see Appendix C).

Table 3. Range of scores for matching scales.

Scale/Subscale	Range of Scores
LSI-OR: General Risk/Need Total	0-43
Criminal History	0-8
Education/Employment	0-9
Family/Marital	0-4
Leisure/Recreation	0-2
Companions	0-4
Procriminal Attitude/Orientation	0-4
Substance Abuse	0-8
Antisocial Pattern	0-4
LSI-OR Spec Risk/Need Total	0-23
Criminal Potential	0-14
History of Perpetration	0-9
Offence Severity	0-26

3.1.1 Overall – All Streams Combined

The Comparison group was fairly well matched to the PPSDM groups (from 2004 and 2005). There were no significant differences between groups for the total General Risk/Need scale of the LSI-OR, six of the eight LSI-OR General Risk/Need subscales (i.e. Education/Employment, Family/Marital, Leisure/Recreation, Companions, Procriminal Attitude/Orientation, Substance Abuse), the History of Perpetration subscale

of the Specific Risk/Need Factors section of the LSI-OR, age at admission, index offence severity, or gender proportion between groups (Table 4).

However, there were some significant differences. First, the omnibus test for differences between the groups (Comparison 1998 versus PPSDM 2004 versus PPSDM 2005) was significant, Pillai's Trace = .055, $F(28, 5552) = 5.593$, $p<.001$. The tests of between-subjects effects revealed that there significant differences between groups for the Criminal History ($F(2, 2788) = 3.908$, $p=.020$) and Antisocial Pattern ($F(2, 2788) = 4.206$, $p=.015$) subscales of the LSI-OR; the Specific Risk/Need Factors section of the LSI-OR ($F(2, 2788) = 5.454$, $p=.004$) and its subscale, Personal Problems with Criminogenic Potential ($F(2, 2788) = 4.956$, $p=.007$); as well as the length of index disposition ($F(2, 2788) = 39.977$, $p<.001$).

Scheffe multiple comparisons revealed that the Comparison 1998 group was marginally higher risk on the Criminal History subscale than the PPSDM 2004 ($p=.060$) and PPSDM 2005 ($p=.053$) groups; significantly higher risk on the Antisocial Pattern subscale than both the PPSDM 2004 ($p=.036$) and PPSDM 2005 ($p=.046$) groups; significantly higher risk on the Specific Risk/Need Factors section than both the PPSDM 2004 ($p=.008$) and PPSDM 2005 ($p=.044$) groups; significantly higher than only the PPSDM 2004 group on the Personal Problems with Criminogenic Potential subscale ($p=.007$); and the Comparison 1998 group had a significantly higher length of index disposition than both the PPSDM 2004 ($p<.001$) and PPSDM 2005 ($p<.001$) groups. No other multiple comparisons were significant.

Chi-square tests also revealed the proportion of offenders serving a probation term, conditional sentence, or parole was significantly different between groups, $X^2(4) =$

19.786, p=.001. Specifically, there appear to be more individuals with conditional sentences in the PPSDM groups than the Comparison 1998 group. The preceding comparisons between the three samples were then made for each of the five streams.

Table 4. Matching results for overall sample (streams combined).

Matching Variables	Comparison 1998		PPSDM 2004		PPSDM 2005		*F or* X^2
	Mean (SD)	n	Mean (SD)	n	Mean (SD)	n	
LSI-OR							
General Risk/Need Total	13.67 (10.39)	906	13.15 (10.10)	946	13.38 (10.09)	940	.757
Crim Hx	2.92 (2.66)	906	2.60 (2.59)	946	2.62 (2.62)	940	3.908*
Educ/Empl	3.18 (2.91)	906	3.02 (2.86)	946	3.12 (2.88)	940	.698
Fam/Mar	1.34 (1.09)	906	1.36 (1.19)	946	1.34 (1.16)	940	.301
Leis/Rec	1.03 (.79)	906	1.01 (.76)	946	1.05 (.78)	940	.531
Companions	1.06 (1.08)	906	1.12 (1.12)	946	1.13 (1.11)	940	1.069
Procriminal	.97 (1.23)	906	.98 (1.28)	946	1.00 (1.25)	940	.370
Substance A	2.31 (2.38)	906	2.31 (2.45)	946	2.37 (2.47)	940	.131
Antisocial	.86 (1.07)	906	.75 (1.01)	946	.75 (1.01)	940	4.206*
Spec Risk/Need Total	2.91 (2.59)	906	2.77 (2.96)	946	2.89 (2.99)	940	5.454**
Crim Poten	1.86 (1.77)	906	1.71 (1.95)	946	1.87 (2.04)	940	4.956**
Hx of Perp	1.05 (1.14)	906	1.06 (1.32)	946	1.02 (1.26)	940	1.311
Age at Admission	33.10 (10.76)	905	33.43 (11.99)	1000	33.57 (11.97)	984	.064
Length first disposition (months)	20.12 (12.39)	906	15.97 (10.12)	1000	16.12 (9.65)	984	39.977***
Offence Severity	16.83 (4.37)	906	16.34 (4.36)	1000	16.65 (4.42)	984	2.577
	#	%	#	%	#	%	
Community disposition							19.786**
Probation	816	90.0	886	88.6	860	87.4	
Cond. Sent.	73	8.1	109	10.9	116	11.8	
Parole	17	1.9	5	0.5	5	0.5	
Gender							5.391
Male	766	84.5	821	82.1	792	80.5	
Female	140	15.5	179	17.9	192	19.5	

* = significant at p<.05 level

** = significant at p<.01 level
*** = significant at p<.001 level
Note: Log transformations were performed on all scale variables as all were significantly skewed. The non-transformed means are reported here, but the *F* values represent a MANOVA conducted on the transformed variables.

3.1.2 Matching Results by Stream – Administrative Designation (AD) Stream

As with the overall sample, the Comparison group was fairly well matched to the PPSDM groups (from 2004 and 2005) for the AD stream. There were no significant differences between groups for the total General Risk/Need scale of the LSI-OR, five of the eight LSI-OR General Risk/Need subscales (i.e. Education/Employment, Family/Marital, Companions, Procriminal Attitude/Orientation, Substance Abuse), both subscales of the Specific Risk/Need Factors section of the LSI-OR, age at admission, or gender proportion between groups (please see Table 5 for descriptive statistics).

Once again, there were several significant differences. First, the omnibus test for differences between the groups was significant, Pillai's Trace = .186, $F(28, 914) = 3.342$, $p<.001$. The tests of between-subjects effects revealed that there significant differences between groups for the Criminal History ($F(2, 469) = 9.275$, $p<.001$), Leisure/Recreation ($F(2, 469) = 7.613$, $p=.001$), and Antisocial Pattern ($F(2, 469) = 9.584$, $p<.001$) subscales of the LSI-OR; the Specific Risk/Need Factors section of the LSI-OR ($F(2, 469) = 3.017$, $p=.050$); as well as the length of index disposition ($F(2, 469) = 8.107$, $p<.001$), and index offence severity ($F(2, 469) = 4.195$, $p=.016$).

Scheffe multiple comparisons revealed that the Comparison 1998 group was significantly lower risk on the Criminal History subscale than the PPSDM 2004 ($p=.003$) and PPSDM 2005 ($p<.001$) groups; significantly lower risk on the Leisure/Recreation subscale than the PPSDM 2004 ($p=.001$) and PPSDM 2005 ($p=.041$) groups; significantly lower risk on the Antisocial Pattern subscale than both the PPSDM 2004

($p<.001$) and PPSDM 2005 ($p=.004$) groups; and significantly higher risk on the Specific Risk/Need Factors section than only the PPSDM 2005 ($p=.051$) group. In addition the Comparison 1998 group had a significantly higher length of index disposition than both the PPSDM 2004 ($p=.001$) and PPSDM 2005 ($p=.005$) groups, and had a significantly higher index offence severity than both the PPSDM 2004 ($p=.042$) and PPSDM 2005 ($p=.010$) groups. No other multiple comparisons were significant.

Chi-square tests also revealed the proportion of offenders serving a probation term, conditional sentence, or parole was significantly different between groups, $X^2(2) = 14.077$, $p=.001$. Specifically, there appear to be more individuals on conditional sentence and fewer on probation in the Comparison 1998 group with respect to the PPSDM groups.

Table 5. Matching results for Administrative Designation (AD) Stream.

Matching Variables	Comparison 1998		PPSDM 2004		PPSDM 2005		*F or* X^2
	Mean (SD)	n	Mean (SD)	n	Mean (SD)	n	
LSI-OR							
General Risk/Need Total	3.99 (2.67)	134	5.87 (5.19)	180	5.66 (5.85)	158	2.868
Crim Hx	.28 (.45)	134	.88 (1.49)	180	1.09 (1.85)	158	9.275***
Educ/Empl	1.45 (2.01)	134	1.58 (2.18)	180	1.46 (1.95)	158	.119
Fam/Mar	.77 (.77)	134	.74 (.95)	180	.75 (1.00)	158	.446
Leis/Rec	.40 (.49)	134	.67 (.63)	180	.58 (.59)	158	7.613**
Companions	.40 (.70)	134	.57 (.79)	180	.56 (.84)	158	1.936
Procriminal	.13 (.34)	134	.28 (.65)	180	.23 (.53)	158	2.509
Substance A	.56 (.92)	134	.98 (1.48)	180	.84 (1.52)	158	2.895
Antisocial	.00 (.00)	134	.17 (.42)	180	.15 (.52)	158	9.584***
Spec Risk/Need Total	.95 (.92)	134	.82 (1.08)	180	.79 (1.42)	158	3.017*
Crim Poten	.55 (.73)	134	.40 (.67)	180	.42 (.92)	158	2.975
Hx of Perp	.40 (.49)	134	.42 (.68)	180	.37 (.70)	158	.612
Age at Admission	33.14 (11.91)	134	32.85 (13.53)	200	33.10 (12.86)	184	.136
Length first disposition (months)	16.16 (7.85)	134	12.48 (5.36)	200	12.82 (5.25)	184	8.107***
Offence Severity	16.44 (3.40)	134	15.45 (4.20)	200	15.23 (4.83)	184	4.195*
	#	%	#	%	#	%	
Community disposition							14.077**
Probation	123	91.8	196	98.0	182	98.9	
Cond. Sent.	11	8.2	4	2.0	2	1.1	
Parole	0	0.0	0	0.0	0	0.0	
Gender							5.121
Male	107	79.9	145	72.5	126	68.5	
Female	27	20.1	55	27.5	58	31.5	

* = significant at p<.05 level

** = significant at p<.01 level
*** = significant at p<.001 level
Note: Log transformations were performed on all scale variables as all were significantly skewed. The non-transformed means are reported here, but the *F* values represent a MANOVA conducted on the transformed variables.

3.1.3 Matching Results by Stream – Basic Stream

There was a mix of significant and non-significant findings for the Basic stream when comparing the Comparison 1998 group to the PPSDM groups. There were no significant differences between groups on five of the eight LSI-OR General Risk/Need subscales (i.e. Family/Marital, Leisure/Recreation, Procriminal Attitude/Orientation, Substance Abuse, Antisocial Pattern), the History of Perpetration subscale of the Specific Risk/Need Factors section of the LSI-OR, index offence severity, or gender proportion between groups (please see Table 6 for descriptive statistics).

However, there were several significant differences. First, the omnibus test for differences between the groups was significant, Pillai's Trace = .230, $F(28, 1076) = 5.005$, $p<.001$. The tests of between-subjects effects revealed that there significant differences between groups for the total General Risk/Need scale of the LSI-OR ($F(2, 550) = 6.605$, $p=.001$), the Criminal History ($F(2, 550) = 14.366$, $p<.001$), Education/Employment ($F(2, 550) = 3.392$, $p=.034$), and Companions ($F(2, 550) = 11.290$, $p<.001$) subscales of the LSI-OR; the Specific Risk/Need Factors section of the LSI-OR ($F(2, 550) = 5.386$, $p=.005$) and its Personal Problems with Criminogenic Potential subscale ($F(2, 550) = 4.394$, $p=.013$); as well as age at admission ($F(2, 550) = 5.049$, $p=.007$) and the length of index disposition ($F(2, 550) = 17.902$, $p<.001$).

Scheffe multiple comparisons revealed that the Comparison 1998 group was significantly lower risk on the total General Risk/Need scale of the LSI-OR than both the

PPSDM 2004 (p=.021) and the PPSDM 2005 (p=.003) groups; significantly lower risk on the Criminal History subscale than the PPSDM 2004 (p<.001) and PPSDM 2005 (p<.001) groups; significantly lower risk on the Education/Employment subscale than only the PPSDM 2005 (p=.034) group; significantly lower risk on the Companions subscale than both the PPSDM 2004 (p=.026) and PPSDM 2005 (p<.001) groups; significantly higher risk on the Specific Risk/Need Factors section than both the PPSDM 2004 (p=.016) and PPSDM 2005 (p=.018) groups and significantly higher risk on the Personal Problems with Criminogenic Potential subscale than both the PPSDM 2004 (p=.041) and PPSDM 2005 (p=.031) groups. In addition the Comparison 1998 group was significantly older at admission than both the PPSDM 2004 (p=.047) and PPSDM 2005 (p=.012) groups and had a longer length of index disposition than both the PPSDM 2004 (p<.001) and PPSDM 2005 (p=.001) groups. No other multiple comparisons were significant.

Chi-square tests also revealed the proportion of offenders serving a probation term, conditional sentence, or parole was significantly different between groups, $X^2(4) = 17.521$, p=.002. Specifically, there appear to be more offenders on conditional sentences and fewer on probation in the Comparison 1998 group with respect to the PPSDM groups.

Table 6. Matching results for Basic Stream.

Matching Variables	Comparison 1998		PPSDM 2004		PPSDM 2005		*F or X^2*
	Mean (SD)	n	Mean (SD)	n	Mean (SD)	n	
LSI-OR							
General Risk/Need Total	4.52 (2.94)	172	6.42 (4.88)	189	6.74 (5.10)	193	6.605**
Crim Hx	.26 (.44)	172	.98 (1.53)	189	.94 (1.56)	193	14.366***
Educ/Empl	1.31 (1.83)	172	1.83 (2.25)	189	1.92 (2.18)	193	3.392*
Fam/Mar	.76 (.71)	172	.84 (.93)	189	.74 (.82)	193	.424
Leis/Rec	.58 (.50)	172	.72 (.65)	189	.71 (.66)	193	1.566
Companions	.37 (.65)	172	.57 (.75)	189	.78 (.91)	193	11.290***
Procriminal	.26 (.44)	172	.29 (.63)	189	.36 (.66)	193	1.321
Substance A	.74 (1.10)	172	1.04 (1.53)	189	1.08 (1.58)	193	1.497
Antisocial	.25 (.43)	172	.17 (.40)	189	.21 (.48)	193	1.680
Spec Risk/Need Total	1.18 (1.14)	172	.88 (1.17)	189	.93 (1.35)	193	5.386**
Crim Poten	.80 (1.00)	172	.55 (.85)	189	.58 (.98)	193	4.394*
Hx of Perp	.38 (.49)	172	.33 (.63)	189	.36 (.67)	193	1.353
Age at Admission	33.91 (12.14)	171	31.35 (11.45)	200	30.04 (10.83)	200	5.049**
Length first disposition (months)	17.26 (8.06)	172	12.65 (6.76)	200	13.96 (6.51)	200	17.902***
Offence Severity	16.54 (4.18)	172	15.43 (4.40)	200	16.33 (3.91)	200	2.629
	#	%	#	%	#	%	
Community disposition							17.521**
Probation	151	87.8	186	93.0	196	98.0	
Cond. Sent.	19	11.0	14	7.0	4	2.0	
Parole	2	1.2	0	0.0	0	0.0	
Gender							3.569
Male	137	79.7	154	77.0	143	71.5	
Female	35	20.3	46	23.0	57	28.5	

* = significant at p<.05 level

** = significant at p<.01 level
*** = significant at p<.001 level
Note: Log transformations were performed on all scale variables as all were significantly skewed. The non-transformed means are reported here, but the *F* values represent a MANOVA conducted on the transformed variables.

As previously mentioned, the General Risk/Need score of the LSI-OR was significantly lower for the Comparison group than the PPSDM groups, while the Comparison group was significantly older than the PPSDM groups. As risk and age tend to have a negative relationship (Andrews & Bonta, 2003), an ANCOVA was run to determine whether the difference between Comparison and PPSDM groups on total LSI-OR General Risk/Need score could be contributed to age. Therefore, age at admission was included as a covariate. Age at admission was not a significant covariate ($F(1, 549) = 2.739$, $p = .098$), and the differences between the Comparison groups and PPSDM groups remained, $F(2, 549) = 11.574$, $p < .001$.

3.1.4 Matching Results by Stream – Rehabilitative Stream

The Comparison group was fairly well matched to the PPSDM groups for the Rehabilitative stream. There were no significant differences between groups for the total General Risk/Need scale of the LSI-OR, five of the eight LSI-OR General Risk/Need subscales (i.e. Education/Employment, Leisure/Recreation, Companions, Procriminal Attitude/Orientation, Antisocial Pattern), the Specific Risk/Need Factors section of the LSI-OR and its History of Perpetration subscale, age at admission, index offence severity, proportion of offenders serving different types of community sentences, or gender proportion between groups (please see Table 7 for descriptive statistics).

Once again, there were a few significant differences. First, the omnibus test for differences between the groups was significant, Pillai's Trace = .171, $F(28, 1142) =$

3.821, $p<.001$. The tests of between-subjects effects revealed that there significant differences between groups for the Criminal History ($F(2, 583) = 4.698$, $p=.009$), Family/Marital ($F(2, 583) = 11.861$, $p<.001$), and Substance Abuse ($F(2, 583) = 3.100$, $p=.046$) subscales of the LSI-OR; the Personal Problems with Criminogenic Potential subscale of the Specific Risk/Need Factors section of the LSI-OR ($F(2, 583) = 3.335$, $p=.036$); as well as the length of index disposition ($F(2, 583) = 5.831$, $p=.003$).

Scheffe multiple comparisons revealed that the Comparison 1998 group was marginally lower risk on the Criminal History subscale than the PPSDM 2004 group ($p=.052$) and significantly lower than the PPSDM 2005 ($p=.020$) group; significantly lower risk on the Family/Marital subscale than both the PPSDM 2004 ($p=.002$) and PPSDM 2005 ($p<.001$) groups; marginally lower risk on the Substance Abuse subscale than only the PPSDM 2005 ($p=.052$) group; and significantly lower risk on the Personal Problems with Criminogenic Potential subscale than only the PPSDM 2005 ($p=.039$) group. In addition the Comparison 1998 group had a significantly higher length of index disposition than both the PPSDM 2004 ($p=.015$) and PPSDM 2005 ($p=.012$) groups. No other multiple comparisons were significant.

Table 7. Matching results for Rehabilitative Stream.

Matching Variables	Comparison 1998		PPSDM 2004		PPSDM 2005		*F or* X^2
	Mean (SD)	n	Mean (SD)	n	Mean (SD)	n	
LSI-OR							
General Risk/Need Total	12.96 (5.97)	200	14.38 (8.36)	191	14.46 (7.77)	195	.340
Crim Hx	3.39 (2.12)	200	2.95 (2.43)	191	2.82 (2.34)	195	4.698**
Educ/Empl	2.66 (2.46)	200	3.10 (2.70)	191	3.14 (2.77)	195	1.146
Fam/Mar	.98 (.78)	200	1.40 (1.09)	191	1.49 (1.05)	195	11.861***
Leis/Rec	1.01 (.78)	200	1.02 (.75)	191	1.11 (.72)	195	1.448
Companions	.99 (.90)	200	1.17 (1.02)	191	1.14 (1.05)	195	1.348
Procriminal	.74 (.92)	200	.98 (1.12)	191	.86 (.99)	195	2.230
Substance A	2.56 (2.12)	200	3.06 (2.34)	191	3.23 (2.37)	195	3.100*
Antisocial	.64 (.76)	200	.69 (.85)	191	.66 (.77)	195	.080
Spec Risk/Need Total	2.52 (1.80)	200	2.91 (2.21)	191	2.98 (2.10)	195	1.871
Crim Poten	1.58 (1.32)	200	1.74 (1.47)	191	1.97 (1.51)	195	3.335*
Hx of Perp	.94 (.94)	200	1.16 (1.14)	191	1.02 (1.03)	195	1.781
Age at Admission	33.66 (10.52)	200	34.20 (11.18)	200	34.85 (11.36)	200	.663
Length first disposition (months)	19.23 (10.60)	200	16.25 (10.27)	200	15.94 (9.32)	200	5.831**
Offence Severity	16.14 (4.53)	200	16.00 (4.19)	200	16.34 (4.12)	200	4.532
	#	%	#	%	#	%	
Community disposition							5.565
Probation	181	90.5	179	89.5	175	87.5	
Cond. Sent.	14	7.0	20	10.0	23	11.5	
Parole	5	2.5	1	0.5	2	1.0	
Gender							4.480
Male	182	91.0	175	87.5	168	84.0	
Female	18	9.0	25	12.5	32	16.0	

* = significant at p<.05 level

** = significant at p<.01 level
*** = significant at p<.001 level
Note: Log transformations were performed on all scale variables as all were significantly skewed. The non-transformed means are reported here, but the *F* values represent a MANOVA conducted on the transformed variables.

3.1.5 Matching Results by Stream – Individual Stream

The Comparison group was fairly well matched to the PPSDM groups for the Individual stream. There were no significant differences between groups for the total General Risk/Need scale of the LSI-OR, six of the eight LSI-OR General Risk/Need subscales (i.e. Education/Employment, Family/Marital, Leisure/Recreation, Companions, Substance Abuse, Antisocial Pattern), age at admission, index offence severity, or gender proportion between groups (please see Table 8 for descriptive statistics).

However, there were some significant differences. First, the omnibus test for differences between the groups was significant, Pillai's Trace = .207, $F(28, 1150) = 4.740$, $p<.001$. The tests of between-subjects effects revealed that there significant differences between groups for the Criminal History ($F(2, 587) = 5.581$, $p=.004$), and Procriminal Attitude/Orientation ($F(2, 587) = 12.473$, $p<.001$) subscales of the LSI-OR; the Specific Risk/Need Factors section of the LSI-OR ($F(2, 587) = 7.728$, $p<.001$) and its subscales, Personal Problems with Criminogenic Potential ($F(2, 587) = 4.200$, $p=.015$) and History of Perpetration ($F(2, 587) = 6.904$, $p=.001$); as well as the length of index disposition ($F(2, 587) = 14.379$, $p<.001$).

Scheffe multiple comparisons revealed that the Comparison 1998 group was significantly higher risk on the Criminal History subscale than only the PPSDM 2004 group ($p=.006$); significantly lower risk on the Procriminal Attitude/Orientation subscale than both the PPSDM 2004 ($p=.019$) and PPSDM 2005 ($p<.001$) groups; significantly

higher risk on the Specific Risk/Need Factors section than both the PPSDM 2004 (p=.001) and PPSDM 2005 (p=.012) groups; significantly higher risk on the Personal Problems with Criminogenic Potential subscale than only the PPSDM 2004 (p=.016) group; and significantly higher risk on the History of Perpetration subscale than both the PPSDM 2004 (p=.010) and PPSDM 2005 (p=.004) groups . In addition the Comparison 1998 group had a significantly higher length of index disposition than both the PPSDM 2004 (p<.001) and PPSDM 2005 (p<.001) groups. No other multiple comparisons were significant.

Chi-square tests also revealed the proportion of offenders serving a probation term, conditional sentence, or parole was significantly different between groups, $X^2(4) = 19.321$, p=.001. Specifically, there appear to be more offenders on conditional sentences and fewer on probation in the PPSDM groups than the Comparison 1998 group.

Table 8. Matching results for Individual Stream.

Matching Variables	Comparison 1998		PPSDM 2004		PPSDM 2005		*F or* X^2
	Mean (SD)	n	Mean (SD)	n	Mean (SD)	n	
LSI-OR							
General Risk/Need Total	12.94 (5.68)	200	12.96 (7.89)	193	14.33 (9.07)	197	.1.192
Crim Hx	3.16 (2.03)	200	2.58 (2.23)	193	2.83 (2.37)	197	5.581**
Educ/Empl	2.90 (2.52)	200	2.96 (2.70)	193	3.51 (2.92)	197	1.372
Fam/Mar	1.62 (1.14)	200	1.44 (1.09)	193	1.47 (1.10)	197	1.208
Leis/Rec	1.05 (.77)	200	1.05 (.73)	193	1.17 (.81)	197	.859
Companions	.91 (.89)	200	1.13 (1.00)	193	1.12 (1.04)	197	2.699
Procriminal	.50 (.70)	200	.82 (1.08)	193	1.07 (1.23)	197	12.473***
Substance A	2.12 (1.87)	200	2.31 (2.31)	193	2.36 (2.35)	197	.033
Antisocial	.71 (.70)	200	.66 (.83)	193	.81 (.92)	197	1.521
Spec Risk/Need Total	3.13 (1.89)	200	2.51 (1.94)	193	2.85 (2.52)	197	7.728***
Crim Poten	1.98 (1.39)	200	1.62 (1.38)	193	1.98 (1.79)	197	4.200*
Hx of Perp	1.15 (.98)	200	.89 (.99)	193	.87 (1.04)	197	6.904**
Age at Admission	34.58 (9.46)	200	34.17 (12.39)	200	35.07 (12.51)	200	.477
Length first disposition (months)	20.59 (11.32)	200	15.41 (9.77)	200	15.54 (8.96)	200	14.379***
Offence Severity	16.89 (4.75)	200	16.71 (4.24)	200	16.86 (3.81)	200	.797
	#	%	#	%	#	%	
Community disposition							19.321**
Probation	177	88.5	159	79.5	155	77.5	
Cond. Sent.	17	8.5	38	19.0	43	21.5	
Parole	6	3.0	3	1.5	0	0.0	
Gender							.089
Male	164	82.0	162	81.0	164	82.0	
Female	36	18.0	38	19.0	36	18.0	

* = significant at p<.05 level

** = significant at p<.01 level
*** = significant at p<.001 level
Note: Log transformations were performed on all scale variables as all were significantly skewed. The non-transformed means are reported here, but the *F* values represent a MANOVA conducted on the transformed variables.

3.1.6 Matching Results by Stream – Intensive Stream

Contrary to the matching results for the previous streams, there were many significant differences between the Comparison 1998 group and the PPSDM groups in the Intensive stream. There were no significant differences between groups on the Specific Risk/Need Factors section of the LSI-OR and its subscale, Personal Problems with Criminogenic Potential, length of index disposition, or index offence severity (please see Table 9 for descriptive statistics).

However, there were many significant differences. First, the omnibus test for differences between the groups was significant, Pillai's Trace = .254, $F(28, 1150) = 5.969$, $p<.001$. The tests of between-subjects effects revealed that there significant differences between groups for the total General Risk/Need scale of the LSI-OR ($F(2, 587) = 25.192$, $p<.001$), the Criminal History ($F(2, 587) = 22.720$, $p<.001$), Education/Employment ($F(2, 587) = 27.566$, $p<.001$), Family/Marital ($F(2, 587) = 4.208$, $p=.015$), Leisure/Recreation ($F(2, 587) = 14.126$, $p<.001$), Companions ($F(2, 587) = 10.729$, $p<.001$), Procriminal Attitude/Orientation ($F(2, 587) = 16.479$, $p<.001$), Substance Abuse ($F(2, 587) = 5.871$, $p=.003$), and Antisocial Pattern ($F(2, 587) = 20.036$, $p<.001$) subscales of the LSI-OR; the History of Perpetration subscale of the Specific Risk/Need Factors section ($F(2, 587) = 3.193$, $p=.042$); as well as age at admission ($F(2, 587) = 10.299$, $p<.001$).

Scheffe multiple comparisons revealed that the Comparison 1998 group was significantly higher risk on the total General Risk/Need scale of the LSI-OR than both the PPSDM 2004 ($p<.001$) and the PPSDM 2005 ($p<.001$) groups; significantly higher risk on the Criminal History subscale than the PPSDM 2004 ($p<.001$) and PPSDM 2005 ($p<.001$) groups (the PPSDM 2004 group was also significantly higher than the PPSDM 2005 group, $p=.026$); significantly higher risk on the Education/Employment subscale than the PPSDM 2004 ($p<.001$) and PPSDM 2005 ($p<.001$) groups, significantly higher on the Family/Marital subscale than only the PPSDM 2005 ($p=.030$) group; significantly higher risk on the Leisure/Recreation subscale than the PPSDM 2004 ($p<.001$) and PPSDM 2005 ($p<.001$) groups; significantly higher risk on the Companions subscale than the PPSDM 2004 ($p=.009$) and PPSDM 2005 ($p<.001$) groups; significantly higher risk on the Procriminal Attitude/Orientation subscale than the PPSDM 2004 ($p<.001$) and PPSDM 2005 ($p<.001$) groups; significantly higher risk on the Substance Abuse subscale than the PPSDM 2004 ($p=.010$) and PPSDM 2005 ($p=.017$) groups; and significantly higher risk on the Antisocial Pattern subscale than the PPSDM 2004 ($p=.001$) and PPSDM 2005 ($p<.001$) groups (the PPSDM 2004 group was also significantly higher than the PPSDM 2005 group, $p=.033$). When Scheffe multiple comparisons were run on the History of Perpetration subscale, only a marginally significant difference between the Comparison 1998 group and the PPSDM 2004 group ($p=.062$) was found. The comparison 1998 was also significantly younger than the PPSDM 2004 ($p=.001$) and PPSDM 2005 ($p<.001$) groups. No other multiple comparisons were significant.

Chi-square tests also revealed the proportion of offenders serving a probation term, conditional sentence, or parole was significantly different between groups, $X^2(4) =$

22.647, $p<.001$, as was the proportion of male and female offenders, $X^2(2) = 7.745$, $p=.021$. Specifically, there appear to be more offenders on conditional sentences and fewer on probation in the PPSDM groups than the Comparison 1998 group. Also, there appears to be a higher proportion of females in the Comparison 1998 group than the PPSDM groups.

Table 9. Matching results for Intensive Stream.

Matching Variables	Comparison 1998		PPSDM 2004		PPSDM 2005		*F or* X^2
	Mean (SD)	n	Mean (SD)	n	Mean (SD)	n	
LSI-OR							
General Risk/Need Total	29.46 (4.91)	200	25.50 (8.58)	193	24.06 (9.22)	197	25.192***
Crim Hx	6.26 (.99)	200	5.49 (1.99)	193	5.08 (2.42)	197	22.720***
Educ/Empl	6.77 (1.45)	200	5.51 (2.58)	193	5.21 (2.79)	197	27.566***
Fam/Mar	2.31 (1.00)	200	2.36 (1.13)	193	2.12 (1.20)	197	4.208*
Leis/Rec	1.83 (.38)	200	1.54 (.68)	193	1.59 (.65)	197	14.126***
Companions	2.32 (.86)	200	2.10 (1.19)	193	1.94 (1.15)	197	10.729***
Procriminal	2.84 (.81)	200	2.44 (1.33)	193	2.31 (1.31)	197	16.479***
Substance A	4.80 (2.36)	200	4.07 (2.73)	193	4.04 (2.60)	197	5.871**
Antisocial	2.35 (.90)	200	1.99 (1.05)	193	1.77 (1.16)	197	20.036***
Spec Risk/Need Total	5.88 (2.78)	200	6.60 (3.21)	193	6.44 (2.96)	197	1.848
Crim Poten	3.83 (1.82)	200	4.14 (2.17)	193	4.10 (2.10)	197	.296
Hx of Perp	2.06 (1.42)	200	2.46 (1.61)	193	2.34 (1.45)	197	3.193*
Age at Admission	30.32 (9.71)	200	34.59 (11.02)	200	34.76 (11.62)	200	10.299***
Length first disposition (months)	25.63 (17.65)	200	23.05 (12.86)	200	22.06 (13.21)	200	2.811
Offence Severity	18.01 (4.36)	200	18.14 (4.23)	200	18.43 (4.80)	200	.384
	#	%	#	%	#	%	
Community disposition							22.647***
Probation	184	92.0	166	83.0	152	76.0	
Cond. Sent.	12	6.0	33	16.5	44	22.0	
Parole	4	2.0	1	0.5	3	1.5	
Gender							7.745*
Male	176	88.0	185	92.5	191	95.5	
Female	24	12.0	15	7.5	9	4.5	

* = significant at p<.05 level

** = significant at p<.01 level
*** = significant at p<.001 level
Note: Log transformations were performed on all scale variables as all were significantly skewed. The non-transformed means are reported here, but the *F* values represent a MANOVA conducted on the transformed variables.

As previously mentioned, the General Risk/Need score of the LSI-OR was significantly higher for the Comparison group than the PPSDM groups, while the Comparison group was significantly younger than the PPSDM groups. As risk and age tend to have a negative relationship (Andrews & Bonta, 2003), an ANCOVA was run to test the difference between Comparison and PPSDM groups on total LSI-OR General Risk/Need score with age at admission as a covariate to investigate whether these significant differences were due to shared variance. Age at admission was a significant covariate ($F(1, 586) = 40.209$, $p < .001$), but the differences between Comparison groups and PPSDM groups remained, $F(2, 586) = 19.032$, $p < .001$.

3.1.7 Length of Index Disposition

As the length of index community disposition was significantly longer, often by several months, for the Comparison 1998 group than the PPSDM groups for the overall sample and four of the five streams (with the exception of the Intensive Stream), it was investigated further. The possibility that community sentences in Ontario were higher overall in 1998 versus 2004-2005 was examined. Annual reports for the profile of all offenders admitted to the Ontario Ministry of Community Safety and Correctional Services were obtained for fiscal years 1998/99, 2004/05, and 2005/06 (Ministry of Correctional Services, 1999c; Ministry of Community Safety and Correctional Services 2005, 2006).

Table 10. Mean length of community disposition (months) by year.

	1998		2004		2005	
	Mean	N	Mean	N	Mean	N
Probation						
Study sample	20.87	816	17.09	886	17.18	860
Ontario cohort	16.36	34,469	15.74	37,198	15.75	38,351
Conditional Sentence						
Study sample	13.41	73	7.31	109	8.67	116
Ontario cohort	7.59	3,690	7.98	5,332	8.38	5,260
Parole						
Study sample	13.48	17	7.58	5	6.82	5
Ontario cohort	N/A	N/A	6.44	257	6.80	282

N/A = not available

From these Annual Reports, it appears that community sentence length has stayed quite consistent over time in Ontario. Therefore, changing community sentence length for the overall cohorts is not a likely explanation for the 1998 study sample having a higher mean index disposition length. Next, correlations were done to explore whether length of index disposition was related to recidivism (see Table 11).

Table 11. Correlations between index disposition length and yes/no recidivism.

Statistic	Pearson *r*	n
AD	-.001	518
Basic	-.025	572
Rehabilitative	.111**	600
Individual	.024	600
Intensive	.018	600
Entire Sample	.159**	2890

** = significant at p<.01 level

Length of index disposition was significantly correlated with recidivism overall, but generally not when the sample was divided up by stream. The significant correlations between risk and recidivism for the streams may explain why the correlation between length of index disposition and recidivism virtually disappear when divided by stream. Only the correlation for the Rehabilitative stream was significant.

3.1.8 Matching by Gender

Though gender was not a matching criterion, ANOVAs were completed to examine whether males and females were matched on risk, as measured by the General Risk/Need scale of the LSI-OR, respectively (see Table 12).

Table 12. LSI-OR General Risk/Need total score for group by stream and gender.

Stream	Comparison – 1998			PPSDM - 2004			PPSDM - 2005		
	Mean	SD	n	Mean	SD	n	Mean	SD	n
Male									
AD	3.93	2.62	107	5.98	5.12	132	5.69	6.36	103
Basic	4.33	2.81	137	6.47	5.16	146	7.43	5.55	137
Rehabilitative	12.99	6.01	182	14.28	8.41	166	14.3	7.60	164
Individual	12.80	5.59	164	12.75	7.83	157	14.79	9.05	161
Intensive	29.36	5.08	176	25.56	8.57	179	23.98	9.21	189
Male Total	13.90	10.45	766	13.69	10.29	780	14.41	10.22	754
Female									
AD	4.26	2.88	27	5.56	5.41	48	5.62	4.83	55
Basic	5.26	3.32	35	6.26	3.81	43	5.04	3.25	56
Rehabilitative	12.67	5.65	18	15.08	8.19	25	15.26	8.73	31
Individual	13.58	6.11	36	13.86	8.20	36	12.28	9.04	36
Intensive	30.12	3.46	24	24.79	8.95	14	25.75	10.11	8
Female Total	12.42	9.99	140	10.60	8.78	166	9.20	8.40	186
Total									
AD	3.99	2.67	134	5.87	5.19	180	5.66	5.85	158
Basic	4.52	2.94	172	6.42	4.88	189	6.74	5.10	193
Rehabilitative	12.96	5.97	200	14.38	8.36	191	14.46	7.77	195
Individual	12.94	5.68	200	12.96	7.89	193	14.33	9.07	197
Intensive	29.46	4.91	200	25.50	8.58	193	24.06	9.22	197
Overall Total	13.67	10.39	906	13.15	10.10	946	13.38	10.09	940

Overall, males were matched well, indicated by no significant difference between Comparison 1998 and PPSDM groups, $F(2,2297) = 1.240$, *ns*. By stream however, males significantly differed on risk for AD ($F(2,339) = 3.373$, $p=.035$), Basic ($F(2,417) = 9.494$, $p<.001$) and Intensive ($F(2,541) = 21.787$, $p<.001$) streams. Scheffe multiple comparisons showed that the Comparison 1998 group was significantly lower risk than the PPSDM 2004 group ($p=.038$) for the AD stream; the Comparison 1998 group was

significantly lower risk than both the PPSDM 2004 (p=.029) and PPSDM 2005 (p<.001) groups for the Basic stream; and the Comparison 1998 group was significantly higher risk than both the PPSDM 2004 (p<.001) and PPSDM 2005 (p<.001) groups for the Intensive stream. No other multiple comparisons were significant for males.

Overall, there was a significant difference between groups for females (F(2,489) = 5.039, p=007), such that the Comparison 1998 group was significantly higher risk than the PPSDM 2005 group (p=.007). However, only the Intensive stream showed significant differences for females (F(2,43) = 3.558, p=.037), such that the Comparison 1998 group was only marginally higher risk than the PPSDM 2004 group (p=.065). No other multiple comparisons were significant for females.

3.2 Precondition 2 – Risk

3.2.1 LSI-OR General Risk/Need Scale

Precondition 2 predicted that the streams should differ on risk level, given that risk (as measured by the LSI-OR) is an important streaming criterion. For the General Risk/Need scale of the LSI-OR, the Intensive, Individual and Rehabilitative streams were expected to have higher scores than the Basic and AD streams (see Table 13).

Table 13. LSI-OR General Risk/Need total scores by stream.

Stream	Mean	SD	95% Confidence Interval		Min	Max	n
			Lower	Upper			
AD	5.27	4.93	4.82	5.71	0	39	472
Basic	5.94	4.55	5.56	6.32	0	31	554
Rehabilitative	13.92	7.44	13.32	14.52	0	35	586
Individual	13.41	7.68	12.79	14.03	0	39	590
Intensive	26.36	8.10	25.70	27.01	1	41	590
TOTAL	13.40	10.19	13.02	13.77	0	41	2792

Collapsing across the groups, a one-way ANOVA revealed the streams are significantly different on the General Risk/Need scale, $F(4, 2787) = 873.103$, $p<.001$. Scheffe multiple comparisons showed that the AD and Basic streams do not differ from one another, nor do the Rehabilitative and Individual streams. All other multiple comparisons are significant at the $p<.001$ level, such that the Intensive stream is significantly higher than all other streams, and the Rehabilitative and Individual streams are significantly higher risk than the AD and Basic streams.

Table 14. LSI-OR risk category proportions by stream.

Stream	Very Low		Low		Medium		High		Very High	
	n	%	n	%	n	%	n	%	n	%
AD	257	49.6	166	32.0	42	8.1	4	0.8	3	0.6
Basic	245	42.8	241	42.1	60	10.5	7	1.2	1	0.2
Rehabilitative	62	10.3	145	24.2	246	41.0	118	19.7	15	2.5
Individual	66	11.0	163	27.2	245	40.8	95	15.8	21	3.5
Intensive	12	2.0	20	3.3	65	10.8	254	42.3	239	39.8
TOTAL	642	22.2	735	25.4	658	22.8	478	16.5	279	9.7

The proportion of offenders in each stream by risk category is significantly different ($X^2(16) = 2.071E3$, $p<.001$) and generally as one would expect. For example, for the AD stream, the largest proportion of offenders are low or very low risk, while the

Intensive stream has the highest proportion of high and very high risk offenders (see Table 14).

As previously mentioned, PPOs completing LSI-OR assessments have the opportunity to override the resulting risk level, if they believe the risk assessment does not take into account all factors relevant to the client's risk. There were 487 overrides completed, which is 16 percent of the total sample. Two clients were overridden to the Very Low risk level, 24 clients were overridden to Low, 243 clients were overridden to Medium risk, 148 were overridden to High, and 70 were overridden to Very High risk.

3.2.2 LSI-OR Specific Risk/Need Scale

Though there is no streaming criterion for the Specific Risk/Need scale in particular, it was expected that there may also be significant differences on specific risk between streams (see Table 15).

Table 15. LSI-OR Specific Risk/Need total scores by stream.

			95% Confidence Interval				
Stream	Mean	SD	Lower	Upper	Min	Max	n
AD	.85	1.17	.74	.95	0	10	472
Basic	.99	1.23	.89	1.09	0	8	554
Rehabilitative	2.80	2.05	2.63	2.97	0	11	586
Individual	2.83	2.15	2.66	3.01	0	12	590
Intensive	6.30	3.00	6.06	6.54	0	19	590
TOTAL	2.86	2.86	2.75	2.96	0	19	2792

A one-way ANOVA revealed the streams were significantly different on the Specific Risk/Need scale, $F(4, 2787) = 632.217$, $p < .001$. Scheffe multiple comparisons showed that the pattern of results for the Specific Risk/Need scale of the LSI-OR mirrored that of the General Risk/Need findings. AD and Basic streams did not differ from one another, nor did the Rehabilitative and Individual streams. All other multiple

comparisons were significant at the $p<.001$ level, such that the Intensive stream is significantly higher risk than all other streams, and the Rehabilitative and Individual streams are significantly higher risk than the AD and Basic streams.

3.3 Precondition 3 – Recidivism

3.3.1 Categorical Yes/No Recidivism Variable

Given that risk level is expected to differ between streams, corresponding differences in recidivism were also expected (see Table 16).

Table 16. Recidivism rates (yes/no) by stream.

Stream	Entire Sample		
	n	%	N
AD	55	10.6	518
Basic	59	10.3	572
Rehabilitative	161	26.8	600
Individual	188	31.3	600
Intensive	364	60.7	600
TOTAL	827	28.6	2890

A one-way ANOVA revealed that there were significant differences between streams on the categorical yes/no recidivism variable, $F(4, 2885) = 143.926$, $p<.001$. Scheffe multiple comparisons showed that the pattern of results also mirrored the findings for the LSI-OR in Precondition 2. AD and Basic streams did not differ from one another, nor did the Rehabilitative and Individual streams. All other multiple comparisons were significant at the $p<.001$ level, such that the Intensive stream is significantly higher risk than all other streams, and the Rehabilitative and Individual streams are significantly higher risk than the AD and Basic streams.

3.3.2 Severity of New Offences

Table 17. New offence severity by stream.

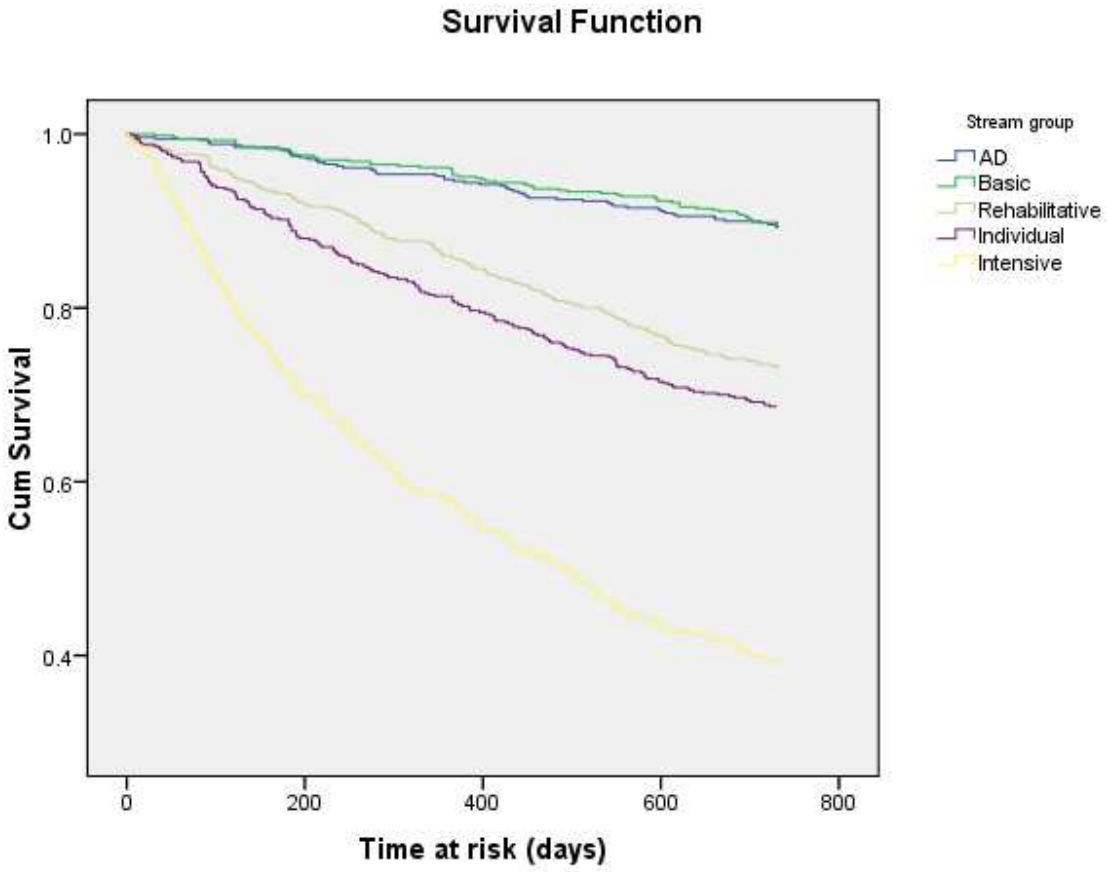
Stream	Entire Sample		
	Mean	SD	n
AD	14.95	4.56	51
Basic	15.64	4.66	59
Rehabilitative	16.42	4.68	161
Individual	16.01	4.67	188
Intensive	16.55	4.54	364
TOTAL	16.23	4.62	827

A one-way ANOVA was run on the severity of new offences, and no significant differences were found between streams ($F(4, 822) = 1.916$, *ns*) for those offenders who did recidivate (see Table 17).

3.3.3 Survival analysis

Survival analysis was also done to determine whether the streams reoffended at different rates than one another (see Figure 1). Indeed, the streams were overall significantly different on survival rate, Wilcoxan (Gehan) statistic(4) = 519.497, $p<.001$. Median Survival Times (in days) for recidivists in each stream was as follows: AD = 366.50; Basic = 398.50; Rehabilitative = 350.50; Individual = 274.00; Intensive = 201.00.

Figure 1 – Survival functions for the five streams.



Pairwise comparisons showed that the Intensive stream survived for a significantly shorter time than all other streams (Wilcoxan (Gehan)(1) = 298.578, 331.218, 157.148, 110.507 for AD, Basic, Rehabilitative, and Individual streams respectively, $p<.001$ for all comparisons). The Individual stream survived for a significantly shorter time than the Rehabilitative stream (Wilcoxan (Gehan)(1) = 4.157, $p=.041$), the Basic stream (Wilcoxan (Gehan)(1) = 82.553, $p<.001$) and the AD stream (Wilcoxan (Gehan)(1) = 72.439, $p<.001$). The Rehabilitative stream survived for the

significantly shorter time than the Basic stream (Wilcoxan (Gehan)(1) = 54.494, $p<.001$) and the AD stream (Wilcoxan (Gehan)(1) = 47.041, $p<.001$). The Basic and AD streams did not show significant differences for survival times.

3.4 Precondition 4 – Predictive Validity of LSI-OR

3.4.1 Overall

Related to Preconditions 2 and 3, the LSI-OR General Risk/Need scale should predict recidivism for all three groups (i.e. Comparison 1998, PPSDM 2004 and PPSDM 2005).

Table 18. Correlations between LSI-OR General Risk/Need scale and yes/no recidivism.

Statistic	Entire Sample	Comparison 1998	PPSDM 2004	PPSDM 2005
Pearson *r*	.468	.439	.470	.496

The LSI-OR General Risk/Need scale predicted recidivism in this sample, at a rate equal or superior to other LSI-OR assessment studies (see Table 18). All correlations were significant at the $p<.01$ level. However, contrary to Exploratory question 4, stronger correlations are observed with the PPSDM groups than with the Comparison 1998 group.

3.4.2 By Gender

As there is controversy regarding the predictive validity of the LSI-OR with female offenders (because it was originally developed and normed on male offenders), the differential predictive validity of the LSI-OR for gender was explored (see Table 19).

Table 19. Correlations between LSI-OR General Risk/Need scale and yes/no recidivism.

Statistic	Males	Females
Pearson *r*	.463	.457

The LSI-OR General Risk/Need scale appears to predict recidivism similarly for males and females. Correlations were both significant at the $p<.01$ level. There were 2300 males included in the analysis, and 492 females.

3.5 Primary Hypothesis

The primary hypothesis predicted that the PPSDM groups would have lower recidivism rates than the Comparison 1998 group.

3.5.1 Categorical Yes/No Recidivism

Table 20. Recidivism rates (yes/no) by stream.

Stream	Comparison – 1998			PPSDM - 2004			PPSDM - 2005		
	n	%	N	n	%	N	n	%	N
AD	17	12.7	134	18	9.0	200	20	10.9	184
Basic	19	11.0	172	19	9.5	200	21	10.5	200
Rehabilitative	53	26.5	200	49	24.5	200	59	29.5	200
Individual	58	29.0	200	63	31.5	200	67	33.5	200
Intensive	125	62.5	200	123	61.5	200	116	58.0	200
TOTAL	272	30.0	906	272	27.2	1000	283	28.8	984

A 3 (Comparison group vs. PPSDM 2004 group vs. PPSDM 2005 group) X 5 (Stream) ANCOVA with LSI-OR General Risk/Need Score as a covariate was run. There was a main effect for stream $F(4, 2776) = 8.077$, $p<.001$, but no main effect for PPSDM groups vs. Comparison $F(2, 2776) = .185$, *ns*, nor were any interactions significant. LSI-OR score was a significant covariate $F(1, 2776) = 221.999$, $p<.001$. Contrary to prediction, there are no significant reductions in recidivism from the Comparison to the PPSDM groups (see Table 20).

3.5.2 Recidivism by Gender

Recidivism rates were also analysed by gender, to explore whether the PPSDM may be differentially effective for males or females (see Table 21).

Table 21. Number and percent of recidivists in five streams and three samples, presented by gender.

Stream	Comparison – 1998			PPSDM - 2004			PPSDM - 2005		
	n	%	N	n	%	N	n	%	N
Males									
AD	14	13.1	107	13	9.0	145	14	11.1	126
Basic	15	10.9	137	17	11.0	154	16	11.2	143
Rehabilitative	48	26.4	182	45	25.7	175	49	29.2	168
Individual	46	28.0	164	58	35.8	162	56	34.1	164
Intensive	109	61.9	176	115	62.2	185	113	59.2	191
Male Total	232	30.3	766	248	30.2	821	248	31.3	792
Females									
AD	3	11.1	27	5	9.1	55	6	10.3	58
Basic	4	11.4	35	2	4.3	46	5	8.8	57
Rehabilitative	5	27.8	18	4	16.0	25	10	31.2	32
Individual	12	33.3	36	5	13.2	38	11	30.6	36
Intensive	16	66.7	24	8	53.3	15	3	33.3	9
Female Total	40	28.6	140	24	13.4	179	35	18.3	192

A 3 (Comparison group vs. PPSDM 2004 group vs. PPSDM 2005 group) X 5 (Stream) X 2 (Male vs. Female) ANCOVA with LSI-OR General Risk/Need Score as a covariate was run. LSI-OR score was again a significant covariate, $F(1,2761) = 223.665$, $p<.001$, and there was a main effect for stream, $F(4,2761) = 2.785$, $p=.025$. The difference between the Comparison and PPSDM groups was not significant, $F(2,2761) = 1.595$, *ns*. There was a marginally significant main effect for gender, $F(1,2761) = 3.677$, $p=.055$, such that females had lower recidivism rates than males. None of the interactions were significant.

3.5.3 Severity of New Offences

The severity of new offences was also analysed to examine whether the PPSDM may have resulted in a decrease in the severity of recidivism (see Table 22).

Table 22. New offence (recidivism) severity.

Stream	Comparison – 1998			PPSDM - 2004			PPSDM - 2005		
	Mean	SD	n	Mean	SD	n	Mean	SD	n
AD	15.59	5.60	17	15.06	3.90	18	14.38	4.30	16
Basic	16.95	3.50	19	13.71	5.38	17	16.21	4.71	19
Rehabilitative	16.81	4.49	53	17.48	4.26	48	15.16	5.05	58
Individual	16.78	4.51	58	16.15	5.11	62	15.23	4.35	67
Intensive	17.59	4.08	125	15.65	4.75	120	16.37	4.47	116
TOTAL	17.10	4.33	272	15.93	4.80	265	15.71	4.59	276

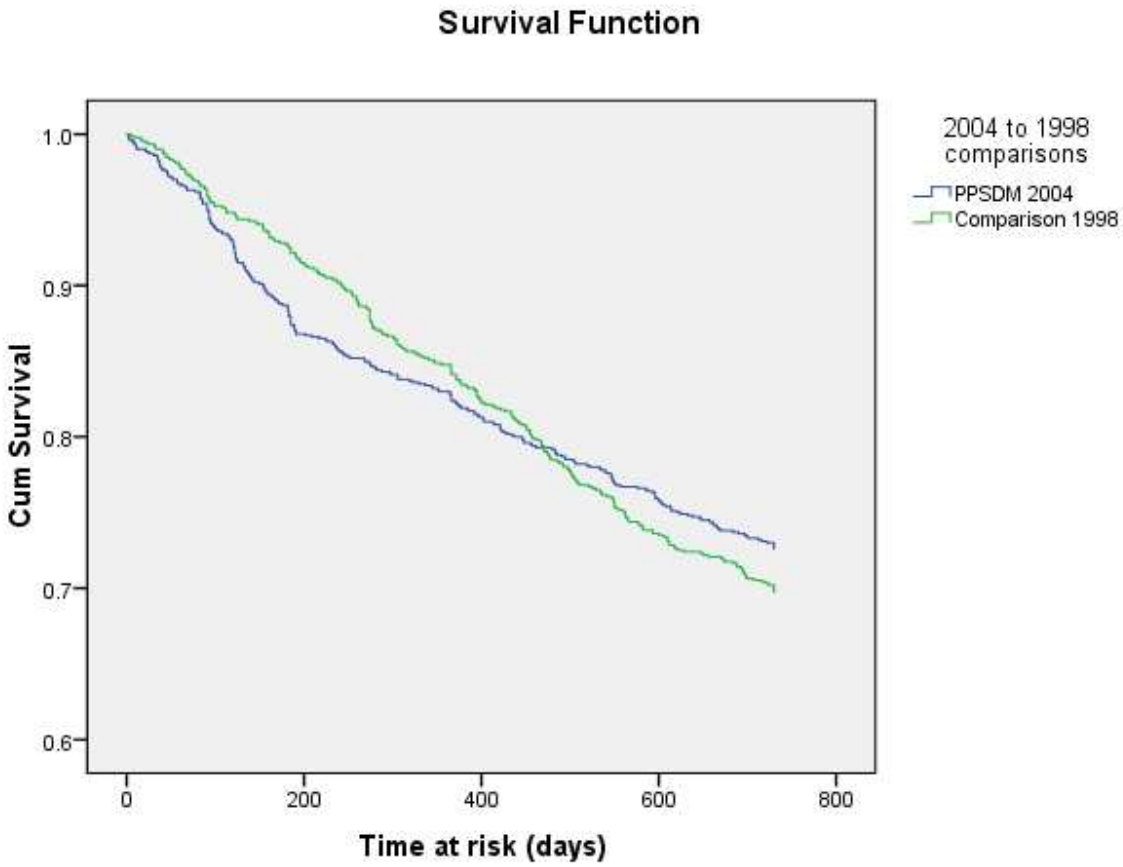
A 3 (Comparison group vs. PPSDM 2004 group vs. PPSDM 2005 group) X 5 (Stream) ANCOVA with LSI-OR General Risk/Need Score as a covariate was run on the severity of new offences. There was a main effect for stream $F(4, 797) = 2.943$, $p=.020$, and the main effect for PPSDM groups vs. Comparison was marginally significant, $F(2, 797) = 2.815$, $p=.060$. The interaction between stream and PPSDM group was not significant. LSI-OR score was again a significant covariate $F(1, 797) = 4.696$, $p=.031$. Scheffe multiple comparisons showed only the difference between the Comparison 1998 group and the PPSDM 2004 group was significant ($p=.049$). Though not fully significant, it appears the PPSDM may have reduced the severity of new offences somewhat in relation to the Comparison group.

3.5.4 Survival Analysis

Cox regression survival analysis was also performed to determine whether the PPSDM groups have a longer survival time than the Comparison 1998 group, controlling for LSI-OR General Risk/Need score (see Figures 2 and 3). The survival analysis for the

Comparison 1998 group and the PPSDM 2004 group revealed that the LSI-OR was a significant covariate, B = .080, SE = .004, Wald(1) = 413.215, $p<.001$. Controlling for LSI-OR, there was no difference in the survival function between the Comparison 1998 and PPSDM 2004 groups, B = -.050, SE = .087, Wald(1) = .327, *ns*.

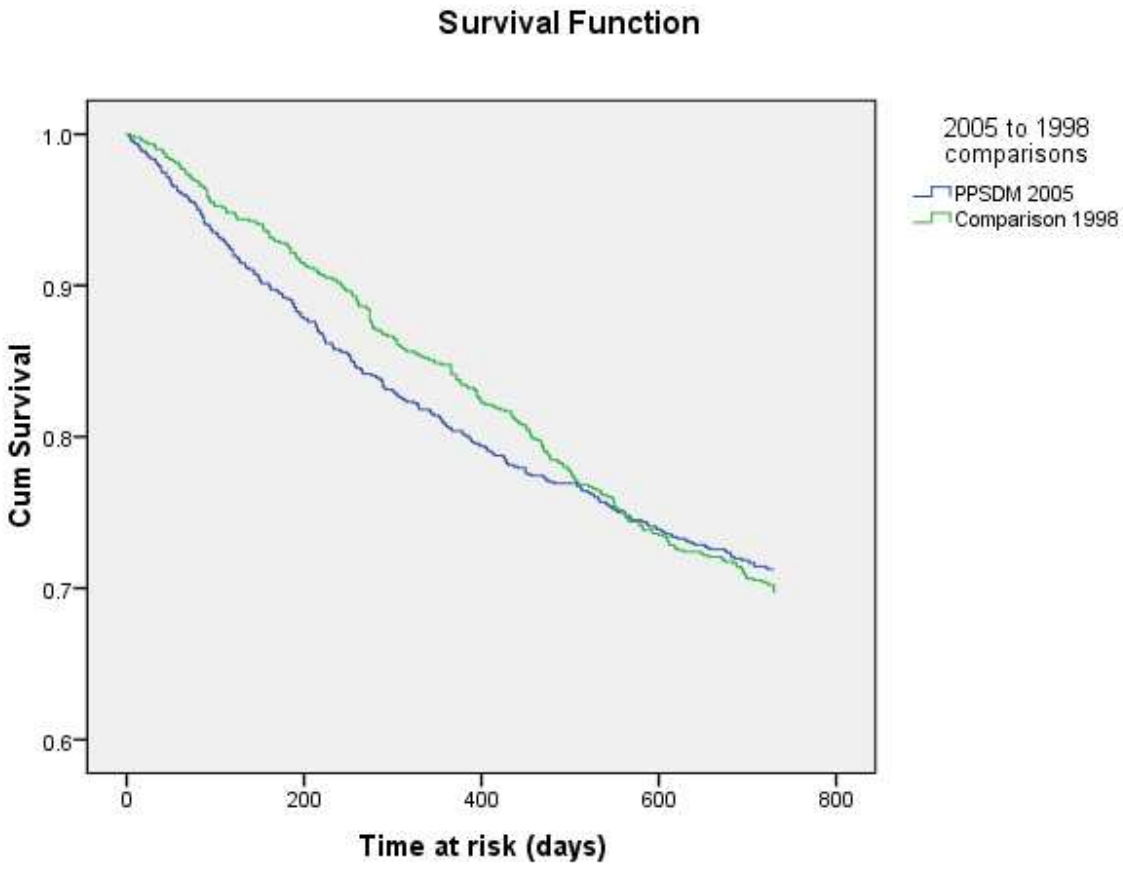
Figure 2. - Survival functions for Comparison 1998 versus PPSDM 2004 groups.



The Cox regression survival analysis for the Comparison 1998 group versus the PPSDM 2005 group showed that the LSI-OR was once again a significant covariate, B =

.081, SE = .004, Wald(1) = 431.164, $p<.001$. Controlling for LSI-OR, there was no difference in the survival function between the Comparison 1998 and PPSDM 2005 groups, B = -.096, SE = .086, Wald(1) = 1.267, *ns*.

Figure 3. - Survival functions for Comparison 1998 versus PPSDM 2005 groups.



3.5.5 New Offence Categories

The most serious offence was recorded for each offender, and the 2063 different offences were coded into 17 categories. The frequencies of these offence categories were

examined for the Comparison 1998 group and the PPSDM groups (see Tables 23 to 25). The "Other" category included offences that were difficult to code into another category. For example, there were three offences that were homicide related. As they did not fit into one of the other categories, and there were only three of them, they were put in the "Other" category. There were also many offences that were put into the "Other" category because their descriptions in the database were ambiguous. For example, several offences were described as "Possession" (e.g. Possession over $200), but without describing what contraband were possessed. These offences may have been drug offences, as in possession of a narcotic, or break and enter type of offences, such as possession of break-in instruments, but there was no way to know. These ambiguous offences make up the majority of the "Other" category.

Table 23. Most serious offence category frequencies for the Comparison 1998 group.

Offence Category	Frequency	%
Other	45	16.5
Assaults	43	15.8
Theft	34	12.5
Fail to comply/Breaches/Fail to appear	27	9.9
Fraud	25	9.2
Drug offences	23	8.5
Break and enter	19	7.0
Criminal harassment/threats	18	6.6
Weapon offences	7	2.6
Cause disturbance/Mischief	6	2.2
Sex offences	6	2.2
Minor driving offences	5	1.8
Robbery	5	1.8
Arson	3	1.1
Serious driving offences	3	1.1
Escape/Break out/Flight	2	0.7
Child pornography offences	1	0.4
TOTAL	272	100

Table 24. Most serious offence category frequencies for the PPSDM 2004 group.

Offence Category	Frequency	%
Fail to comply/Breaches/Fail to appear	56	20.6
Assaults	40	14.7
Theft	31	11.4
Criminal harassment/threats	28	10.3
Other	23	8.5
Fraud	21	7.7
Drug offences	18	6.6
Break and enter	17	6.2
Minor driving offences	9	3.3
Weapon offences	8	2.9
Cause disturbance/Mischief	5	1.8
Serious driving offences	5	1.8
Sex offences	5	1.8
Robbery	4	1.5
Child pornography offences	1	0.4
Arson	1	0.4
TOTAL	272	100.0

Table 25. Most serious offence category frequencies for the PPSDM 2005 group.

Offence Category	Frequency	%
Fail to comply/Breaches/Fail to appear	64	22.6
Other	44	15.5
Assaults	32	11.3
Theft	31	11.0
Criminal harassment/threats	26	9.2
Fraud	19	6.7
Drug offences	13	4.6
Cause disturbance/Mischief	12	4.2
Sex offences	11	3.9
Break and enter	10	3.5
Minor driving offences	5	1.8
Robbery	5	1.8
Serious driving offences	5	1.8
Weapon offences	5	1.8
Escape/Break out/Flight	1	0.4
TOTAL	283	100.0

Given that the PPSDM groups had a much higher frequency of fail to comply offences than the Comparison group, fail to comply offences were filtered out (recoded as no recidivism), and recidivism rates recalculated for the groups (see Table 26).

Table 26. Yes/No recidivism rate with fail to comply/breach/fail to appear category filtered out.

	Comparison – 1998			PPSDM - 2004			PPSDM – 2005		
	n	%	N	n	%	N	n	%	N
Recidivism rate	245	27.0	906	216	21.6	1000	219	22.3	984

A 3 (Comparison 1998 versus PPSDM 2004 versus PPSDM 2005) by 5 (Stream) ANCOVA with LSI-OR General Risk/Need total score as a covariate was run to determine whether there were significant differences between groups on the proportion of fail to comply type offences as the most serious reoffence recorded. There was a main effect for stream $F(4, 2776) = 7.904$, $p < .001$, as well as for PPSDM groups vs. Comparison group, $F(2, 2776) = 2.963$, $p = .052$. The interaction between stream and PPSDM group was not significant. LSI-OR score was again a significant covariate $F(1, 2776) = 134.770$, $p < .001$. Scheffe multiple comparisons revealed that the PPSDM groups were not significantly different from each other, but the Comparison 1998 group had significantly fewer fail to comply type offences as their most serious reoffence than both the PPSDM 2004 ($p = .031$) and 2005 ($p = .002$) groups. These results are consistent with the most serious offence frequencies, showing that the PPSDM groups have more fail to comply offences than the Comparison group as their most serious new offence recorded.

3.5.6 Intensive Stream

The risk principle states that more resources should be focused on high-risk offenders, because they will show the largest reductions in recidivism. Therefore, the Intensive group was examined alone to explore whether there were any reductions in recidivism for the PPSDM groups relative to the Comparison group. The intensive group was split into thirds based on their LSI-OR General Risk/Need score into Low (1-23), Medium (24-29) and High (30-41) categories. A 3 (Comparison group vs. PPSDM 2004 group vs. PPSDM 2005 group) X 3 (Low vs. Medium vs. High risk) ANOVA was run on the yes/no recidivism variable. There was a main effect for the Risk level of the Intensive stream, $F(2, 581) = 15.130$, $p < .001$, but the main effect of Comparison versus PPSDM groups was not significant, $F(2, 581) = .260$, *ns*. The interaction between risk and group was not significant either.

3.5.7 Collaborative Evaluation Process (CEP)

The Collaborative Evaluation Process (CEP) is a measure used by MCSCS to evaluate the level of PPSDM implementation at each Probation and Parole Office. The CEP scores were used as a proxy for adherence to the PPSDM for individual offenders supervised at each office, where scores were available, to explore whether offenders supervised at offices with high CEP scores would have reduced recidivism. Note that only the PPSDM 2004 and PPSDM 2005 groups are included in this analysis, as the CEP measure did not exist in 1998. The quality of implementation as measured by the CEP instrument was unrelated to outcome by stream. Each of the subscales were analyzed for their relation to recidivism (e.g. Assessment, Offender Management Plan, Interviewing Skills, Cognitive Interventions, etc.), but as outcome was unrelated to the CEP, only the

total score, file review and BORS scales are reported herein. For descriptive information, see Appendix E.

Table 27. Recidivism rates (yes/no) by CEP Total score.

CEP Group	Entire Sample		
	N	%	N
Low CEP Total score	149	27.3	546
Med. CEP Total score	162	31.4	516
High CEP Total score	161	29.2	552
TOTAL	472	29.2	1614

The chi-square analysis was not significant, $X^2(2) = 2.164$, *ns.*

Table 28. Recidivism rates (yes/no) by stream for CEP Total score.

Stream	Low CEP Total Score			Med. CEP Total Score			High CEP Total Score		
	N	%	N	n	%	N	n	%	N
AD	3	5.3	57	19	13.7	139	2	2.7	74
Basic	14	9.9	142	11	12.4	89	13	12.7	102
Rehabilitative	36	30.8	117	19	23.5	81	39	28.1	139
Individual	49	35.8	137	21	29.6	71	42	33.3	126
Intensive	47	50.5	93	92	67.6	136	65	58.6	111
TOTAL	149	27.3	546	162	31.4	516	161	29.2	552

A 3 (Low CEP Total Score vs. Medium CEP Total Score vs. High CEP Total Score) X 5 (stream) ANCOVA with LSI-OR General Risk/Need Score as a covariate was run on the yes/no recidivism variable. There was a main effect for stream $F(4, 1535) = 7.860$, $p < .001$, but the main effect CEP Total score was not significant, $F(2, 1535) = .441$, *ns*. The interaction between stream and CEP Total score was significant, $F(8, 1535) = 2.082$, $p = .035$. LSI-OR score was again a significant covariate $F(1, 1535) = 160.472$, $p < .001$.

Table 29. Recidivism rates (yes/no) by CEP File Review score.

CEP Group	Entire Sample		
	n	%	N
Low CEP File Review score	160	27.2	588
Med. CEP File Review score	158	26.9	587
High CEP File Review score	188	32.0	588
TOTAL	506	28.7	1763

The chi-square analysis was not significant, $X^2(2) = 4.627$, *ns.*

Table 30. Recidivism rates (yes/no) by stream for CEP File Review score.

Stream	Low CEP File Review Score			Med. CEP File Review Score			High CEP File Review Score		
	n	%	N	n	%	N	n	%	N
AD	5	6.7	75	12	11.2	107	11	8.9	124
Basic	15	9.5	158	13	11.2	116	10	12.0	83
Rehabilitative	26	26.0	100	35	25.9	135	39	30.0	130
Individual	47	33.6	140	38	30.4	125	37	35.9	103
Intensive	67	58.3	115	60	57.7	104	91	61.5	148
TOTAL	160	27.2	588	158	26.9	587	188	32.0	588

Again, a 3 (Low vs. Medium vs. High CEP File Review Score) X 5 (stream) ANCOVA with LSI-OR General Risk/Need Score as a covariate was run on the yes/no recidivism variable. There was a main effect for stream $F(4, 1677) = 8.568$, $p < .001$, but the main effect CEP File Review score was not significant, $F(2, 1677) = .294$, *ns*. The interaction between stream and CEP File Review score was not significant. LSI-OR score was again a significant covariate $F(1, 1677) = 174.555$, $p < .001$.

Table 31. Recidivism rates (yes/no) by CEP BORS score.

CEP Group	Entire Sample		
	n	%	N
Low CEP BORS score	151	28.0	539
Med. CEP BORS score	158	29.4	538
High CEP BORS score	163	30.4	537
TOTAL	472	29.2	1614

The chi-square analysis was not significant, $X^2(2) = .717$, *ns*.

Table 32. Recidivism rates (yes/no) by stream for CEP BORS score.

Stream	Low CEP BORS Score			Med. CEP BORS Score			High CEP BORS Score		
	n	%	N	n	%	N	n	%	N
AD	3	4.2	72	16	11.9	135	5	7.9	63
Basic	15	12.1	124	10	9.8	102	13	12.1	107
Rehabilitative	37	30.8	120	30	30.9	97	27	22.5	120
Individual	43	33.9	127	31	37.3	83	38	30.6	124
Intensive	53	55.2	96	71	58.7	121	80	65.0	123
TOTAL	151	28.0	539	158	29.4	538	163	30.4	537

A 3 (Low vs. Medium vs. High CEP BORS Score) X 5 (stream) ANCOVA with LSI-OR General Risk/Need Score as a covariate was run on the yes/no recidivism variable. There was a main effect for stream $F(4, 1535) = 8.404$, $p < .001$, but the main effect of CEP BORS score was not significant, $F(2, 1535) = 1.144$, *ns*. The interaction between stream and CEP BORS score was not significant. LSI-OR score was again a significant covariate $F(1, 1535) = 160.668$, $p < .001$.

3.6 Cohort Effects

One significant concern regarding the methodology of this study was the use of a comparison group sampled from a population admitted to MCSCS six and seven years previous to the PPSDM samples. Six years is a significant amount of time, allowing for

the possibility of historical differences between the groups. As previously mentioned, annual reports describing the total cohort of offenders admitted to MCSCS for a given fiscal year were obtained for the 1998/99, 2004/05 and 2005/06 fiscal years (Ministry of Correctional Services, 1999c; Ministry of Community Safety and Correctional Services 2005, 2006) to explore differences in the cohorts over time, as well as their comparability to the study sample.

Information regarding changes in age, gender proportion, and LSI-OR risk category over time was available. The age of offenders admitted to MCSCS appear consistent over time. Unfortunately, the mean age of offenders on probation was not available for 1998, but the mean age for 2004/05 and 2005/06 was 33.2 years and 33.3 years respectively, which is similar to the study sample (mean age of Comparison group = 33.10; PPSDM 2004 = 33.43; PPSDM 2005 = 33.57). The average age of offenders receiving a conditional sentence was available for all three years, and were similar (1998/99 = 35.1; 2004/05 = 34.7; 2005/06 = 34.8). Though offenders admitted to institutions were not included in the study sample, the mean age for these offenders was available for all three years, and so is included to further show the similarities between cohorts (1998/99 = 32.3; 2004/05 = 33.4; 2005/06 = 33.6).

The proportion of males and females on probation remained almost identical over the three years for all three groups. In 1998/99, there were 28,602 (83.0%) males and 5,867 (17.0%) females admitted to probation; in 2004/05, there were 30,556 males (82.1%) and 6,642 (17.9%) females admitted to probation; and in 2005/06, there were 31,806 (82.9%) males and 6,545 (17.1%) females admitted to probation. Again, this is similar to the study sample, for which 766 (84.5%) males and 140 (15.5%) females were

in the Comparison 1998 group; 821 (82.1%) males and 179 (17.9%) females were in the PPSDM 2004 group; and 792 (80.5%) males and 192 (19.5%) females were in the PPSDM 2005 group.

LSI-OR risk categories for each of the three calendar years was obtained from MCSCS. The following table shows that the proportion of offenders in the lower risk categories appears to have decreased from 1998 to 2004 and 2005 while the proportion of offenders in higher risk categories has increased from 1998 to 2004 and 2005. This would imply that the overall risk level of offenders has increased over time. However, more than triple the number of offenders did not have an LSI-OR score recorded on file in 1998 as compared to 2004 and 2005 confounds this possibility and makes interpretation difficult.

Table 33. LSI-OR risk categories for entire Ontario cohorts for 1998, 2004, and 2005.

	1998			2004			2005		
Risk level	Admits	% of total	% total assessed	Admits	% of total	% total assessed	Admits	% of total	% total assessed
Very low	5365	13.5	23.7	6345	14.8	17.2	6347	14.4	16.4
Low	7826	19.7	34.5	10378	24.2	28.1	10498	23.7	27.1
Medium	6993	17.6	30.8	12337	28.8	33.4	13030	29.5	33.6
High	2147	5.4	9.5	6120	14.3	16.6	6900	15.6	17.8
Very High	344	0.9	1.5	1769	4.1	4.8	1968	4.5	5.1
Total with risk	22675	57.1	100.0	36949	86.2	100	38743	87.6	100.0
No risk recorded	17039	42.9	-	5893	13.8	-	5480	12.4	-
TOTAL	39714	100.0	-	42842	100.0	-	44223	100.0	-

In addition, the occurrence of legislation changes regarding offenders in Ontario was explored. The Service Ontario website “E-Laws” was reviewed (Service Ontario,

2008), which is a database of Ontario legislation, statutes and regulations. Under the section regarding the Ministry of Community Safety and Correctional Services, the only legislation changed or introduced between 1998 and 2005 pertaining to offenders was Christopher's Law (creation of the Ontario Sex Offender Registry) in 2000. However, there were very few sex offences committed in the study sample (see Tables 23 to 25 regarding most serious offence categories), and therefore this new law is unlikely to have had a significant effect on the study groups.

4.0 DISCUSSION

The current study was primarily designed to investigate whether the Probation and Parole Service Delivery Model (PPSDM) has been effective in reducing recidivism since its implementation by the Province of Ontario in 2001. In order to evaluate this, a comparison group was constructed and matched to a stratified random sample from 2004, three years after the inception of the PPSDM. Another sample was chosen from 2005, and the three groups compared.

Several "preconditions" were necessary to examine prior to testing the main hypothesis; that is, that the PPSDM would be effective in reducing recidivism. First, it was necessary to examine the comparability of the three groups, in order to evaluate the primary hypothesis. Next, it was necessary to explore whether some of the central aspects of the PPSDM, namely the assumptions regarding the characteristics of and differences between streams (i.e. risk level and recidivism rates), were supported. Finally, because the LSI-OR was used extensively throughout the analyses to control for risk, its' predictive validity was confirmed for this study. The preconditions appear to have been satisfied, however the primary hypothesis did not receive strong support, despite various post-hoc analyses to explore the non-significant findings. Each of the analyses and results will be reviewed in detail, and discussion regarding possible explanations for the findings will follow, along with the limitations of the current study and directions for future research.

4.1 Precondition 1 – Matching

Given that efforts were made to deliberately match the Comparison group to the PPSDM 2004 group, and the PPSDM 2005 group was selected in the same manner as the

PPSDM 2004 group, it was expected that the Comparison 1998 group would match the PPSDM groups on a number of characteristics. Because groups were compared on recidivism for the primary hypothesis, characteristics related to recidivism were first assessed for similarity between groups, and for some demographic items.

For the entire sample, not divided into streams, the groups were quite well matched. There were several significant differences between groups; however, the majority of these differences were not meaningful and likely due to the high sample size and corresponding level of power to detect a significant difference. For example, the Comparison 1998 group was significantly higher risk on the Criminal History subscale of the LSI-OR than both PPSDM groups. Yet, the means for each group were 2.92, 2.60, and 2.62 respectively on a scale ranging from zero to eight. These scores put all groups in the same risk category (low) and a 0.30 difference on a scale of this magnitude does not appear to be consequential.

The pattern of results for the AD, Rehabilitative, and Individual streams were similar to that of the overall sample – there were several significant differences, but the differences do not appear to be meaningful, and always less than one point in differences between groups on any of the risk scales. For the Basic stream, there was a significant difference between groups on the General Risk/Need scale of the LSI-OR. Though this difference was slightly larger than the others (the largest difference between groups was 2.22 points), its larger scale range (0 - 43 points) leads and all three groups to remain in the same risk category (low). Age was also significantly different for the Basic stream, such that the Comparison group was significantly older than the PPSDM groups. Given that the Comparison group was significantly lower on the LSI-OR, and risk level and age

tend to have an inverse relationship (Andrews & Bonta, 2003), an ANCOVA was used to determine whether the difference in LSI-OR score was attributable to the age difference. Age, however, was not a significant covariate, which indicates the difference in LSI-OR score was not attributable to age alone.

The Intensive stream had a number of significant differences, including higher differences in scores on the LSI-OR overall and each of its' subscales. The Comparison group was up to 5.4 points higher on the General Risk/Need scale than the PPSDM groups. Despite the higher difference, all three groups remain in the same risk category (high). The same analysis was completed for age on the Intensive stream, since the Comparison group was higher risk and younger than the PPSDM groups. For the Intensive group, age was a significant covariate, indicating that age accounted for at least some of the variance in risk level, but the significant differences between the groups on risk remained. Though most of the significant differences with respect to risk do not appear to be meaningful, the LSI-OR was used as a covariate in the majority of the following analyses to control for risk as a precaution. Only the LSI-OR General Risk/Need total score was used as a covariate, as it was assumed to account for the subscale scores also.

Length of index disposition was one characteristic consistently different between groups, and by a larger margin. The length of community sentence for the Comparison group was consistently (with the exception of the Intensive stream) significantly longer, usually by three to five months. This measure was initially included in the matching analysis as sentence length has been used as a proxy for offence severity (DiPlacido, Simon, Witte, Gu & Wong, 2006). However, DiPlacido et al. (2006) used custody

sentence length in a sample of federal offenders, for which index sentence length may be more indicative of offence severity than a community provincial sentence. It is possible that the community sentences adjudicated by judges are somewhat arbitrary (i.e. most common probation sentences are either one, two or three years), or based on other factors (i.e. offender's supervision history, prosocial supports, etc.) and are not good indicators of actual offence severity.

Length of index community disposition was examined in relation to all cohorts admitted to the Ministry of Community Safety and Correctional Services (MCSCS) of Ontario. Annual reports for the fiscal years of 1998/99, 2004/05 and 2005/06 were obtained from the MCSCS and compared to the study sample, to see if community sentences overall may have changed over time, possibly explaining the difference in length of index community disposition between the Comparison 1998 group and the PPSDM groups. However, the community sentence lengths seem fairly consistent over time, and hence population changes in sentence length cannot explain this difference.

Therefore, length of index community disposition for its relationship to recidivism was examined, given the main hypothesis requires the three groups to be compared on recidivism. Length of index disposition was correlated with recidivism had a small but significant correlation with recidivism for the entire sample, but the significance virtually disappeared when the sample was divided up by stream. The significant correlation between recidivism and length of index disposition overall may be attributable to the significant correlations between risk and recidivism for the streams. The only significant correlation was for the Rehabilitative stream (r = .111), but given

that the correlation was small, it could be a spurious finding due to running several correlations and inflating the Type 1 error.

Though gender was not a matching criterion, the quality of the matching on risk level was examined. Overall, females appear to be lower risk than males. There were some significant differences between groups, however these differences were quite small, as in the matching for the entire sample and by stream. Therefore, the groups seem to be well-matched, and those significant differences that exist do not appear to be very meaningful, or are unlikely to affect recidivism results. Of course, the possibility that the groups differ on a variable that was not measured cannot be ruled out.

4.2 Precondition 2 – Risk

Because risk, as measured by the LSI-OR General Risk/Need scale is an important streaming criterion outlined by the PPSDM, the streams were expected to differ on risk. In particular, Basic and AD clients are assumed to be low risk, Rehabilitative and Individual clients are supposed to be medium to high risk, and Intensive clients are expected to be high risk. Indeed, the findings confirmed this precondition. The mean General Risk/Need score for the Basic and AD streams fell within the low risk category of the LSI-OR, the Rehabilitative and Individual stream mean score fell within the medium risk category, and the Intensive stream's mean score was within the high risk category. Multiple comparisons confirmed that the streams significantly differed as expected, such that AD = Basic < Rehabilitative = Individual < Intensive. Though the Specific Risk/Need section of the LSI-OR is not necessarily used for streaming clients, it was examined for differences amoung streams. The Specific

Risk/Need section findings followed the same pattern as the General Risk/Need scale, such that AD = Basic < Rehabilitative = Individual < Intensive.

Though the general expected pattern was observed, there were some curious outliers. For example, there were clients in the AD stream with a high risk score, and some in the Intensive stream with a low risk score. It is possible that these outliers are due to LSI-OR overrides completed by the assessing Probation and Parole Officer (PPO) for reasons unaccounted for by the instrument, or they could simply be data entry errors. Overall, it appears that clients are being streamed as intended.

4.3 Precondition 3 – Recidivism

Precondition 3 stemmed from Precondition 2 – that is, if streams are expected to differ on risk for recidivism, they must be different on actual recidivism rates as well. This precondition was assessed in three different ways. First, a simple yes/no categorical recidivism variable was analyzed. The pattern of results for this variable mirrored the results of Precondition 2 with the LSI-OR, such that the AD and Basic streams have the lowest recidivism rates (10.6% and 10.3% respectively), followed by the Rehabilitative (26.8%) and Individual (31.3) streams, with the Intensive stream having the highest recidivism rate at 60.7 percent.

Next, the severity of new offences for those offenders who did reoffend was examined. The findings were less clear for this measure. Though the general pattern remains (i.e. AD < Intensive), there were no significant differences between streams. This may mean that although streams differ in their rate of recidivism, the seriousness or severity of new offences may not vary considerably. This finding may not be surprising given a provincial sample was used for this study, and the most serious sentence available

is two years less one day of custody followed by a community disposition. Most offences considered high in severity such as homicide, serious sex offences, and aggravated assaults/assaults causing bodily harm would receive federal sentences, and would not be included in this sample. There may also be reason to question the validity of the scale, as it was developed based on sentences given for offences in 1982. Sentencing patterns may have changed over time, changing the severity rankings somewhat.

Finally, survival analysis was used for Precondition 3 to compare the groups on time to recidivate. The general pattern of results was similar for time to recidivate as was for yes/no recidivism, with one exception, the Rehabilitative and Individual groups were significantly different, such that the Rehabilitative stream survived significantly longer than the Individual group. Therefore, the pattern for the survival analysis was AD = Basic < Rehabilitative < Individual < Intensive. It is possible that the higher risk groups do not manage to live crime-free for as long as the lower risk groups. Another explanation for this is detection. PPOs are most likely to supervise higher risk groups more closely, and so crimes detected by the higher risk groups may be more likely detected, and done so faster, than the lower risk group. In particular, the Intensive stream is monitored very closely, as per the PPSDM case standards. In addition to PPO supervision, protocols are set up between the PPO and police, and minor condition breaches are more likely to be enforced.

4.4 Precondition 4 – Predictive Validity of the LSI-OR

The LSI-OR has well-established predictive validity (Gendreau, Little & Goggin, 1996; Girard & Wormith, 2004) so it was expected to predict recidivism well in this study also. As the LSI-OR is used as an important streaming criterion, and was used

extensively for analyses in the current study, it was necessary to confirm its predictive validity for this sample. The correlations between the General Risk/Need scale of the LSI-OR and the yes/no recidivism variable were high for the entire sample, as well as by group. Correlations ranged from .439 to .496. Besides these strong correlations, the mirrored patterns for Preconditions 2 and 3 provide more evidence for the predictive validity of the LSI-OR.

Using the LSI-OR for female samples has been controversial, as the LSI-OR was primarily normed on male offenders. However, the LSI-OR seems to predict recidivism as well for females as males in the current study. Coulson, Ilacqua, Nutbrown, Giulekas and Cudjoe (1996) also found similar results, in that females had lower risk scores compared to males, while the LSI maintained good predictive validity for females.

4.5 Primary Hypothesis

The Ontario MCSCS changed their policy on the supervision of offenders in the community several years ago, trying to integrate "best practices" from the literature on Effective Correctional Intervention into the day-to-day activities of PPOs. The primary hypothesis of the current study was that the PPSDM would reduce recidivism, as indicated by significant differences between the Comparison 1998 group and the PPSDM groups. Several different types of analyses were used to test this hypothesis.

First, the simple yes or no recidivism variable was analyzed. There were small reductions in recidivism rates for the PPSDM group; 30.0 percent of the Comparison group recidivated, compared to 27.2 percent for the PPSDM 2004 group and 28.8 percent of the PPSDM 2005 group. The most promising reductions were for the Intensive group, with recidivism rates of 62.5 percent, 61.5 percent, and 58.0 percent for the Comparison,

PPSDM 2004 and 2005 groups respectively. However, none of these differences were significantly different. A 3 (Comparison group versus PPSDM groups) by 5 (stream) ANCOVA with LSI-OR as a covariate did not show a significant main effect for group or any interactions. For this part of the analysis, the primary hypothesis was not supported.

Next, the same analysis was done for gender, to explore whether the PPSDM group was differentially effective for males or females. A 3 (Comparison group versus PPSDM groups) by 5 (stream) by 2 (gender) ANCOVA with LSI-OR as a covariate did not show a significant main effect for group or any interactions. There was a marginally significant main effect for gender, such that females had lower recidivism rates than males overall. This finding is consistent with the findings in Precondition 1, in which females tended to be somewhat lower risk than males. The remainder of the analyses were not examined for males and females separately. Therefore, the findings may not be as generalizeable to female offenders, as females were a smaller percentage of the study sample.

The severity of new offences for recidivists was then analyzed to examine whether the PPSDM may be effective in reducing the severity of recidivism. Though the ultimate goal in corrections is to stop offenders from committing any further crimes, a reduction in severity from their original offence(s) (i.e. serious assault causing bodily harm to minor assault, or from break and enter to minor theft) may be considered a partial success. The same analysis was performed for severity as had been run for the categorical yes/no variable (a 3 X 5 ANCOVA). Similar to the other recidivism analyses, LSI-OR was a significant covariate and there was a significant main effect for stream. Here however, there was a marginally significant main effect for group (p = .060), such that

the PPSDM groups' new offence severity (Mean 2004 = 15.93; Mean 2005 = 15.71) was less than the Comparison group (Mean = 17.10). Though this analysis was only marginally significant, and only the multiple comparison between the Comparison group and the PPSDM 2004 group was significant, it suggests that the PPSDM may have had an effect on the severity reduction of new offences.

Next, a Cox regression survival analysis, controlling for LSI-OR General Risk/Need score, was used to determine whether the PPSDM groups would have a longer survival time than the Comparison groups. Similar to the severity analysis, having a group stay crime-free for a longer period of time may also be considered a partial success. However, the survival analysis found no significant differences between the Comparison group and the PPSDM groups.

Data regarding the most serious reoffence committed by each offender was available in the database, and so was further analyzed for differences between groups as well. Only the most serious offence was available, meaning if an offender was sentenced for more than one offence on the same day, only the most serious was recorded in the database. For example, if an offender had been convicted for an assault as well as drug possession, only the assault would be recorded. The 2063 different types of offences in the database were coded into 17 categories, based on offence similarity. For example, any offence listed as an assault (i.e. aggravated assault, assault causing bodily harm, assault a peace officer, etc.) was coded into the "assaults" category. The frequency of these categories for each group was examined. One interesting finding was the frequency of fail to comply type offences in the PPSDM groups was more than double that in the Comparison group. Due to this finding, the fail to comply offences were filtered out and

the recidivism rates recalculated for the three groups; as a result, the Comparison group had a significantly higher recidivism rate than the PPSDM groups. Though this analysis is somewhat artificial, in that filtering out any category of offences that is disproportionate amoung the groups will change the recidivism rate between the groups, it shows that differences in fail to comply as a most serious offence are significantly more common in the PPSDM groups than the Comparison group. It is possible that filtering out the fail to comply offences may have removed an artefact created by the PPSDM.

The risk principle states that more resources should be focused on high-risk offenders, because they will show the largest reductions in recidivism (Andrews & Bonta, 2003). Therefore, in this study, the Intensive stream was examined alone, as they are high risk and are allocated more resources as per the PPSDM, to explore whether greater reductions in recidivism may be realized with the highest risk offenders. The Intensive stream was split into thirds based on their LSI-OR General Risk/Need score into low, medium and high risk categories, and analyzed. There was a significant main effect for risk level, but the main effect for group was not significant, nor was there an interaction. Even though this stream is high risk, there were no significant reductions in recidivism rates by group.

The final set of analyses to assess whether the PPSDM can reduce recidivism was an examination of the Collaborative Evaluation Process (CEP), the "in-house" implementation evaluation developed and administered by the Ontario MCSCS to assess the level of implementation and fidelity of the PPSDM at each Probation and Parole Office. The CEP score per office was available (expressed as a percentage, with higher

scores indicating higher fidelity to the PPSDM), and was used as a proxy for how well the PPSDM may have been followed for each offender who had been supervised at that office. The CEP has two subscales, the file review subscale (which accounts for 40% of the total CEP score), and the Behavioural Observation Rating Scale (BORS – which accounts for 60% of the total CEP score). The CEP total score, as well as the file review and BORS subscales were divided into thirds to create high, medium, and low PPSDM implementation groups, and the groups compared on the yes/no recidivism variable to explore whether those offenders supervised at offices with higher CEP scores would show reduced recidivism rates. However, no significant differences in recidivism were found between offices that were rated as implementing the PPSDM well versus those who had not. The pattern of results for this analysis was somewhat confusing as well. For example, the offices in the low CEP score group had the lowest recidivism rates, followed by the high CEP group, with the medium PPSDM implementation group actually having the highest recidivism rate. As the CEP instrument has not been thoroughly examined for reliability and validity, the results could be due to measurement problems. In addition, using office-level scores as individual data is a crude proxy, and may not be appropriate in this circumstance.

Taken together, there are several possible explanations for these results. First, considering the marginal reduction in new offence severity from the Comparison to the PPSDM groups, and the higher proportion of failure to comply type offences for the PPSDM groups, suggests there may be increased detection and enforcement under the PPSDM. Though not a particular direction of the PPSDM, an unintended effect may be more enforcement of probation violations by PPOs.

Regardless, the expected reductions in recidivism rates under the PPSDM did not occur. Incomplete implementation is one potential explanation for the non-significant results. The PPSDM is still quite young in its history, having been implemented in 2001. Hundreds of PPOs were required to change the way they supervise offenders, some of whom had been doing their jobs a certain way for years or even decades. This type of large-scale policy change requires a shift in the organizational culture, and culture shifts take a significant amount of time, often accompanied by growing pains. There may not have been PPSDM "buy-in" by a portion of the PPOs, who may have continued to supervise offenders in the pre-PPSDM style. Previous research has shown implementation is a common issue in the effectiveness of rehabilitative programs (Andrews & Bonta, 2003) and in supervision in particular (Bonta, Rugge, Sedo & Coles, 2004; Harris, Gingerich & Whittaker, 2004). In addition, one of the keystones of the PPSDM was staff training on theories of criminal behaviour, approaches to cognitive-behavioural intervention, stages of change theory, motivational interviewing and relapse prevention. PPOs may not have felt comfortable implementing and using these techniques, especially after only five days of training, hence this particular aspect of the PPSDM may not have been implemented well.

Finally, while the PPSDM did introduce some key changes to the way PPOs do business, it may not be considered a dramatic shift in policy. The pre-PPSDM supervision policies shared many similarities with the PPSDM, and would be considered good correctional practice. Case management decisions were to be based on offender assessment, and balanced between public safety and the least intrusive supervision necessary; supervision level was based on risk level (as measured by the LSI-OR) such

that the most intensive supervision was reserved for the highest risk offenders; and offenders were referred to programming based on criminogenic need (Ministry of Correctional Services, 1999a). The major changes from pre-PPSDM policy included the development of the new supervision streams, introduction of MCSCS core programming (rather than contracting to external agencies), and the training and expectation that staff would use appropriate cognitive-behavioural interventions with their clients in offender contacts, rather than the offenders simply reporting. Though these changes may be quite significant, there was not a dramatic change from using all poor correctional practices pre-PPSDM to all best practices post-PPSDM. Therefore, if the policy changes were not substantial, dramatic decreases in recidivism should not be expected. Taken together with the possibility that the PPSDM was not fully implemented as planned, it is not surprising that there were no significant differences in recidivism from the Comparison to the PPSDM groups.

It is worthwhile to note, however, that despite all of the preceding discussion regarding the difficulty in finding a significant reduction in recidivism, some significant results were discovered. Especially given the macro-level nature of the data, which is discussed further in the limitations section, there is a lot of "noise" in the data used for this study. Nonetheless, the PPSDM groups had marginally significant reductions in severity of new offences, which may be due to more technical violations being enforced rather than more serious offences such as thefts, assaults, and drug offences being committed.

4.6 Limitations

As discussed in section 3.6 of the results chapter, there are concerns regarding the time span between comparison groups. Though efforts were made to account for historical differences and comparability of the study sample to the overall cohorts of offenders in Ontario, one cannot assume there are no remaining historical differences between the groups. In addition, the samples were not completely randomized. Instead, a quasi-experimental matching procedure was used. Therefore, the possibility of pre-existing differences between groups besides those controlled for cannot be ruled out.

Next, the data used in this study is macro in nature, meaning there was little detail regarding each offender's supervision conditions, what treatment programs they may have participated in, how closely each PPO followed the PPSDM in the supervision of each offender, how skilled and/or comfortable each PPO may have been with regards to cognitive-behavioural interventions, amoung other things. Therefore, any findings are general in nature, and would be best followed up with a more detailed study. Related, the current study does not speak to implementation, making this a sort of "black box" study, in which it is not known what actually occurred in the supervision of the offenders or how well the PPSDM was actually followed. Therefore, this study cannot be definitive in whether the PPSDM actually has an effect or not.

The study also could not evaluate unintended effects of the PPSDM (with the possible exception of the higher number of fail to comply type offences). There was no data to comment on whether the PPSDM was more cost-effective, affected clients' well-being through more involved contact with their PPOs, increased or decreased their motivation to participate in programming, affected PPOs job satisfaction, affected clients'

relationships with their friends and families, improved their job performance, changed relations between MCSCS and other Ministries within the provincial government, or any number of other unintended effects that could occur from a shift in correctional policy.

Finally, the results and interpretation are limited by the nature of the data. All data were extracted from MCSCS databases, which meant federal or out-of-province data was not included, the definitions of recidivism and offence severity was restricted to the definitions used by MCSCS, some desirable data were not available, and there is little control over the quality of data entry, as many people within MCSCS enter data into their databases.

4.7 Directions for Future Research

A replication of this study may be useful in a few years to see if there is continued incremental changes as the PPSDM becomes more entrenched in the agency culture. The ideal timing for such a replication may depend on whether any significant changes in implementation have occurred in the meantime to warrant a re-examination of potential PPSDM effects on recidivism. It may be prudent to conduct interviews with key informants, such as managers and PPOs, to get a sense of the history, progress, and stage of implementation of the PPSDM first.

Several more studies that examine the inner workings of the PPSDM in greater detail are needed. For example, a study such as that carried out by Bonta et al. (2004) with PPOs submitting audio recordings of their offender contacts would be valuable in terms of evaluating their fidelity to the PPSDM. A file review study with a design similar to the current study (i.e. comparing streams and comparison versus PPSDM groups), but in greater detail to investigate whether the PPSDM was actually being followed for each

offender, and the resulting recidivism rates, would also be valuable. It would be interesting to also conduct interviews with clients who may have been supervised under both policies, to explore whether they noticed a difference, which they preferred, and if they believed any of the strategies included under the PPSDM were effective in helping them develop a crime-free lifestyle. In addition, given that the Ministry created new core programs with the PPSDM, these programs should be evaluated for their effectiveness and fidelity with the best practices in the literature.

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APPENDIX A – PPSDM STREAM PLACEMENT CRITERIA

Probation and Parole Service Delivery Model

Initial Stream Placement – Criteria

Decisions about an offender's initial stream placement are based on a number of criteria. The initial stream placement is a temporary placement that is confirmed (or not) by the subsequent assessment process. Confirmation in an intervention/stream is not contingent on the offender meeting these same criteria.

BASIC SERVICE STREAM

Court Ordered Task Completion

- The offender **has a condition with a clearly defined task (e.g., CSO, restitution)**
- The offender is a first time offender
- The offender is a repeat offender, but it has been at least 2 years since the completion of any previous sentence/disposition
- There have been no prior medium/high risk classifications
- The offence is non-violent (note: some assaults may be considered non-violent based on the circumstances of the offence)
- The offender is not a sex offender
- The offender is not a parolee
- The offender is not on a conditional sentence order
- There is no condition to attend for programming, and;
- The circumstances of the offence to not indicate that core programming may be warranted.

Brokerage Service

- The court has ordered the offender to **attend for counseling at a specifically-named agency, but the circumstances of the offence do not indicate that core programming may be warranted**
- The offender is a first time offender
- The offender is a repeat offender, but it has been at least 2 years since the completion of any previous sentence/disposition
- There have been no prior medium/high risk classifications
- The offence is non-violent (note: some assaults may be considered non-violent based on the circumstances of the offence)
- The offender is not a sex offender
- The offender is not a parolee
- The offender is not on a conditional sentence order.

CORE REHABILITATIVE SERVICE STREAM

- A core in-house or contract agency program exists, and
- The particulars of the offence indicate potential for participation in core in-house or contract agency program, and/or
- There is a court-ordered counseling condition (e.g. anger management, etc.) indicating potential for participation in a core in-house or contract agency program, and/or
- Prior assessment(s) identified a criminogenic need in one of the core in-house or contract agency program areas
- Previous medium to high LSI-OR assessment(s).

INDIVIDUAL SERVICE STREAM

One of/or a combination of:

- A history of mental illness related to the offender's recidivism
- The offender is known to be multi-need
- There is no in-house or contract agency core program in the potential criminogenic need area (such as partner abuse)
- The offender was previously assessed at medium to high risk/need
- There are numerous optional/special conditions.

INTENSIVE SUPERVISION STREAM

A combination of:

- The offender has a history of violence
- The offender has a history of varied types of offences
- The offender has a previous high/very high LSI-OR assessment
- An official diagnosis for a mental or psychiatric disorder which contributes to the offender's pattern of violent behaviour
- The offender is known to be a threat to cause serious bodily harm
- The offender was previously supervised in the intensive supervision stream
- There is ongoing risk of serious harm to a specific victim (e.g. stalking).

Probation and Parole Service Delivery Model

Initial Stream Placement – Guide

SECTION A

1. If a repeat offender, have less than two years elapsed since the last supervision period?	NO □ YES □
2. If a repeat offender, was the last classification medium or higher?	NO □ YES □
3. Is the offence violent in nature (common assault may be considered non-violent based on the circumstances of the offence)?	NO □ YES □
4. Is this a sex offender?	NO □ YES □
5. Is this a parolee?	NO □ YES □
6. Is this a conditional sentence order?	NO □ YES □
7. Is there a condition indicating potential to attend a core programme (e.g. anger management)?	NO □ YES □
8. Do the circumstances of the offence indicate that core programming may be warranted (e.g. spousal abuse)?	NO □ YES □

If no to all of the above, go to section B. If yes to any of the above, go to sections C, D & E.

SECTION B

<u>BASIC SERVICE STREAM – Court Ordered Task Completion, and Brokerage Service</u>
(complete this section only if "no" to all the questions in Section A)

1. Is this either a first time offender or a repeat offender where there is more than a 2 year lapse between the last and current supervision?	NO □ YES □
2. Is there a task type condition such as restitution or CSO?	NO □ YES □
3. Is there a condition to attend to a specific agency or service?	NO □ YES □

If yes to both questions B.1. and B.2., consider initial placement in the court ordered task completion.

If yes to both questions B.1. and B.3., consider initial placement in brokerage service. If yes to all three section B questions, consider initial placement in either brokerage service or court ordered task completion, whichever is likely to be completed last.

SECTION C

<u>REHABILITATIVE GROUP SERVICE STREAM</u> (Complete this section only if the office offers in-house or contract agency core programs)

1. Do the particulars of the offence indicate potential for participation in a core program offered in-house or through a contract agency? NO □ YES □

2. Is there a court ordered counseling condition indicating potential for participation in a core program? NO □ YES □

3. Does a prior assessment identify a criminogenic need in one of the core program areas? NO □ YES □

If yes to any question in Section C, consider initial placement in the Rehabilitative Group Service Stream.

SECTION D

<u>INDIVIDUAL SERVICE STREAM</u>

1. Was the offender previously assessed as multi-need? NO □ YES □

2. Is there indication of a potential criminogenic need area for which there is no in-house or contract agency core program? NO □ YES □

3. Are there numerous non-mandatory conditions? NO □ YES □

4. Is there a history of mental illness which is related to the offender's individual recidivism potential? NO □ YES □

If yes to one and/or a combination of the questions in Section D, consider initial placement in the Individual Service Stream.

SECTION E

<u>INTENSIVE SUPERVISION STREAM</u>

1. Does the offender have a history of a number of violent offences? NO □ YES □

2. In addition to having a history of violent offending, is there an official diagnosis of a mental or psychiatric disorder that contributes to the offender's pattern of violent behaviour?	NO □	YES □
3. Has the offender previously been supervised in the intensive supervision stream?	NO □	YES □
4. Is the offender known to be a threat to cause serious harm?	NO □	YES □
5. Is there risk of serious harm to a potential victim (e.g. some spousal abusers)?	NO □	YES □

If yes to any question in Section E, consider initial placement in the Intensive Supervision Stream.

The initial placement to a stream is meant only to link as quickly as possible the offender with the case manager most likely to manage the case. An assessment will either confirm the initial placement or redirect the offender to another stream.

APPENDIX B – CEP INSTRUMENT

Collaborative Evaluation Process Instrument
Version 5

FILE REVIEW PROCESS 40% of Total CEP Scores

A) ASSESSMENT 36% (17 pts)

Data Collection

B5	(2)	LSI-OR General
B6	(2)	LSI-OR Specific
B7	(2)	Gathering sufficient backgrnd info from offender

Collaterals

B8	(2)	Verify offender info/crim factors through appropriate & sufficient collaterals (administrative, program, personal)
B9	(1)	Rationale for collateral choices given

Analysis of info

B11	(1)	Identification of criminogenic factors
B10	(1)	Verification and rationale for crim factors documented
B12	(2)	Motivational stage of change identified & documented

Stream Placement

B13	(1)	Appropriate stream placement identified
B14	(1)	Rationale for stream placement documented
B15	(2)	Placement @ to criminogenic factors

B) OFFENDER MANAGEMENT PLAN 19% (9pts)

C17	(2)	Addresses dynamic criminogenic risk factors with established/structured tasks, goals & timelines
C18	(1)	Plan addresses optional conditions of supervision document
C19	(2)	Planned referrals with timelines
C20	(2)	Identification of related collaterals & contact timelines
C23	(2)	Strategies to address motivational stage of change and offender commitment

C) SPECIAL GROUPS (Parole, Conditional Sentence Order, Sex Offender, Partner Abuse) 11% (5pts)

G40	(1)	Appropriate stream placement (not Basic)
G41	(1)	Reporting schedule appropriate, consistent with assessment
G42	(2)	Appropriate directives, protocol & policy observed
G43	(1)	Collateral sources referenced in LSI-OR & appropriate

D) CASE RECORDS 13% (6pts)

F33	(2)	Rationales documented (such as for service stream, enforcement/non-enforcement)
F35	(2)	Recording of current situation as related to OMP
F36	(2)	Contact is focused on criminogenic targets & progress

E) CASE REVIEW 9% (4pts)

D24	(1)	Changes in supervision plan, criminogenic factors, designation, or no review in past 12 mths trigger case review. Documented in a timely manner
D25	(1)	Verification of changes through collateral sources
D26	(1)	LSI-OR reviewed for changes in dynamic variables which impact criminogenic factors with particular focus on Crim Hx, Crim Comp, Crim Att, Antisocial Pattern
D27	(1)	Appropriate outcome determined from review & documented

F) ENFORCEMENT 13% (6pts)

E28	(1)	Documentation of violation
E29	(2)	Documentation of enforcement decision including rationale
E31	(1)	Decision recorded in a timely manner (within 5 working days of confirmation of breach/violation
new	(2)	High risk cases are enforced in a timely manner

Total Score= 47 points
40% of total CEP score

BORS PROCESS 60% of Total CEP Scores

A) INTERVIEWING SKILLS (12/48)

Bors1	Length of session
Bors2	Interviewer builds rapport
Bors3	Empathy is demonstrated
Bors4	Parameters of the session explained
Bors5	Attending behaviour noted
Bors11	Appropriate use of crisis skills
Bors12	Identification & communication of offenders strengths
Bors14	Appropriate use of open & closed questioning
Bors20	Active listening
Bors22	Effective use of authority
Bors25	Interview has a notable beginning, middle and end
Bors26	Positive ending

B) ADHERENCE TO PPSDM STANDARDS (9/48)

Bors6	Dynamic criminogenic targets identified and targeted
Bors7	Appropriate information collected
Bors8	Review of supervision order
Bors9	Evidence of collaterals to confirm
Bors13	Session is focused on criminogenic factors
Bors15	Referrals made to address criminogenic factors
Bors19	Appropriate stream placement identified
Bors37	Is familiar with community resources
Bors48	Non-criminogenic needs are referred out

C) MOTIVATIONAL INTERVIEWING (9/48)

Bors16	Assessment of client motivation
Bors17	Responsivity factors are clearly identified
Bors18	Motivational strategies used
Bors21	Affirming praise at 4:1 ratio
Bors23	Supports self-efficacy of client
Bors28	Encourages small steps, small successes
Bors30	Explores ambivalence
Bors31	Discusses pros/cons; cost/benefit
Bors47	Rolls with resistance

D) COGNITIVE INTERVENTIONS (9/48)

Bors10	Avoidance of power struggles
Bors24	Exceptions to the problem highlighted
Bors27	Interviewer models positive behaviour
Bors32	Developing a change plan
Bors33	Problem solves with client
Bors34	Teaches connection between thinking & behaviour
Bors38	Concrete verbal instructions
Bors39	Providing rational reasons for issues
Bors40	Challenges thinking errors

E) RELAPSE PREVENTION (9/48)

Bors29	Identifies non-negotiable behaviours
Bors35	Identifies support network with client
Bors36	Encourages client in skills practice
Bors41	Uses analogies relevant to client
Bors42	Sets short/log term goals
Bors43	Helps client identify high-risk situations
Bors44	Helps client identify “seemingly unimportant decisions”
Bors45	Helps client develop new coping responses
Bors46	Identifies replacement/alternative behaviour

Total Score= 48 points
60% of total CEP score

APPENDIX C - OFFENCE SEVERITY CODES

0 No Recidivism
1 Unknown
2 Municipal Bylaw Offences
3 Other Provincial Offences
4 Liquor Licence Act Offences
5 Highway Traffic Act Offences
6 Parole Violations
7 Other Federal Statute Offences
8 Misc. Offences Against Public Order
9 Drinking & Driving Offences
10 Breach of Court Order/Escape Offences
11 Criminal Code Traffic Offences
12 Drug Possession Offences
13 Obstruction of Justice Offences
14 Morals & Gaming Offences
15 Arson/Property Damage Offences
16 Assault & Related Offences
17 Theft/Possession Offences
18 Misc. Offences Against the Person
19 Fraud & Related Offences
20 Weapons Offences
21 Traffic/Import Drug Offences
22 Non-Violent Sexual Offences
23 Break & Enter & Related Offences
24 Violent Sexual Offences
25 Serious Violent Offences
26 Homicide & Related Offences

<u>Offences Included in Each Category</u>

1 Unknown
2 Municipal Bylaw Offences
3 Other Provincial Offences
Includes: Other Provincial Statutes
Juvenile Delinquent Act – Provincial
Securities Act – Provincial

4 Liquor Licence Act Offences
Includes: Liquor Control Act

5 Highway Traffic Act Offences
Includes: Highway Traffic Act

6 Parole Violations

Includes: Ontario Parole Violation
National Parole Violation – Federal
National Parole Violation – Provincial

7 Other Federal Statute Offences

Includes: Attempt Indictable Offence
Immigration Act
Juvenile Delinquent Act – Federal
Attempt Summary Offence
Accessory After Fact
Kill Animal Not Cattle
Mistreat Animal
FDA Act
Bankruptcy Act
Kill Cattle
FDA Cosmetics
Personation Extreme
Vessel Miscellanea
Dangerous Operation of Vessel
FDA Devices
Witchcraft Fortune
Canada Shipping Act
Customs Act
Excise Act
Securities Act – Federal
Disclosure of Information
Forge Passport
Other Criminal Code Offences
Possess Forged Passport

8 Misc. Offences Against Public Order

Includes: Cause a Disturbance
Public Mischief
Loiter
False Fire Alarm
Harass, Phone Calls
Unlawful Assembly
Hate Propaganda
Against Parliament
Rioting
Corruption – Other
Damage to Aircraft
False Info. Aircraft
Intercept Communication

Offence Weapon on Aircraft
Petty Trespass
Possession of Interception Device
Trespassing at Night

9 Drinking & Driving Offences
Includes: Impaired Driving
Over 80 Mgs. Alcohol
Refuse Breath Sample

10 Breach of Court Order/Escape Offences
Includes: Fail to Appear on Promise to Appear
Fail to Comply – Recognizance
Fail to Comply – Order
Breach Recognizance
Fail to Appear on Summons
Revocation Probation Order
Escape from Custody
Unlawfully at Large
Damage to Navigational Facilities
Assist Escape – Permit
P.O. Permits Escape
Fail to Comply to Probation
Skip Bail

11 Criminal Code Traffic Offences
Includes: Dangerous Driving
Fail to Remain
Criminal Negligence – Motor Vehicle
Drive while Disqualified
Vehicle Smoke Screen

12 Drug Possession Offences
Includes: Possession Narcotic NCA
Possession Restricted Drug FDA-H
FDA Drugs
Possession Controlled Drug FDA-G
Cultivate Narcotic NCA
Double Doctoring

13 Obstruction of Justice Offences
Includes: Obstruct Police
Obstruct Justice
Personation With Intent
Perjury
Personating Police

Bribery
Acknowledge Instrument in False Name
False Messages
Compound or Conceal an Indictable Offence
Fabricate Evidence
Obstruct Clergy
Obstruct Execution of Warrant
Wiretapping
Obtain Affidavits Without Authority
Contempt of Court
Corrupt Reward

14 Morals & Gaming Offences

Includes: Solicit
Procure – Prostitution
Bookmaking
Common Nuisance
Deliver Firearm
Live Off Avails
Own Bawdy House
Keep Betting House
Cheating at Play
Dead Body
Found in Bawdy House
Found in Betting House
Lottery
Off Track Betting
Own Betting House
Parimutuel
Defilement
Inmate in Bawdy House
Receive Bets
Vagrancy
Venereal Disease
Immoral Performance
Indecent Phone Calls
Keep Bawdy House
Keep Cock-pit
Live Off Gaming/Crime
Procure – Feign Marriage

15 Arson/Property Damage Offences

Includes: Mischief to Property
Willful Damage
Arson
Threat Damage to Property

16 Assault & Related Offences

Includes:
- Common Assault
- Bodily Harm
- Assault Causing Bodily Harm
- Assault Peace Officer
- Assault and Resist Arrest
- Criminal Negligence – Bodily Harm
- Choking
- Set Trap
- Assault – Aircraft
- Assault to Prevent Lawful Process
- Intent to Cause Bodily Harm

17 Theft/Possession Offences

Includes:
- Theft Under $200
- Theft Over $200
- Possession Over $200
- Possession Under $200
- Take Vehicle Without Consent
- Attempted Theft
- Theft of Mail
- Theft of Cattle
- Theft of Telecommunication
- Possession Stolen Mail

18 Misc. Offences Against the Person

Includes:
- Mischief Dangerous
- Threaten
- Failure to Provide the Necessities of Life
- Intimidation
- Threat to Injure a Person
- Abandon a Child
- Libel
- Conceal Dead Child's Body
- Interfering with Transportation Facilities
- Point Firearm

19 Fraud & Related Offences

Includes:
- Fraud Over $200
- False Pretence
- Uttering
- Forgery
- Illegal Use Credit Card
- Conspiracy
- Fraudulently Obtaining Accommodation

Fraudulent Concealment
Fraudulently Obtaining Transportation
Attempted Fraud
Breach Contract
Conversion Over
Falsify Records
Attempted Uttering
Breach Trust – 111 CCC
Counterfeit
Breach Trust – 296 CCC
Bringing into Canada Property Obtained by Crime
Conversion Under
Uttering Counterfeit Money
Counterfeit – Summary
False Statement
Fraud Under $200
Fraudulently Obtaining Credit
Fraudulent Obtaining Valuable Security
Possession Forgery Instruments
Utter Forged Passport

20 Weapons Offences

Includes: Possession Restricted Weapon
Possession Prohibited Weapon
Concealed Weapon
Using Explosives
Possession Weapon Public Meeting
Volatile Substance
Duelling
Dangerous Substance Aircraft
Deliver Restricted Weapon
Explosive Substance
Transfer Firearms to Under 16
Firearms General
Careless Use of Firearms
Possession Firearm Where Prohibited
Possession Offensive Weapon
Possession Explosive
Possession Firearm
Use Firearm during Commission of Offence

21 Traffic/Import Drug Offences

Includes: Traffic Narcotics – NCA
Traffic in Control Drug, FDA-H
Traffic in Restricted Drug, FDA-G
Import, Export Narcotics

Conspire – Control Drug FDA
Conspire – Traffic Narcotic NCA
Conspire – Restricted Drug FDA

22 Non-Violent Sexual Offences
Includes: Indecent Act
Gross Indecency
Incest
Buggery Bestiality
Indecent Exhibition
Corrupting Child
Sexual Intercourse – Not Incest
Bigamy
Obscene Matter
Seduction – Promise to Marry
Nudity
Polygamy
Loiter – Sex Offence

23 Break & Enter & Related Offences
Includes: Break and Enter with Intent
Burglary Tools, Possession
Unlawfully in Dwelling House
Masked with Intent to Commit
Forcible Entry
Possession of Instrument for Breaking into Coin Device
Attempted Break and Enter
Breaking Out
Possession of House-breaking Instrument

24 Violent Sexual Offences
Includes: Indecent Assault Female
Rape
Attempted Rape
Indecent Assault Male

25 Serious Violent Offences
Includes: Robbery
Wounding with Intent
Kidnapping
Extortion
Abduction
Libel Extortion
Attempted Murder
Forcible Confinement
Hijack Aircraft

26 Homicide & Related Offences

Includes:
- Murder One
- Manslaughter
- Attempted Murder
- Criminal Negligence – Death
- Conspire to Murder
- Supply Means for Abortion
- Accessory to Murder
- Infanticide
- Kill Unborn Child
- Aid or Abet Suicide
- Murder Two
- Procure - Miscarriage

APPENDIX D – LSI-OR

Instrument not available electronically.

APPENDIX E – RESULTS OF CEP ANALYSIS

Table 34. CEP Total score - descriptive statistics by stream.

Stream	Mean	Median	SD	Min	Max	N
AD	77.23	78.30	6.28	58.0	87.4	270
Basic	76.26	77.00	6.73	58.0	92.0	333
Rehabilitative	77.61	78.80	6.86	58.0	92.0	337
Individual	76.89	77.60	7.19	58.0	92.0	334
Intensive	77.85	78.80	5.64	58.0	92.0	340
TOTAL	77.17	78.30	6.59	58.0	92.0	1614

Table 35. CEP Total score - descriptive statistics by low-medium-high split.

CEP Group	Mean	Median	SD	Min	Max	N
Low CEP Total score	70.05	72.40	5.67	58.0	75.4	546
Med. CEP Total score	78.13	78.3	1.28	75.6	80.4	516
High CEP Total score	83.31	83.6	2.21	80.7	92.0	552
TOTAL	77.17	78.30	6.59	58.0	92.0	1614

Table 36. CEP File Review score - descriptive statistics by stream.

Stream	Mean	Median	SD	Min	Max	N
AD	75.77	78.00	9.60	53.4	95.0	306
Basic	72.95	73.80	9.66	53.6	95.0	357
Rehabilitative	75.98	77.30	9.74	53.4	95.0	365
Individual	73.93	76.80	10.43	53.4	95.0	368
Intensive	75.41	76.80	8.96	53.6	95.0	367
TOTAL	74.78	76.80	9.76	53.4	95.0	1763

Table 37. CEP File Review score - descriptive statistics by low-medium-high split.

CEP Group	Mean	Median	SD	Min	Max	N
Low CEP File Review score	63.75	65.80	6.23	53.4	71.8	588
Med. CEP File Review score	76.13	76.80	2.09	71.8	78.0	587
High CEP File Review score	84.47	83.30	4.98	78.0	95.0	588
TOTAL	74.78	76.80	9.76	53.4	95.0	1763

Table 38. CEP BORS score - descriptive statistics by stream.

Stream	Mean	Median	SD	Min	Max	N
AD	78.58	78.50	5.92	61.0	93.7	270
Basic	78.73	78.30	7.20	61.0	95.3	333
Rehabilitative	78.78	78.30	7.56	61.0	95.3	337
Individual	79.18	78.30	7.70	61.0	95.3	334
Intensive	79.52	78.60	6.25	61.0	95.3	340
TOTAL	78.97	78.50	7.00	61.0	95.3	1614

Table 39. CEP BORS score - descriptive statistics by low-medium-high split.

CEP Group	Mean	Median	SD	Min	Max	N
Low CEP BORS score	71.62	73.30	4.95	61.0	77.7	539
Med. CEP BORS score	78.87	78.50	1.20	77.7	81.2	538
High CEP BORS score	86.46	84.70	3.31	81.2	95.3	537
TOTAL	78.97	78.50	7.00	61.0	95.3	1614