Examining the Effectiveness of Youth Diversion: An Evaluation of the Ottawa Community Youth Diversion Program (OCYDP)

by

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Abstract

This study evaluated the Ottawa Community Youth Diversion Program (OCYDP), a voluntary diversion program targeting medium-risk youth and structured according to the risk, need, responsivity (RNR) principles of offender rehabilitation. One-hundred-and-seventy post-charge youth referred to the OCYDP were compared to 209 matched youth sentenced to a period of probation. Youth were matched on risk level, age, and sex and were followed up for an average of 25 months. Youth on probation were twice as likely to be reconvicted each month than youth who successfully completed the OCYDP ($p < .001$). However, youth who failed to complete the program were reconvicted at nearly two times the rate of the probation sample ($p = .044$). No difference was found in reconviction rates between youth on probation and youth who only partially completed the OCYDP. The author concluded that the OCYDP is more effective in reducing reconviction than probation; however, it is unclear as to whether this success is attributable to diversion or RNR-adherence.
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In Canada, youth are responsible for a disproportionate amount of crime. In 2010, youth between the ages of 12 and 17 accounted for nearly 36% of the total number of people accused of an offence (Statistics Canada, 2011). This high level of delinquency and the associated repercussions (e.g., continuing criminal behaviour, school drop out, employment instability) often have the public demanding that action be taken to address these issues (Bala, 2003). With differing goals of addressing youth crime in mind (e.g., punishment, deterrence, treatment), a variety of models for intervention have been adopted in Canada (e.g., incarceration, intensive supervision, residential programs; Federal-Provincial-Territorial Task Force, 1996). However, it was youth diversion that received the most attention with the enactment of the Youth Criminal Justice Act (YCJA) in 2002 (Bala, Carrington, & Roberts, 2009).

Generally speaking, diversion is the avoidance of any level of traditional justice system processing (Palmer & Lewis, 1980). According to the YCJA, at both the pre-charge and post-charge stage, youth can be counseled and released or referred to a diversion program providing interventions. The YCJA directs justice system officials to consider diversion above any other intervention measure [s. 4(a)]. The weight placed on diversion measures within justice system legislation assumes that it is beneficial, arguably moreso, than previous attempts at addressing youth crime.

Informed by labelling theory, differential association theory, and the risk, need, and responsivity model of rehabilitation, diversion has been advocated based on a number of benefits (e.g., reduced justice system caseload, avoidance of detrimental
effects of traditional system, more youth-focused process). Of arguably greater importance, however, is its effectiveness in reducing recidivism rates and, as a result, the consequences that are attributed to criminal behaviour (Polk, 1984). As will be reviewed, the evidence supporting diversion's effectiveness tends to be positive, however, its effectiveness varies considerably according to program design. With more than 50% of accused youth being diverted from the justice system in 2010 (Statistics Canada, 2011), it is important that programs afforded the responsibility of dealing with these offenders are adequately evaluated.

The goal of the present research is to investigate whether referral to the Ottawa Community Youth Diversion Program, a youth diversion program targeting medium-risk offenders, results in lower recidivism rates than sentencing youth to a period of probation.

**Overview of the Problem**

**Prevalence and persistence of youth crime.** Youth are responsible for more police-reported crime than any other age group in Canada (Statistics Canada, 2010a). In 2010, youth aged 12 to 17 accounted for one-third of all persons accused of a crime, with nonviolent offences, namely property, being the most common (Statistics Canada, 2011). These youth tend to be disproportionately male, as males tend to re-offend at significantly higher rates than females and have longer and more serious criminal histories (Farrington, 1994; Loucks & Zamble, 1994; Moffitt, 1993). While this elevated crime rate typically garners considerable attention and concern from the public (Bala, 2003), this increased level of offending, for most youth, is often short-lived.
With the peak age of criminal behaviour at 17, most youth desist from engaging in antisocial acts as they enter into early adulthood (Moffitt, 1993; Statistics Canada, 2010a). It has been argued that these adolescent-limited offenders engage in criminal behaviour as a result of proximal factors (e.g., maturity level, importance of peer relationships, self-conscious development of attitudes, shift in relationship with parents and authority figures) that are common during adolescent development (Moffitt, 1993; Steinberg & Schwartz, 2000). While most youth cease criminal behaviour after a short period of time (Statistics Canada, 2010b), numerous studies have demonstrated the continuity of antisocial behaviour from adolescence to adulthood for some youth (Laub & Sampson, 2003; Piquero, 2008; Thornberry & Krohn, 2001).

For example, DeLisi (2006) studied 500 frequent offenders and determined that those with the earliest arrest onset (i.e., age 8 and 9) committed the most offences over their criminal career. In fact, those with the earliest arrest dates averaged more than twice the number of offences than frequent offenders who began committing crime at an older age. Blokland, Nagin, and Nieuwbeerta (2005) also followed a sample of serious offenders tried in 1977 in the Netherlands and found that the offenders with the longest and most active criminal careers had the youngest average age at first arrest. Krohn, Thornberry, Riviera, and LeBlanc (2001) reviewed 19 criminal career studies completed between 1940 and 1999 and concluded that all 19 reported a significant relationship between early onset of criminal behaviour and subsequent offending. In fact, they reported that compared to late-onset offenders, early onset offenders, defined as age 12 or earlier, were at a two to three times higher risk of becoming serious, violent, and chronic offenders (Krohn et al., 2001).
These offenders, commonly termed life-course persistent offenders, engage in
criminal behaviour in most stages of their life (Moffitt, 1993). Longitudinal studies have
demonstrated that biological (e.g., high levels of testosterone), social (e.g., negative
relationship with parents), and personality (e.g., antisocial attitudes) variables all play a
role in this continuing behaviour (Andrews & Bonta, 2010). While the criminal careers of
youth offenders often end before adulthood, most adult offenders have a history of
adolescent antisocial behaviour (Thornberry & Krohn, 2001). The persistence of criminal
behaviour into adulthood provides strong support for early intervention with youth
offenders, as does the negative effects of any antisocial behaviour.

Consequences of criminal involvement in adolescence. Although the majority
of youth cease committing crime as they enter into adulthood, mere engagement in
criminal behaviour and the resulting justice system interaction is associated with a
number of other consequences. Several studies have demonstrated the role of legal
sanctions in increasing the likelihood of dropping out of school (Bernburg & Krohn,
2003; Huizinga & Henry, 2008; Lizotte et al., 2004). Janosz, Le Blanc, Boulerice, and
Tremblay (1997) followed 1500 high school students and found that self-reported number
of prior arrests was a significant predictor of school dropout. Another study examined
600 male youth and found that self-reported official intervention (e.g., police charge,
conviction) decreased a youth's odds of graduating by 70% when controlling for risk,
race and ethnicity, parental poverty, and academic aptitude (Bernburg & Krohn, 2003).

Numerous studies have demonstrated the relationship between previous offences
and employment difficulties (Huizinga & Henry, 2008; Thornberry & Christenson,
1984). For example, De Li (1999) used Farrington's (1994) longitudinal data on 411 boys
to demonstrate that involvement with the criminal justice system between the ages of 14 and 16 had a strong, negative effect on employment status and job stability at age 18 and 19. Youth offending has also been linked to an increased risk of developing depression and suicidal ideations (Lewis, Shanok, Grant, & Ritvo, 1983). Wiesner, Kim, and Capaldi (2005) used a longitudinal sample of 206 at-risk boys and followed them from ages 9 and 10. They demonstrated that, even after controlling for age, socioeconomic status, and antisocial propensity (e.g., bullying, school disobedience, engaging in fights), high levels of adolescent offending increased a youth’s risk of developing depressive symptoms.

Antisocial behaviour at a young age has also been connected with increased risk of developing poor social skills (Huizinga & Henry, 2008), becoming victims of crime (Loeber & Farrington, 2001), having substance abuse issues (Le Blanc & Loeber, 1998; Wiesner et al., 2005), engaging in sexual activity and, for male repeat offenders, becoming a father at a young age (Le Blanc & Loeber, 1998; Stouthamer-Loeber & Wei, 1998).

Beyond the risk of continuing criminal behaviour into adulthood, early engagement in antisocial behaviour and justice system processing can negatively impact a number of areas in a youth’s life. Youth interventions targeted at reducing further criminal behaviour and minimizing these negative consequences have been growing in number within correctional settings (Bala, 2003; Lipsey, 2009); however, few intervention approaches have received the attention and support from the current youth justice legislation [YCJA, 2002, s. 2(1)] as youth diversion.

The Diversion of Youth Offenders
The history of youth diversion in Canada. Prior to 1857, when Parliament enacted legislation that acknowledged the unique legal status of juveniles, youth were treated as adults (Doob & Cesaroni, 2004; Penney & Moretti, 2005). Any differences in psychological ability and development were ignored and youth were held accountable for their criminal behaviour to the same degree as adult offenders (Penney & Moretti, 2005). After 1857, Canadian cities began creating rehabilitation-focused institutions designed specifically for neglected, abused, and delinquent children, leading to the establishment of the Juvenile Delinquents Act (JDA) in 1908 (Doob & Cesaroni, 2004; Penney & Moretti, 2005).

The JDA focused on the best interests of the child and promoted the welfare notion of *parens patrie*, indicating that the state could intervene like a parent (FPT, 1996; Hornick & Rodal, 1995). In an effort to divert youth from the punitive and often harmful adult justice system, separate detention centres and special courthouses were built (Doob & Cesaroni, 2004; Moyer, 1980). They were established with a focus on understanding the causes of delinquency and tailoring treatment programs to the needs of the youth (Doob & Cesaroni, 2004). The JDA was established on the belief that violating the law does not impact the offender’s status as a child and they should, therefore, continue to be treated as such (Educon Marketing & Research Systems, 1996). Police began using alternatives to formal charging, such as warnings or cautions, to deal with juvenile offenders despite no express provisions in the JDA referring to diversion (Bala, 2003; Educon Marketing & Research Systems, 1996; Juvenile Delinquents Act, 1970).

By the 1970’s, community-based agencies began developing formal youth diversion programs modeled after those for adults. These were considered legitimate
alternatives to youth court by both police and prosecutors (Bala, 2003; Educon Marketing & Research Systems, 1996). Despite the freedom afforded to police and prosecution in diverting youth under the JDA, this act was criticized for the diversity in sentences for similar crimes, ignoring the due process rights of youth, and the use of arbitrary and trivial punishments (Educon Marketing & Research Systems, 1996). These issues eventually led to the development of the Young Offenders Act (YOA) in 1982.

Despite its increased focus on the protection of society and youth accountability, the YOA formalized the criteria and procedures for the use of diversion that was lacking in the JDA [Hornick & Rodal, 1995; YOA, 1982, s. 3(1)(d)]. The YOA’s Declaration of Principle indicated that alternative measures, including inaction, to traditional sanctions should be considered when the protection of society is not a factor [s. 3(1)(d)]. Diversion practices were encouraged but were not expected of criminal justice agents under the YOA.

Due to the lack of provisions in the JDA concerning diversion, referral processes received little attention from provincial governments under the first youth act, providing both police and prosecutors with considerable discretion (Bala, 2003). Under the YOA, provincial and territorial governments gained the power to establish clear policies on the referral of youth to alternative measures. These policies were often more restrictive than those established by police departments and community agencies under the JDA [Bala, 2003; YOA, 1982, s. 4(1)(a);]. In fact, after the inception of the YOA, court-based responses to youth crime significantly increased as the use of screening and diversion decreased (Bala, 2003). The YOA was often criticized for its lack of emphasis on rehabilitation and its over-reliance on court-based responses and custody for the majority
of youth crimes (Bala, 2007; Penney & Moretti, 2005). In fact, it was the imprisonment of a large number of youth for minor offences that served as a driving force behind the enactment of the Youth Criminal Justice Act (YCJA) in 2002 (Bala, 2003; Doob & Sprott, 2006).

The YCJA was centred on the belief that community-based responses were more effective and appropriate in dealing with the majority of youth crimes (Bala, 2007). The two previous youth justice systems were heavily criticized for failing to reduce crime (Gensheimer, Mayer, Gottschalk, & Davidson, 1986); the tendency to aggravate existing problems (Gensheimer et al., 1986); the inhumane treatment of youth (Educon Marketing & Research Systems, 1996); the overburdened and overly used court system (Bala, 2007; Penney & Moretti, 2005); and the lack of focus on treatment (Educon Marketing & Research Systems, 1996; Gensheimer, et. al., 1986). The YCJA, in an attempt to alleviate these issues, promoted the well-being of the youth and dedicated more efforts to alternative measures, now known as *extrajudicial measures* [s. 2(1)].

*Extrajudicial measures* encompass all measures other than judicial proceedings used to deal with youth, including the use of police discretion at the pre-charge level as well as all diversion programs. Extrajudicial sanctions, which fall under extrajudicial measures, are all formal methods of diversion resulting from an official charge, commonly receiving referrals from the prosecution [YCJA, 2002, s. 2(1)]. Unlike the YOA, which encouraged but did not create a presumption that alternative measures should be used for minor offences, the Declaration of Principles in the YCJA explicitly states that “extrajudicial measures are often the most appropriate and effective way to address youth crime” [s. 4(a)]. It creates a presumption that youth crime should not be
responded to through the laying of a charge if the youth has no prior record of offending and has not committed a violent crime [s. 4(c)]. It goes on to further note that having a criminal record or having been previously dealt with through the use of extrajudicial measures does not preclude their use if the measures could continue to hold the youth accountable for his or her offending behaviour [s. 4(d)].

The YCJA also more formally established Youth Justice Committees (s. 18 and 19). They are often composed of community members, police officers or community agency professionals. These committees play a variety of roles in extrajudicial measures, including screening youth, making referrals to extrajudicial programs, and providing support to victims (Bala, 2003; FPT, 1996).

The enactment of the YCJA resulted in a quick change in screening and charging processes in Canada. In 2003, the year the YCJA came into effect, the rate of youth dealt with by means of alternative measures increased by 18% from the previous year, with the number of youth being charged by police having decreased by 15% (Statistics Canada, 2010b). These higher levels of diversion and lower levels of police charges have remained stable through 2010 (Statistics Canada, 2011).

**Theoretical Support for the Use of Diversion**

The development and use of diversion services for youth offenders is primarily supported by three theories: labelling theory, differential association theory, and the risk, need, and responsivity model of rehabilitation.

**Labelling theory.** Labelling theory has been the most frequently cited theory in support of diversion. Contrary to theories purporting that there is something inherently deviant in an offender (e.g., biological theories of criminal conduct), labelling theory
contends that society creates the criminal (Becker, 1963). It is argued that deviance is produced through interaction with agents of social control (e.g., police, lawyers, judges), influencing the development of deviant self-concepts among offenders (Schur, 1971). Those in contact with the justice system internalize the labels thrust upon them, regarding themselves as the offender they are perceived to be, and begin to behave in ways in line with that title. Lemert (1951) first established primary and secondary deviance in an attempt to explain this process. Primary deviance describes the initial criminal act while secondary deviance represents further criminal behaviour that results from being labeled a “criminal” (Lemert, 1951). Lemert (1951) acknowledges that the degree to which an individual accepts the stigma associated with criminal justice processing varies with respect to pre-existing self-concepts; therefore, not all first-time offenders processed through the system engage in secondary deviance. While he does not specifically describe these problematic pre-existing self-concepts, he notes that self-conceptions that closely conform to the given label (e.g., unintelligent) put the youth at a greater risk of adopting a criminal lifestyle (Lemert, 1951). Nonetheless, the theory claims that the ‘criminal’ label may override other existing statuses (e.g., ‘Canadian’, ‘educated’) and result in a self-fulfilling prophecy (Becker, 1963).

Once an individual has been stigmatized as deviant, it is argued that the community will expect him to live up to that label (Schur, 1971). Defining behaviours as evil gradually shift to defining the individual as evil, leading to all future behaviour being regarded as suspicious (Tannenbaum, 1938). The community response and subsequent isolation results in limited access to conventional roles and opportunities, leading youth to accept the only opportunities available to them, normally those of an antisocial nature
(Moyer, 1980). Diversion from the justice system is an attempt to avoid the initial labelling of the offending youth, thereby preventing subsequent re-offending.

While aspects of labelling theory have received some empirical support (e.g., Bernburg & Krohn, 2003; Farrington, 1977; Rubington & Weinberg, 2008; Schwartz & Skolnick, 1962), few studies have demonstrated that subsequent delinquent behaviour is a direct result of fewer conventional opportunities caused by criminal labels. In fact, critics have noted that the theory is constructed in a way that makes it difficult to empirically test and that studies attempting to validate it have only supported selected aspects of the theory (Binder & Geis, 1984).

Labelling theory has been criticized for failing to account for primary deviance and the factors that influence committing a criminal act for the first time (Thio, 1978). It has also been criticized for describing the actor as innocent and passive, when it is argued that many offenders hold criminal titles with pride (Bordua, 1967).

**Differential association theory.** Differential Association theory is centred on the belief that the learning of criminal behaviour occurs within relationships with people and groups (Cressey, 1952). This social learning theory explains deviant behaviour as a result of an excess of definitions favourable to law violation compared to unfavourable definitions of law violation (Cressey, 1952; Sutherland, 1974). Cressey (1952) and Sutherland (1974) argue that criminal behaviour requires criminal attitudes, motivations, and techniques that are acquired when highly exposed to criminal norms, rather than prosocial norms. This occurs when a person spends time with people exhibiting criminal behaviour patterns, not necessarily people defined as criminal. Sutherland (1974) explained that the degree to which a person gains favourable definitions of law violation
is contingent on the frequency, duration, priority, and intensity of contact with those exhibiting criminal behaviour patterns. Glaser (1956) later elaborated on Sutherland and Cressey's theory, contending that the individual must first identify with a group of people, at which time he or she will assume their perspective on criminal behaviour. He noted that mere exposure to delinquents is not sufficient to adopt pro-criminal attitudes (Glaser, 1956). This reformulation accounts for individual choice in identifying whose behaviour patterns will be the most influential.

Burgess and Akers (1966) criticized Sutherland’s theory, indicating that it fails to explain the learning process involved in becoming a criminal. They added an additional component, purporting that once an individual has more definitions favourable to law violation, their criminal pattern must be reinforced or more satisfying than anti-criminal patterns in order to continue engaging in criminal behaviour (Burgess & Akers, 1966). Diversion attempts to limit youth’s contact with experienced offenders, who are assumed to hold negative views towards law compliance, through the avoidance of justice system institutions (e.g., custody facilities, courtrooms, and probation offices).

Differential association theory has been criticized for failing to be stated in a way that can be verified or rejected by empirical findings (Cressey, 1952). Gibbs (1987) argues that unless values are attributed to rating the frequency, duration, priority, and intensity of association, the theory cannot accurately predict the criminality of individuals. As a result, only portions of the theory have been empirically tested (Bruinsma, 1992; Cressey, 1952). It has also been criticized for failing to account for all types of crimes. Certain classes of crimes, such as embezzlement or check forgery, are crimes of opportunity and, therefore, cannot be solely accounted for by favourable
It has also been argued that offenders cannot identify the people from whom they learned criminal and anti-criminal behaviour patterns, making empirical verification of this theory extremely difficult (Thio, 1978). Some have rejected this theory entirely, indicating that the societal rejection common among delinquents forces them to form antisocial associations with one another, rather than form relationships then become delinquents (Bynum & Thompson, 1992). Thus, delinquent groups concentrate deviant behaviour rather than create it.

**Principles of Risk, Need, and Responsivity.** The Risk, Need, and Responsivity (RNR) model of offender rehabilitation is firmly rooted in general personality and cognitive social learning perspectives of behaviour (Andrews & Bonta, 2010). These perspectives argue that deviant acts are a result of increased rewards for criminal behaviour and that understanding these rewards will assist in identifying risk factors and needs that are associated with offending (Andrews & Bonta, 2010). While RNR is theoretically informed, it is also empirically supported by literature on the predictive accuracy of risk factors (Andrews & Bonta, 2010). RNR contends that the effectiveness of treatment in reducing criminal behaviour is contingent on identifying and addressing an offender’s level of risk, areas of need, and responsivity factors (Andrews, Bonta, & Hoge, 1990a).

The risk principle states that treatment services must consider a youth’s risk of re-offending, as high-risk offenders require more intensive treatment than low-risk offenders (Andrews & Bonta, 2010). The need principle suggests that the intervention must address criminogenic needs (dynamic risk factors) that, if altered, will reduce a youth’s risk of future offending (Andrews, Bonta, & Hoge, 1990a). These factors are attributes of an
offender and their circumstances and fall into seven areas: family/parental circumstances, education/employment, peers, leisure time, substance use, attitudes/values, and antisocial personality pattern (Andrews & Bonta, 2010). It is important to note that not all offender needs are criminogenic. According to the RNR model, unless the needs have been empirically shown to reduce recidivism, they should not be the primary focus of correctional treatment (e.g., personal distress, self-esteem; Andrews & Bonta, 2010).

The responsivity principle indicates that treatment services should consist of cognitive-behavioural interventions and must be tailored to the abilities and learning style of an offender (Andrews, Bonta, & Hoge, 1990a). For example, an offender with reading difficulties would not likely benefit from the completion of written skill-building activities at home, therefore, written assignments should be completed with the assistance of the supervisor.

Andrews and Bonta (2010) conducted a meta-analysis on the effectiveness of correctional treatment services according to adherence to the RNR principles. They reported that treatment adhering to all three principles generated an effect size (Pearson’s $r$) of .26 in reducing recidivism, with considerably less effectiveness for those that only complied with two principles (.18) and one principle (.02).

Proponents of RNR contend that an offender’s risk level and needs areas can best be addressed within the community (Andrews, Zinger, Hoge, Bonta, Gendreau, & Cullen, 1990b). Andrews and Bonta’s (2010) treatment meta-analysis found that treatment adhering to the RNR principles had greater effects in reducing recidivism when offered in the community ($r = .35$) than within custody ($r = .17$). This finding is also supported by Lipsey’s (2009) meta-analysis on youth interventions, where it was concluded that, while
controlling for other influential variables, counselling was significantly less effective in reducing recidivism for youth who received the service while incarcerated, compared to those counselled while on probation or in a diversion program. Furthermore, skill-building interventions (e.g., cognitive-behavioural therapy) significantly reduced recidivism when provided within the context of a diversion program, compared to similar treatment provided within probation and incarceration settings (Lipsey, 2009). While reviewing the relative effectiveness of treatment approaches with youth offenders is not within the scope of this paper (see Andrews et al., 1990b; Latimer, Dowden, Morton-Bourgon, 2003; Lipsey 2009), community-based treatment services appear to result in fewer subsequent re-offences. As many diversion programs offer treatment to youth offenders (Bala, 2003), the effectiveness of RNR-focused treatment offered within the community provides some support for the use of diversion programs in Canada.

The RNR model has been criticized for the subjective role of value-laden risk factors in the theory, indicating that the authors impose their own beliefs on what factors should be considered and do not consider the goals and values of the offender (Ward & Maruna, 2007). For example, identifying an area that, with improvement, will result in less harm and greater good (i.e., a criminogenic need) allows the practitioner to define what is harmful and what is good.

The RNR model has also been criticized for focusing on individualistic factors that influence criminal behaviour while essentially ignoring societal influences, such as poverty and social disadvantage (Ward & Maruna, 2007). In fact, it has been described as being “inconsistent with the facts about human functioning” (Ward & Maruna, 2007, p. 82). They argue that ignoring the context in which an individual commits crime hampers
the accurate prediction of criminal behaviour. Studies examining the predictive validity of risk factors such as lower-class origins, however, do not support this criticism (Andrews & Bonta, 2010).

**Diversion Overview**

Criminal justice officials, community agencies, service providers and the general public all hold differing views on what should be considered diversion. Most tend to agree, however, that diversion must provide the avoidance or reduction of justice system processing (Gensheimer et al., 1986; Palmer & Lewis, 1980). As will be explored in the next section, diversion measures range from unstructured or non-intervention programs (e.g., police/prosecutor warnings) to formal intervention (e.g., non-judicial alternate programs). There are different models and programs for delivery of formal diversion services, including youth justice committees, private agencies/non-governmental organizations (e.g., John Howard Society, Elizabeth Fry Society), police- or probation-run programs and youth panels of professionals (e.g., child welfare workers, probation officers; Bala, 2003; FTP, 1996).

In most cases, youth involved in formal programs participate in different services, including restitution, community service, victim apology letters, essays, conferencing or victim offender mediation, educational sessions (e.g., anti-shoplifting programs) or individual/group counselling (Bala, 2003; Binder & Geis, 1984; FTP, 1996). Official programs differ in diversion models, with some employing a brokerage style and others providing in-house services. The brokerage model involves a caseworker assessing a youth’s needs and determining which services are required. They typically make a treatment referral, document completion of assigned tasks, and communicate with the
source of the initial referral (e.g., police, prosecution; Bala, 2003). Those who provide in-house services generally follow a similar pattern, with the intervention being provided within the program.

As outlined by the YCJA, each province/territory has discretion in determining the eligibility criteria for extrajudicial measures (s. 7/8). The criteria can depend on a variety of factors (e.g., age, index offence, number of prior offences); however, non-violent, first-time offenders are considered standard (FPT, 1996). Some provinces do allow youth to be diverted more than once, which is supported by the YCJA [Bala, 2003; YCJA, s. 4(d)].

If a youth does not comply with diversion conditions, it is common for caseworkers to refer the youth back to the main referral source, who retains discretion over the next step. The consequences of failing to comply with diversion conditions can range from no action to incarceration; this typically differs according to referral type (i.e. pre-charge or post-charge; Binder & Geis, 1984).

Pre-charge diversion. Police have many options at their disposal when faced with a young person who has broken the law: no action, caution and release, caution and referral to an extrajudicial measures (EJM) program, or court referral. Despite the growing popularity of diversionary programs, police still have the discretion to take no action in response to knowledge of criminal behaviour. Caution and release typically occurs in the presence of the youth’s parents and is done by a senior officer. This has been termed true diversion as it involves diverting the young offender out of the system with no further action being taken (Binder & Geis, 1984; FPT, 1996; Polk, 1984). The brief contact with police is theorized to act as a deterrent for future criminal behaviour.
and allows for the avoidance of any further processing within the criminal justice system (Bala, 2009; FPT, 1996).

Cautioning and referring a young person to a diversionary program can be informal or formal, with the informal referrals being voluntary and without any consequences should the youth not attend or complete the designated program (Bala, 2007). Formal diversion programs require the youth, after having agreed to participate, to complete specific tasks/activities (e.g., restitution, counselling, community service). A lack of compliance may result in a return to the standard criminal justice system (Bala, 2007; Polk, Adler, Muller, & Rechtman, 2003). These programs work under the auspices that early intervention is far superior in impacting criminogenic needs (i.e., factors related to re-offending) and reducing recidivism than the traditionally reactive nature of the youth court system (Educon Marketing & Research Systems, 1996).

While cautioning and referral eligibility practices vary among provinces and police departments, there are a number of common features among established policies. Oftentimes, they are limited to first-time non-violent offenders, there must be sufficient evidence to establish the offence, the youth must admit to the allegations and be willing to consent to the caution/referral process (FPT, 1996; Polk et al., 2003). In 2010, 58% of youth recommended for charging were diverted from the justice system through either counsel and release or referral to an alternative program (Statistics Canada, 2011).

**Post-charge diversion.** Once a youth has been formally charged with a criminal offence, the case can be proceeded through the full court process, a caution can be administered by the prosecution or the youth can be referred to an extrajudicial sanctions (EJS) program (Bala, 2003; FPT, 1996). While prosecutors have always had the
discretion to proceed with a case, the YCJA provides a framework for which prosecutors can issue a formal caution and fully release the youth post-charge (s. 8). Based on the seriousness of the offence, the nature and number of prior offences, or other aggravating factors, the prosecution may also opt to defer prosecution and refer the offender to an EJS program [YCJA, s. 10(1)], which typically occurs after the first appearance in court (Bala, 2003). These programs offer similar intervention services and typically utilize the same in-house processes as pre-charge diversion programs. In fact, in many cases, the EJM and EJS programs are the same; they differ only in referral process and consequences of failing to comply (FTP, 1996).

Similarly to pre-charge referrals, there must be sufficient evidence against the youth to proceed with a referral to an EJS program [YCJA, s. 10(2)(f)]; otherwise, the case should be dropped (Bala, 2003). If a youth is referred to a program, the court case is adjourned pending a decision regarding the appropriate sanction, with charges being dismissed by the court if the youth completes the program (Bala, 2003).

It is rare that judges play a role in whether a youth is diverted prior to conviction. They may suggest that the Crown prosecutor caution or refer the youth to an EJS program, but it is not enforceable (Bala, 2003). They can, however, exercise discretion in their sentencing practices. Post-adjudication diversion (i.e., the avoidance of a traditional, more severe sentence) is significantly less common (Bala, 2007) and usually consists of Intensive Support and Supervision Programs and attendance centre orders [YCJA, s. 42(2)(l) and (m)], both of which fall under EJS programs.

Intensive Support and Supervision Programs provide an opportunity for high-risk youth with mental health concerns to be strictly supervised and receive intense, family-
oriented treatment within the community (Boys & Girls Club of Canada, 2006). Attendance centres are designed to make better use of youth’s leisure time and provide educational programs such as alcohol and drug awareness (John Howard Society of Alberta, 2000). The YCJA also added Deferred Custody and Community Supervision as an alternative sentence for youth who would otherwise be sentenced to custody [s. 42(5)]. Youth are supervised in the community, similar to probation, but non-compliance results in incarceration (Department of Justice, 2010). In 2008/09, these community-based programs accounted for 5.13% of youth sentences, a 2% increase from 2004/05 despite a decrease in youth involvement in correctional services of approximately 5% (Statistics Canada, 2010c). This increased use of diversionary programs is likely linked to the purported benefits cited by diversion advocates.

**Goals of diversion.** Diversion programs were developed to correct for a variety of shortcomings in the juvenile justice system (Bala, 2003). Many proponents contend that diversion allows youth to avoid the negative impact caused by exposure to the juvenile justice system. Despite the differing theoretical arguments surrounding the cause of this negative impact (e.g., labelling theory, differential association theory), the evidence against justice system processing has been well established (Huizinga & Henry, 2008; McAra & McVie, 2007).

For example, Bernburg and Krohn (2003) followed a sample of 529 youth males for 10 years and found that official intervention (e.g., police charge, conviction, period of probation, incarceration) was associated with an increase in the commission of serious crime in early adulthood (age 21-22), even after controlling for risk level. Huizinga, Schumann, Ehret, and Elliot (2003) compared data from two longitudinal projects (one
from Germany and one from the United States) and concluded that judicial sanctions resulted in the maintenance or increase in offending behaviour over 10 years, with more severe sentences resulting in higher recidivism rates.

Smith, Goggin, and Gendreau (2002) completed a meta-analysis on the effects of prison sentences on recidivism and also concluded that incarcerated youth had a 9% increase in recidivism compared to offenders supervised in the community. McAra and McVie (2007) followed a cohort of 4,300 youth and found that, even after controlling for risk, those who were drawn the furthest into the justice system (i.e., brought to a hearing) were the least likely to desist from crime 12 months after justice system penetration when compared to a matched group of offenders. In 2008, Huizinga and Henry reviewed 19 studies produced between 1970 and 2007 examining the effect of arrest on subsequent youth offending. They reported that 14 concluded that it increased recidivism, with only two studies finding that arrest resulted in reduced re-offending.

It has also been argued that, due to their constant state of development (Steinberg & Schwartz, 2000), adolescents are more susceptible to negative inmate subculture and consequences associated with physical and psychological victimization often seen in custody (Cesaroni & Peterson-Badali, 2005; Maitland & Sluder, 1998). It has been argued that the avoidance of these negative issues results in lower recidivism rates for youth who are diverted (Bernburg & Krohn, 2003).

The reduction of the excessive volume of cases inserted into the youth system is often cited as a leading cause for diversion (Educon Marketing & Research Systems, 1996; Gensheimer et al., 1986; Klein, Teilmann, Lincoln, & Labin-Rosensweig, 1976). Severy and Whitaker (1984) found that, even when controlling for the area’s changing
crime rate, there was a 12% decrease in adjudicated youth during the 4-year long Memphis-Metro Youth Diversion Project compared to the 4 years prior to the development of the program.

The opportunity for greater access to treatment services also provides support for the use of diversionary practices. Many argue that youth immersed in the traditional criminal justice system are often thrust into a punishment-focused environment, less conducive to treatment change, which results in fewer opportunities for intervention (Latimer et al., 2003). For example, Wiebush (1993) evaluated a post-adjudication intensive supervision program (ISP) for youth, comparing them to a matched group of incarcerated offenders. While he found no differences in subsequent recidivism rates, he noted that 98.7% of ISP youth were referred to some form of intervention, namely counselling, compared to only 58.1% of the comparison group (Wiebush, 1993).

Diversion has also been advocated for dealing with youth at a quicker rate (Moyer, 1980), allowing justice officials to focus their efforts on more serious offenders (FPT, 1996), providing financial relief for the justice system (FPT, 1996), allowing communities to assume responsibility for solving youth’s problems (Lemert, 1981), and providing a more comfortable and fair experience for youth and parents (Fischer & Jeune, 1987; Moyer, 1980).

Criticisms of diversion. One of the most common criticisms of diversion is its net-widening effect. It has been argued that youth who would normally have been informally dealt with by police, or had their cases dropped by the prosecution, are being referred to diversion programs (Polk, 1984). There has been a shift in perspective from youth being diverted from to being referred to that continues to retain youth under the
control of the juvenile justice system (Gensheimer et al., 1986; Klein et al., 1976; Lemert, 1981). In a study examining diversion’s effect on the proportion of youth under justice system control, Blomberg (1977) found a 32% increase in the total number of youth receiving some form of justice intervention during a diversion program’s first year of operation. This issue of over-reach is especially visible when police and probation departments set up their own in-house diversion programs. These programs simply serve to shuffle power from one part of their organization to another (Lemert, 1981). Diversion has provided an appealing third option to police when faced with youth who require more than a caution but less than a charge; alternative measures are less severe than court but less risky than outright release (Moyer, 1980). The existence of net-widening is fundamentally at odds with the central idea of diversion - to reduce youth’s interaction with justice system agencies.

Diversion has also been accused of neglecting the due process rights of youth. Under the YCJA, youth must accept responsibility for the offending behaviour in order to be considered for extrajudicial sanctions [s. 10(2)(e)]. While this cannot be used against them in any future court proceedings [YCJA, s. 10(4)], the admission, as well as acceptance of diversion terms, is typically done without a lawyer present at the police level (Bala, 2003).

It has also been argued that diversion does not necessarily reduce recidivism, but simply reduces a youth’s likelihood of being apprehended for recidivism (Chaple, 2011). Those who are traditionally processed have considerably more interaction with police and criminal justice officials, thereby increasing their likelihood of being recognized, scrutinized, and treated more harshly than diverted youth. Although, others have also
claimed that youth who have been previously diverted will be dealt with more harshly in future court cases as they have already been given their chance for court avoidance (Bala, 2003; FPT, 1996).

Others have argued that diversion is not fully voluntary (Moyer, 1980), that eligibility criteria are often vague (Moyer, 1980), and that discriminatory practices may arise as decisions to divert are not subject to public scrutiny (FPT, 1996; Moyer, 1980). While there have been a number of criticisms against diversion, its ability to reduce recidivism is the most commonly debated issue.

**The effectiveness of diversion in reducing recidivism.** A brief glance at evaluations examining the effectiveness of diversion programs in reducing recidivism relative to the traditional justice system yields mixed results. There are a number of studies demonstrating that diversion is successful in reducing re-offence rates (Davidson II, Redner, Blakely, Mitchell, & Emshoff, 1987; King, Holmes, Henderson, & Latessa, 2001; Palmer & Lewis, 1980; Quay & Love, 1977; Regoli, Wilderman, & Pogrebin, 1985). Other studies, however, have found that diversion has no significant impact on recidivism rates relative to the traditional justice system (Carney & Buttell, 2003; Patrick, Marsh, Bundy, Mimura, & Perkins, 2004; Severy & Whitaker, 1982; Wiebush, 1993). In an attempt to summarize existing literature, Gensheimer et al. (1986) conducted a meta-analysis of 38 youth diversion program evaluations. They determined that diversion did not reduce recidivism at a greater rate than those processed by the traditional justice system, but concluded that this speaks to a greater need to examine the process within diversion programs.
In 2009, Lipsey conducted a meta-analysis reviewing juvenile treatment evaluations completed between 1958 and 2002. With offender characteristics and intervention techniques held constant, Lipsey (2009) concluded that level of juvenile justice supervision did not significantly predict recidivism. That is, youth who received treatment in diversion programs did not have significantly lower re-offence rates than youth receiving treatment while on probation or incarcerated. Although the non-significant effect sizes demonstrated a trend towards diversion leading to greater effectiveness, Lipsey concluded that the success of well-implemented and high quality treatment was not contingent on setting.

Recently, a meta-analysis directly examining diversion programs was conducted to explore different types of diversion and program-level variables associated with diversion's effectiveness (Wilson & Hoge, 2011). Forty-five studies, reporting on 73 diversion programs, were examined and the summary results indicated that diversion is more effective than the traditional justice system in reducing recidivism. However, the degree to which diversion was effective was contingent on a number of moderator variables. Study-level variables played a significant role in the effect sizes, particularly study design quality. Contrary to the overall findings, studies implementing a successful research design (e.g., random assignment, no differences between groups found post hoc, follow up greater than 12 months, diversion sample size greater than 100, etc.) reported no difference in recidivism rates between diverted youth and those traditionally processed. The authors argue that that finding should be considered with caution as the programs within these studies \((k = 6)\) are diverse and consider both intervention and
caution approaches, target different groups of youth, and provide differing services; however, they emphasize the need for higher quality studies.

While a number of program and youth-level variables were examined independently, there were strong, significant relationships between program variables and the risk level of the youth targeted by the programs. They found no significant difference in the effectiveness of caution and intervention programs unless they were grouped by the risk level targeted by each program. For low risk youth, caution programs demonstrated greater effectiveness; however, for programs providing interventions, targeting medium/high risk youth resulted in greater effectiveness than targeting low risk youth. This is in line with the RNR principles of rehabilitation, in that low risk youth should be provided fewer interventions than medium/high risk youth (Andrews & Bonta, 2010).

A similar trend was found when focusing on referral level (i.e., pre- vs. post-charge). While there was a significant relationship between referral level and effectiveness (with pre-charge programs demonstrating greater effectiveness than post-charge), pre-charge programs were considerably more effective for youth deemed low risk, whereas there was no difference in effectiveness of programs targeting medium/high risk youth according to whether they were referred prior to or after the laying of a charge.

While there was too little information to evaluate the quality, nature, and dose of the treatment services offered by diversion programs, enough information was provided to examine both the risk and responsivity principle adherence of several programs. Results indicated that programs that provided greater levels of intervention to medium/high risk youth, compared to low risk youth, and those that provided cognitive-
behavioural therapy or tailored their programs to the needs of the offender demonstrated greater reductions in recidivism than those that did not.

The authors concluded that though there was significant variability in findings, the results of the meta-analysis and previous literature examining high quality treatment interventions suggest that diversion coupled with RNR adherence would optimize the benefits of diversion and result in considerable reductions in recidivism.

Wilson and Hoge (2011) did not examine the influence of completion of the intervention diversion programs, compared to non-completion, as most studies failed to provide the recidivism rates according to completion level. Although labelling theory purports that mere diversion reduces the risk of re-offending, regardless of the level of services provided afterwards, the offender treatment literature indicates that reductions in recidivism are associated with completion of the treatment, rather than just initial enrollment. While results are contingent on the nature and integrity of the treatment offered, findings of treatment outcome studies have consistently found that successful completion of treatment is associated with greater reductions in recidivism than failure to complete or only partial completion (McGrath, Cumming, Livingston, & Hoke, 2003; Seager, Jellicoe, & Dhaliwal, 2004). In fact, studies have shown that completers have lower recidivism rates than refusers and dropouts (Seager et al., 2004). The results are mixed, however, when looking at the effects of non-completion compared to no treatment or other forms of treatment.

Some studies demonstrate no difference in recidivism rates between non-completers and no treatment (Golden, 2002; McGrath et al., 2003), while others show an increase in recidivism for non-completers (Huebner & Cobbina, 2007; McGuire, Bilby,
Hatcher, Hollin, Hounsome, & Palmer, 2008). McMurran & Theodosi (2007) conducted a meta-analysis examining the recidivism rates of offenders who differed in their completion level of cognitive behavioural therapy. From 16 studies they concluded that those who successfully completed the treatment had significantly lower recidivism rates than those who went untreated (these offenders were never given the opportunity to be treated). More interestingly, they also found that offenders who failed to complete the treatment program had a significantly higher likelihood of re-offending than those who went untreated, suggesting that failing to complete treatment may have a detrimental effect on offenders.

There are a number of theories put forward to explain why some offenders fail to complete treatment while others do not. One theory purports that the factors associated with non-completion of treatment are the same as those associated with recidivism. Some of these factors include higher risk scores on empirically validated scales (Browne, Foreman, & Middleton, 1998; Craissati & Beech, 2001; Wormith & Olver, 2002), more impulsivity (McGrath et al., 2003), previous incarceration and lengthier criminal histories (Browne et al., 1998; Huebner & Cobbina, 2007) and less education (Wormith & Olver, 2002). Other theories focus primarily on the motivation of the offender. These theories have led to the development of motivational interviewing, where strategies are developed to motivate and sustain motivation in offenders in order to increase likelihood of completing and benefiting from treatment (Miller, 1983). This leads to a focus on assessing offenders' treatment attitudes prior to treatment referral in an effort to gage whether they will be receptive to services (Wormith & Olver, 2002). One study has gone as far as to conclude that participation in treatment does not reduce recidivism rates for
those who complied, but merely enables motivated offenders to demonstrate their commitment to not reoffend (Seager et al., 2004).

**The Ottawa Community Youth Diversion Program (OCYDP)**

The Ottawa Community Youth Diversion Program provides diversion services to youth on behalf of the Boys and Girls Club of Ottawa and operates under the Ministry of Children and Youth Services (MCYS). It is a designated EJM and EJS program as it accepts referrals from the Ottawa Police Service (OPS) as well as the Ottawa Crown Attorney’s office. This voluntary program is in line with the risk, need and responsivity principles as they aspire to match risk level and need areas with the appropriate intervention. It primarily targets medium risk youth in an attempt to avoid those who would have normally been counseled and released. Youth are required to be between the ages of 12 and 17, accept responsibility for the index offence, and consent to participate to be accepted into the program. An advisory committee made up of members of the Ottawa Police Service, MCYS Probation, stakeholder agencies, and academia guides OCYDP on program operations.

The OCYDP provides a screening version of the Youth Level of Service/Case Management Inventory (YLS/CMI; Hoge & Andrews, 2002), a risk assessment tool, to police officers to help determine eligibility of youth who have allegedly committed an offence. If the youth appears eligible, the case is referred to a designated intake officer with the OPS who is the primary point of contact for the program. They determine whether a referral is appropriate and forward all paperwork to the program. Referrals from Crown Prosecutors rely heavily on professional discretion and provincial guidelines
that primarily focus on the nature of the offence. Once they determine eligibility, they forward the information to OCYDP.

The OCYDP is based on a case management, brokerage model. An individual action plan is created for each youth that must include a measure of accountability (e.g., letter of apology), interventions designed to lower risk factors (e.g., counselling), and achievable goals. Assigned caseworkers assess the youth using the YLS/CMI and make referrals to community agencies based on their identified criminogenic risk/need areas. Referrals to one of 25 agencies include, but are not limited to, one-on-one counselling, peer mediation, education/information sessions, or restorative justice projects. The youth must agree to the plan to continue in the program; otherwise, their file is returned to the police or prosecution, who retain full discretion over the case. Once the intervention is complete, or the youth decides to withdraw, a compliance report, consisting of presenting issues, intervention completion, and the youth’s general attitude, is completed and sent to the source of the referral (i.e., OPS or Crown Attorney). Youth files remain open for 4-12 weeks, depending on the length and nature of the intervention.

Summary and Purpose of Present Study

Given that 58% of youth accused of committing an offence were diverted from the justice system in 2009/10, it is important to evaluate the effectiveness of diversion services. A number of goals have been cited in support of the development of diversion programs (e.g., caseload and financial relief from justice system, better access to treatment services, celerity in processing); however the ability of alternative programs to reduce recidivism continues to be a prominent argument in favour of diversion (Polk, 1984).
Despite the growing popularity of diversion programs for youth, the evaluation literature investigating diversion’s effect on recidivism has been mixed. While a number of studies have noted reductions in recidivism attributed to diversion services compared to the traditional justice system (Davidson II et al., 1987; King et al., 2001; Myers et al., 2000; Quay & Love, 1977; Regoli et al., 1981), numerous other studies have reported no difference in re-offence rates (Carney & Buttell, 2003; Patrick et al., 2004; Severy & Whitaker, 1982; Wiebush, 1993). Only recently has a meta-analysis been conducted examining the effectiveness of youth diversion programs with an emphasis on differing program and study variables associated with its success. The authors concluded that youth diversion was more effective than the traditional justice system in reducing recidivism, however, they noted that there was considerable variation in these results according to both program and study design. In light of this finding, it is essential that individual diversion programs are carefully evaluated.

Diversion has also received indirect support from the literature on the effects of traditional criminal justice processing. Studies examining the recidivism rates of youth dealt within the conventional justice system have demonstrated that exposure to judicial interventions results in increased recidivism rates (Bernburg and Krohn, 2003; Huizinga and Henry, 2008; Huizinga et al., 2003; McAra & McVie, 2007). In fact, some studies noted that the further the youth were processed in the system, the higher the likelihood of recidivism (Huizinga et al., 2003; McAra & McVie, 2007).

The purpose of the present study is to examine the relationship between disposition type (i.e., diversion through the OCYDP and youth probation), completion status (i.e., successful, partial or non-completion) and recidivism rates. With roughly 350
youth being diverted to the OCYDP a year, it is important to investigate whether the goals of the project are being achieved, namely whether those referred to the program demonstrate lower recidivism rates than those receiving routine criminal justice services.

To examine this objective, youth diverted to the OCYDP were matched with a sample of youth sentenced to probation and recidivism rates were analyzed. The analysis was also broken down by the completion level of the youth referred to the OCYPD.

**Research Questions**

1) Do recidivism rates differ according to disposition type (i.e., diversion or youth probation)?

2) Are the beneficial effects, if any, of diversion consistent for all youth referred to the OCYDP, regardless of completion level (i.e., successful, partial or non-completion)?

**Hypotheses**

Based on prior literature examining the effectiveness of youth diversion and treatment compliance, the detrimental effects of justice system processing, and the effectiveness of the risk, need, and responsivity principles, this study tested the following hypotheses:

1) Youth referred to the OCYDP will have lower recidivism rates than youth sentenced to probation

2) The greater the completion of the OCYDP (i.e., closer to successful completion), the greater the reduction in recidivism compared to youth sentenced to probation

3) Youth who successfully completed the OCYDP will have lower recidivism rates than youth who partially completed or failed to complete the OCYDP

**Method**

**Sample**
The diversion sample consists of a 170 randomly sampled youth referred post-charge to the OCYDP between January 1st 2007 and December 31st 2009. This sample was matched with 209 youth sentenced to a period of probation in the city of Ottawa during the same time frame. The total sample size is 379.

Measures

**Youth Level of Service/ Case Management Inventory (YLS/CMI).** The Youth Level of Service/ Case Management Inventory (YLS/CMI; Hoge & Andrews, 2002) is designed to assess risk and need factors in youth offenders. This actuarial risk assessment tool is rooted in the risk, need, and responsivity model of offender rehabilitation (Andrews et al., 1990a) and considers only empirically-validated risk factors. It is psychometrically sound and provides a link between criminogenic needs and the development of a case plan.

The YLS/CMI is composed of seven sections. The first section consists of 42 risk/need items organized into eight categories: prior/current offenses, family circumstances/parenting, education/employment, peer relations, substance abuse, leisure/recreation, personality/behaviour, and attitudes/orientation (Hoge & Andrews, 2002). Relevant risk and need factors are identified and summarized in Part two, resulting in a Total Risk/Need score. Four categories of overall risk are provided based on a normative sample of youth offenders: Low, moderate, high, and very high (Hoge & Andrews, 2002). These overall risk levels reflect the likelihood of the youth re-offending in the future. Part three provides a section where other factors may be considered (e.g., escape history) when developing the case plan. Parts four to seven allow the assessor to
use discretion in assigning risk level, specify the contact level (e.g., medium supervision), outline targets of service according to need areas, and review progress.

Previous research with youth offenders has demonstrated the psychometric integrity of the YLS/CMI. Rowe (2002) reported good internal consistency estimates for the YLS/CMI subscales with alpha coefficient values ranging from .60 to .82, with a median value of .72. An alpha coefficient of .91 for the Total Risk/Need score was also reported (Rowe, 2002). Inter-rater agreement was assessed by Marczyk, Heilbrun, Lander, and DeMatteo (2003), who reported an intraclass correlation coefficient (ICC) of .82 for a single rater and .89 for the average of the two raters for the Total Risk/Need score based on 95 assessments independently coded by both raters.

The YLS/CMI has also demonstrated good construct validity, with results indicating moderate to high correlations with other assessment measures (Poluchowicz, Jung, & Rawana, 2000; Schmidt, Hoge, & Robertson, 2002). For example, Rowe (2002) assessed 408 young offenders from file information and reported a correlation of .82 between the total YLS/CMI score and the Psychopathy Checklist: Youth Version (PCL:YV; Forth, Kosson, & Hare, 2003). Moderate to high correlations were also presented for the Childhood & Adolescent Taxon Scale (Quinsey, Harris, Rice & Cormier, 1998), Disruptive Disorder Rating Scale (Barkley & Murphy, 1998), and the Conduct Disorder Symptom Scale (Barkley & Murphy, 1998). Jung and Rawana (1999) also provided support for criterion validity by comparing youth offenders to a sample of high school students.

The predictive validity of the Total YLS/CMI Risk/Need score and individual subscales has been demonstrated on a number of samples (Costigan & Rawana, 1999;
Gossner & Wormith, 2007; Hoge & Andrews, 1996; Holsinger, Lowenkamp, & Latessa, 2006; Jung & Rawana, 1999; Rowe, 2002). For example, Schmidt, Campbell, and Houlding (2011) followed a group of adolescent offenders for 10 years and reported that the YLS/CMI total score was a strong predictor of nonviolent offences (AUCs = .73) and a moderate predictor of violent recidivism (AUCs = .65) for male offenders. The predictive validity of the subscales demonstrated weak to strong predictive accuracy, ranging from AUCs of .52 (Substance Abuse) to .74 (Attitudes/Orientation).

Recidivism. Recidivism was defined as any conviction occurring after completion of the OCYDP or probation. For youth who only partially or failed to complete the OCYDP, follow-up commenced when their involvement with the OCYDP was severed according to when their completion status was officially recorded. Recidivism information was gathered from the Ministry of Children and Youth Services (MCYS). The re-contact records maintained by the MCYS identify any new legal documents occurring in Ontario that place youth under the supervision of Youth Justice/Correctional Services. This excludes police contacts or arrests and focuses on formal action taken by the MCYS regarding new offences. For simplicity, recidivism will also be referred to as reconviction, however, it is important to note that none of the youth referred to the OCYDP were convicted for their index offence.

Recidivism was identified as either general or violent. Examples of offences coded as violent include any offences against a person (e.g., assault, uttering threats, sexual offences) or weapon offences. Recidivism was coded for two time frames: within the first year of completion of probation/OCYDP and any time within the follow-up period (i.e., between program/probation completion and June 15th, 2011).
Time to reconviction was also examined to investigate whether disposition type influenced the speed at which youth were reconvicted. Months to first general conviction and months to first violent conviction were coded and used for survival analysis.

**Procedure**

A retrospective cohort design was utilized to examine data on the outcome of referral to the OCYDP compared to a sentence of probation. This design permitted the investigation of archival records of youth referred to the OCYDP and probation in order to examine any differences in recidivism rates.

As mentioned, a random sample of diverted youth was drawn for which to create a comparison group of youth sentenced to a period of probation. Originally, 250 youth referred to the OCYDP were identified. Due to confidentiality protocols, the MCYS was responsible for providing a list of matched youth sentenced to a period of probation in the city of Ottawa, Ontario, between January 2007 and December 2009. They were able to provide 209 youth that matched 170 diverted youth, resulting in a total sample size of 379. Youth were matched on risk level based on the YLS/CMI, gender, and age. Unfortunately, it was not possible to match youth on type or nature of index offence or ethnicity.

These matching variables were chosen based on file access and the strength of their relationship with recidivism according to previous literature. Matching assists in controlling for known confounding variables and ensuring that these non-randomized groups are comparable on specific factors. Variables that the youth were not matched on (due to lack of information) were controlled for in the later stages of analysis.
For the diverted youth, demographic information (e.g., age, gender), index offence, risk level, and program participation information was gathered from the electronic records available through the OCYDP in-house database. Through the Probation Services database, demographic information, index offence, risk level, and legal document information was gathered for the youth in the comparison group.

Once both the diversion and comparison groups were identified, follow-up recidivism information was collected from the MCYS. In order to ensure confidentiality, all youth in the study were given identification numbers that cannot be linked to their name or offence. These numbers were used for data analysis purposes and, therefore, follow-up information is not associated with their names. All of the data was entered into an SPSS database and cleaned for quality assurance purposes.

A court order was obtained to gain access to the files of both samples as well as re-contact information. This was followed by a research proposal presented and accepted by the MCYS.

Analysis

In order to explore whether there were any differences between samples, chi-square and independent t-tests were first conducted. Due to the categorical nature of the dependent variable (reconvicted vs. not reconvicted), multivariate logistic regression analysis was then used to examine how well disposition type (i.e., diversion versus probation) and program completion (i.e., successful versus partial versus non-completion) predict recidivism. Logistic regression allows the prediction of which category a person is likely to belong to (e.g., recidivist versus non-recidivist) given a variable of interest (e.g., disposition type; Kleinbaum, Kupper, Nizam, & Muller, 2008). Dichotomous
outcome variables violate the assumption of linearity; therefore, the use of logarithm transformations made the form of the relationship linear, while leaving the relationship itself non-linear (Kleinbaum et al., 2008).

The models were fitted to the data by maximum likelihood and the model’s adequacy of fit was verified, including consideration of relevant regression diagnostic indices (e.g., linearity, independence; Kleinbaum et al., 2008). In order to control for the influence of other factors, variables that were not included in the matching process (e.g., nature of index offence) were included in the models along with the independent variable of interest (i.e., disposition type or completion level). All categorical independent variables were dummy coded and the reference group (coded as 0) is defined for every table. Recidivism as the outcome was coded as 1 (reconvicted) or 0 (not reconvicted).

Due to the variable nature of the follow-up time, survival analysis was also used to examine the degree to which disposition type and completion status predicted time to reconviction over the entire follow-up period. Survival analysis is similar to logistic regression in that it predicts the relationship between a variable and an outcome; however, the outcome is time to an event, rather than the event itself. Cox Proportional Hazards modeling was chosen as it can control for differences in characteristics between the two groups (e.g., diversion and probation) and considers variable lengths of follow-up (Kleinbaum & Klein, 2005). It can also manage right-censored data, allowing for the inclusion of subjects who “survive” the follow-up period (i.e., non-recidivists; Cox, 1972; Kleinbaum & Klein, 2005).

An adjusted odds ratio (adjusted for the influence of the other variables) of 1.00 indicates no difference in recidivism between the diversion group and the probation
group. Unless otherwise specified, values from 0 to 0.999 suggest that probation (or the group coded as 1) is more effective than diversion, whereas values from 1.00 to infinity indicate that diversion (or the group coded as 0) is more effective in preventing recidivism.

Results

Sample Descriptives

The sample in this study consists of 379 matched youth, 170 diverted from the justice system to the OCYDP and 209 sentenced to a period of probation. Table 1 provides a comparison between diverted and probation youth on gender, age, risk level, and nature and type of index offence. As expected, there were no significant between-group differences for gender \(x^2(1) = 2.078, p = .149\], age \(t(436) = -1.263, p = .207,\) two-tailed], and risk level \(t(436) = -1.119, p = .264,\) two-tailed]. Most youth were male, 15 years old, and medium risk. For the diversion sample, 48 youth were assessed as low risk, 106 as medium, and 14 as high. For the probation sample, 51 were low risk, 139 were medium risk, and 19 were high risk.

Significant differences between groups were observed for type of index offence \(x^2(6) = 90.991, p < .001\] and nature of index offence \(x^2(1) = 34.826, p < .001\]. For nature of index offence, youth on probation had a higher percentage of violent index offences. An examination of the standardized residuals for type of index offence indicated that differences between samples existed for against-person offences (probation had higher incidents), mischief (diversion had higher incidents), and ‘other offences’ (e.g., traffic violations, communication for the purpose of prostitution; probation had higher incidents).
Table 1

Demographic Variables for Diversion and Probation Samples

<table>
<thead>
<tr>
<th>Variable</th>
<th>Disposition Type</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Diversion</td>
<td>Probation</td>
</tr>
<tr>
<td></td>
<td>( n = 170 )</td>
<td>( n = 209 )</td>
</tr>
<tr>
<td></td>
<td>( n(%) )</td>
<td>( n(%) )</td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
<td>127(74.7)</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>43(25.3)</td>
</tr>
<tr>
<td>Type of Index Offence</td>
<td>Against Person (e.g., assault, sexual offence)</td>
<td>30(17.6)</td>
</tr>
<tr>
<td></td>
<td>Weapon</td>
<td>3(1.8)</td>
</tr>
<tr>
<td></td>
<td>Property</td>
<td>71(41.8)</td>
</tr>
<tr>
<td></td>
<td>Mischief</td>
<td>42(24.7)</td>
</tr>
<tr>
<td></td>
<td>Drug</td>
<td>14(8.2)</td>
</tr>
<tr>
<td></td>
<td>Fraud</td>
<td>4(2.4)</td>
</tr>
<tr>
<td></td>
<td>Other (e.g., traffic offence, false fire alarm)</td>
<td>6(3.5)</td>
</tr>
<tr>
<td>Nature of Index</td>
<td>Violent</td>
<td>34(20.0)</td>
</tr>
<tr>
<td></td>
<td>Non-violent</td>
<td>136(80.0)</td>
</tr>
<tr>
<td>Age</td>
<td>M(SD)</td>
<td>15.61(1.293)</td>
</tr>
<tr>
<td>Total YLS score</td>
<td>M(SD)</td>
<td>12.76(6.216)</td>
</tr>
</tbody>
</table>

* \( p < .001 \).

Additional information for diverted youth. Due to increased access to OCYDP files, there was considerably more information available for diverted youth. Table 2 provides a breakdown of treatment referrals, completion status, and referral agency. The majority of youth successfully completed the OCYDP, indicating that they successfully completed each treatment referral according to their assigned caseworker or the independent agency. Youth were considered partial completers if they completed at least one of their referrals (e.g., one of two referrals) and non-completers if they failed to follow through with all referrals or only completed a portion of each referral.
Table 2

_Completion Level, Treatment Participation, and Referral Agency for Diverted Youth (n = 170)_

<table>
<thead>
<tr>
<th>Variable</th>
<th>n(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completion Level</td>
<td></td>
</tr>
<tr>
<td>Successfully Completed</td>
<td>115(67.6)</td>
</tr>
<tr>
<td>Partially Completed</td>
<td>21(12.4)</td>
</tr>
<tr>
<td>Non-completed</td>
<td>29(17.1)</td>
</tr>
<tr>
<td>Youth/Parents Refused</td>
<td>2(1.2)</td>
</tr>
<tr>
<td>Lost Contact/Left Jurisdiction</td>
<td>3(1.7)</td>
</tr>
<tr>
<td>Treatment Referral^a</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>165(100)</td>
</tr>
<tr>
<td>No</td>
<td>-</td>
</tr>
<tr>
<td>Treatment Types^b</td>
<td></td>
</tr>
<tr>
<td>Counselling</td>
<td>106(63.9)</td>
</tr>
<tr>
<td>Employment Support</td>
<td>10(6.0)</td>
</tr>
<tr>
<td>Restorative Justice</td>
<td>109(65.7)</td>
</tr>
<tr>
<td>Recreational Support</td>
<td>21(12.7)</td>
</tr>
<tr>
<td>Drug Agency</td>
<td>71(42.8)</td>
</tr>
<tr>
<td>Educational Support</td>
<td>1(0.6)</td>
</tr>
<tr>
<td>Referral Agency</td>
<td></td>
</tr>
<tr>
<td>Ottawa Provincial Crown</td>
<td>147(86.4)</td>
</tr>
<tr>
<td>Child Welfare Services</td>
<td>4(2.4)</td>
</tr>
<tr>
<td>Federal Crown</td>
<td>12(7.1)</td>
</tr>
<tr>
<td>Probation Services</td>
<td>7(4.1)</td>
</tr>
</tbody>
</table>

^a excludes those who refused to participate or left the jurisdiction (n = 5). ^b not mutually exclusive as youth were referred to several services

_Treatment participation in the OCYDP._ All youth received at least one treatment referral, with the majority being referred to counselling or restorative justice. Youth were referred to an average of 1.92 services, which ranged from one to four. Number of referrals was also examined according to risk level, which provided mild support for OCYDP’s adherence to RNR. Low risk youth (n = 48) were referred to an average of 1.30 services (ranging from one to three), whereas medium risk youth (n = 106) were referred to an average of 2.03 and high risk youth (n = 16) to an average of 2.63 services, both ranging from one to four. Using Bonferroni’s correction, there was a
significant difference identified between all three means ($F(2) = 37.758, p < .001$) at the $p < .05$ level.

Youth were referred to counselling for a variety of issues and to a number of organizations, including Elizabeth Fry Society, Carlington Community and Health Services, Wabano Centre for Aboriginal Health, John Howard Society, and private therapists. Restorative justice was considered any type of community service, as it typically involved physically repairing the harm caused by the offence (e.g., cleaning up graffiti). This was often done through the Salvation Army or the City of Ottawa. Youth could also have been referred to a Collaborative Justice Program or the Boys and Girls Club program requiring youth to write an apology essay.

Drug counselling was provided by a number of agencies, but more prominently the Royal Ottawa Hospital (e.g., Early Intervention Program), Rideauwood, or the Dave Smith Youth Treatment Centre. Employment and education services are also offered through the Boys and Girls Club and the City of Ottawa to provide youth access to tutors as well as work on employment skills. Recreational services are also offered primarily through the Boys and Girls Club of Ottawa in order to involve youth in organized activities.

All the youth in the diversion sample were referred to the OCYDP after the laying of a charge as an extrajudicial sanction. The majority of youth were referred by the Provincial Crown. Referrals from the Federal Crown were for drug offences only and youth referred by Child Welfare Services were solely from Quebec, where child welfare organizations (e.g., Centre Jeunesse de la Monteregie) help manage youth offenders. Youth referred from Probation Services were often from other jurisdictions that use
Probation Services to manage their diversion referrals; none of these youth were convicted for the index offence or were being supervised on probation.

_Sample descriptives according to OCYDP completion._ A comparison of diverted youth according to completion status, shown in Table 3, was conducted to identify significant differences between groups. There were no significant differences according to index type ($\chi^2(12) = 11.917, p = .452$), nature of index ($\chi^2(2) = 1.190, p = .551$), and age ($F(2) = 729, p = .484$, two-tailed). There were, however, significant differences found for gender ($\chi^2(2) = 7.393, p = .025$) and total risk score ($F(2) = 8.351, p = .001$, two-tailed). Examination of the standardized residuals for gender indicated that there was a significantly higher proportion of males who successfully completed OCYDP than females compared to both partial and non-completion groups. Using Bonferroni’s correction, there were significant differences identified between the risk level of youth who successfully completed the OCYDP and youth who only partially completed at $p = .05$, as successful completers scored lower on the YLS/CMI. There was no difference between successful completers and non-completers or partial completers and non-completers.
Table 3

Demographic Variables According to Completion Level for Diverted Youth

<table>
<thead>
<tr>
<th>Variable</th>
<th>Successful Completion</th>
<th>Partial Completion</th>
<th>Non-completion</th>
<th>χ²</th>
<th>2 X 7.393*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>94(81.7)</td>
<td>13(61.9)</td>
<td>18(62.1)</td>
<td>7.393*</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>21(18.3)</td>
<td>8(38.1)</td>
<td>11(37.9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Index Offence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11.917</td>
</tr>
<tr>
<td>Against Person (e.g., assault, sexual offence)</td>
<td>18(15.7)</td>
<td>6(28.6)</td>
<td>5(17.2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weapon</td>
<td>3(2.6)</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Property</td>
<td>43(37.4)</td>
<td>12(57.1)</td>
<td>16(55.2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mischief</td>
<td>31(27.0)</td>
<td>2(9.5)</td>
<td>5(17.2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drug</td>
<td>11(9.6)</td>
<td>1(4.8)</td>
<td>2(6.9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fraud</td>
<td>4(3.5)</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (e.g., traffic offence, false fire alarm)</td>
<td>5(4.3)</td>
<td>-</td>
<td>1(3.4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nature of Index</td>
<td></td>
<td></td>
<td></td>
<td>1.190</td>
<td></td>
</tr>
<tr>
<td>Violent</td>
<td>94(81.7)</td>
<td>15(71.4)</td>
<td>23(79.3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-violent</td>
<td>21(18.3)</td>
<td>6(28.6)</td>
<td>6(20.7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>M(SD)</td>
<td>M(SD)</td>
<td>M(SD)</td>
<td>F</td>
<td>.729</td>
</tr>
<tr>
<td>Risk score</td>
<td>11.61(5.82)a</td>
<td>16.62(4.97)b</td>
<td>14.14(7.31)ab</td>
<td>7.193**</td>
<td></td>
</tr>
</tbody>
</table>

Note. Significant differences lie between means/proportions with different subscripts. *p < .05. **p < .001.

Variables with identified differences between samples were used as control variables for both logistic and Cox regression models, therefore, the ability of these variables to predict recidivism was examined. Gender was a significant predictor of recidivism (β = .538, OR = 1.713, p = .035) as was total risk score derived from the YLS/CMI (β = .054, OR = 1.056, p < .001). Type of index offence was a significant predictor of violent recidivism (β = .556, OR = 1.774, p = .040), but not general recidivism (β = -.032, OR = .968, p = .887).
Recidivism. Recidivism, defined as reconviction, for both disposition samples was compared. Table 4 outlines the recidivism rates of the diversion and probation samples at one year and throughout the entire follow-up period (referred to as ever). The average follow-up period was 33 months (ranging from 18 to 49) for diverted youth and 25 months (ranging from 12 to 44) for youth on probation.

There were no significant differences between recidivism rates of the diversion and probation samples for general or violent offences after one year. There were, however, significant differences in reconvictions throughout the entirety of the follow-up period. For both general and violent offences, youth referred to the OCYDP had lower reconviction rates than youth sentenced to a period of probation for the full follow-up period.

Table 4

Recidivism Rates According to Disposition Type

<table>
<thead>
<tr>
<th>Disposition Type</th>
<th>Diversion</th>
<th>Probation</th>
<th>$x^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$n = 170$</td>
<td>$n = 209$</td>
<td></td>
</tr>
<tr>
<td><strong>One Year</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General</td>
<td></td>
<td></td>
<td>1.528</td>
</tr>
<tr>
<td>Yes</td>
<td>31(18.2)</td>
<td>49(23.4)</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>139(81.8)</td>
<td>160(76.6)</td>
<td></td>
</tr>
<tr>
<td>Violent</td>
<td></td>
<td></td>
<td>2.131</td>
</tr>
<tr>
<td>Yes</td>
<td>14(8.2)</td>
<td>27(12.9)</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>156(91.8)</td>
<td>182(87.1)</td>
<td></td>
</tr>
<tr>
<td><strong>Ever</strong></td>
<td></td>
<td></td>
<td>5.606*</td>
</tr>
<tr>
<td>General</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>47(27.6)</td>
<td>82(39.2)</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>123(72.4)</td>
<td>127(60.8)</td>
<td></td>
</tr>
<tr>
<td>Violent</td>
<td></td>
<td></td>
<td>6.541*</td>
</tr>
<tr>
<td>Yes</td>
<td>21(12.4)</td>
<td>47(22.5)</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>149(87.6)</td>
<td>162(77.5)</td>
<td></td>
</tr>
</tbody>
</table>

*p < .05.
The recidivism rates of the diverted youth were also examined according to completion status (Table 5). For both general and violent offences for one year and throughout the follow-up period, there were significant differences in reconviction rates between groups. An examination of the standardized residuals indicated that, for all outcomes, youth who failed to complete the OCYDP had significantly higher recidivism rates than successful and partial completers. There were no differences in reconviction rates found between successful and partial completers for any outcome.

Table 5

Reconviction Rates of Diverted Youth According to Completion Level

<table>
<thead>
<tr>
<th>Completion Level</th>
<th>Successful Completion</th>
<th>Partial Completion</th>
<th>Non-completion</th>
<th>(x^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(n = 115)</td>
<td>(n = 21)</td>
<td>(n = 29)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>One year</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>17(14.8)(_a)</td>
<td>1(4.8)(_a)</td>
<td>13(44.8)(_b)</td>
<td>16.804**</td>
</tr>
<tr>
<td>No</td>
<td>98(85.2)</td>
<td>20(95.2)</td>
<td>16(55.2)</td>
<td></td>
</tr>
<tr>
<td>Violent</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>7(6.1)(_a)</td>
<td>0(_a)</td>
<td>7(24.1)(_b)</td>
<td>11.949*</td>
</tr>
<tr>
<td>No</td>
<td>108(93.9)</td>
<td>21(100)</td>
<td>22(75.9)</td>
<td></td>
</tr>
<tr>
<td><strong>Ever</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>23(20.0)(_a)</td>
<td>6(28.6)(_a)</td>
<td>17(58.6)(_b)</td>
<td>17.186**</td>
</tr>
<tr>
<td>No</td>
<td>92(80.0)</td>
<td>15(71.4)</td>
<td>12(41.4)</td>
<td></td>
</tr>
<tr>
<td>Violent</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>10(8.7)(_a)</td>
<td>3(14.3)(_a)</td>
<td>8(27.6)(_b)</td>
<td>7.493*</td>
</tr>
<tr>
<td>No</td>
<td>105(91.3)</td>
<td>18(85.7)</td>
<td>21(72.4)</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Proportions in the same row with different subscripts differ significantly at the specified level.
*\(p < .05\). **\(p < .001\).

Research Question One

The first research question addressed whether reconviction rates differ according to disposition type. Table 6 presents the results of the logistic regression analysis examining
the ability of disposition type (i.e., diversion or probation) to predict recidivism. The logistic regression model with general reconvictions as the outcome confirmed the results of the chi-square analysis of recidivism rates by disposition type. For both general and violent reconviction at one year, disposition type and nature of index offence (in the case of violent reconviction) were poor predictors of recidivism and both tests of the overall model were non-significant \[x^2(1) = 1.541, p = .215\] and \[x^2(2) = 2.623, p = .269\], respectively.

Table 6

Summary of Logistic Regression Analyses Predicting Reconviction at One Year By Disposition Type \((n = 379)\)

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Predictor</th>
<th>(\beta)</th>
<th>SE(\beta)</th>
<th>(p)</th>
<th>Adj. Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>Disposition(^a)</td>
<td>.317</td>
<td>.257</td>
<td>.217</td>
<td>1.373</td>
</tr>
<tr>
<td>Violent</td>
<td>Disposition(^a)</td>
<td>.432</td>
<td>.363</td>
<td>.234</td>
<td>1.541</td>
</tr>
<tr>
<td></td>
<td>Nature of Index(^b)</td>
<td>.235</td>
<td>.351</td>
<td>.502</td>
<td>1.266</td>
</tr>
</tbody>
</table>

Note. Adj. Odds Ratio = Adjusted Odds Ratio. For one-year general reconviction, Cox & Snell \(R^2 = .004\). For one-year violent reconviction, Cox & Snell \(R^2 = .007\).

\(^a\)Reference group is OCYDP. \(^b\)Reference group is non-violent.

In order to assess differences in the speed at which youth re-offended, Cox survival analysis was then conducted to account for variable follow-up times. The dependent variable was time to reconviction throughout the entire follow-up period. As shown in Table 7, type of disposition was significantly related to time to reconviction for both general and violent offences. In both cases, being on probation, rather than diversion, increased the monthly risk of reconviction by approximately 2 times (see Figure 1 and Figure 2). The tests of the overall models for general \([x^2(1) = 10.723, p = .001]\) and violent outcomes \([x^2(2) = 12.780, p = .002]\) were both significant.
Table 7

Summary of Cox Survival Analyses Predicting Time to Reconviction by Disposition Type (n = 379)

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Predictor</th>
<th>β</th>
<th>SEβ</th>
<th>p</th>
<th>Adj. Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>Disposition&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.596</td>
<td>.185</td>
<td>.001</td>
<td>1.815**</td>
</tr>
<tr>
<td>Violent</td>
<td>Disposition&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.723</td>
<td>.280</td>
<td>.010</td>
<td>2.062*</td>
</tr>
<tr>
<td></td>
<td>Nature of Index&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.369</td>
<td>.256</td>
<td>.149</td>
<td>1.446</td>
</tr>
</tbody>
</table>

<sup>a</sup>Reference group is OCYDP. <sup>b</sup>Reference group is non-violent.
*p < .05. **p < .001.

Figure 1. Survival curve representing time to reconviction as a function of disposition type.
Although there were no differences in recidivism identified between diverted and probation groups at one year, longer follow-up periods, as indicated by the survival analysis, demonstrated that youth referred to the OCYDP were reconvicted at a slower rate than youth on probation. As this analysis combined all diverted youth, the relationship between disposition type and recidivism as a function of OCYDP completion was examined.

Samples were first assessed to ensure that there were no significant differences between the youth in each completion level and the probation sample. When comparing

**Figure 2.** Survival curve representing time to violent reconviction as a function of disposition type.
partial completers to the probation sample, no significant differences were found for
gender, age, risk score, or nature of index offence. For non-completers compared to
probationers, only the nature of index offence \( \chi^2(1) = 8.387, p = .004 \) was significantly
different, as youth on probation had higher incidents of violent index offences. Youth
were equivalent on all other variables. The comparison between successful completers
and probation revealed significant differences according to risk score \( t(322) = -2.401, p =
.017, \) two-tailed], gender \( \chi^2(1) = 5.063, p = .024 \), and nature of index offence \( \chi^2(1) =
30.218, p < .001 \). The successful completers were lower risk, more likely to be male, and
had fewer violent index offences. Therefore, these variables were entered into the logistic
and Cox regression models as control variables.

Table 8 presents the results of the logistic regression models examining the
influence of disposition type on recidivism as a function of diversion completion level.
Each level of completion was dummy coded so that each variable represents the
completion level (coded as 1) in comparison to the probation sample (reference group).
This dummy coding changes the interpretation of the odds ratio from the previous
analysis. Odds ratios between 0 and .999 represent greater effectiveness for diversion and
odds ratios from 1.00 to infinity imply greater effectiveness for youth on probation.

The first model indicates that, even with samples matched on risk score, gender,
and age, youth who failed to complete the OCYDP were more than twice as likely to be
reconvicted for a general offence compared to youth on probation at one year. There
were, however, no differences in one-year reconviction rates according to disposition
type if youth successfully or partially completed the diversion program. The Hosmer-
Lemeshow test revealed a good fit of the model to the data, \( \chi^2(8) = 7.489, p = .485 \), and
the test of the overall model was significant, $\chi^2(5) = 29.446, p < .001$. For violent recidivism, similar to the results for hypothesis one, there were no differences in recidivism rates between any level of OCYDP completion and the probation sample when holding all other variables constant. As a number of control variables were significant, the goodness-of-fit of the model as measured by the Hosmer-Lemeshow test was satisfactory, $\chi^2(8) = 9.100, p = .334$, and the test of the overall model was significant, $\chi^2(6) = 25.521, p < .001$.

Table 8

Summary of Logistic Regression Analyses Predicting Reconviction at One Year by Disposition Type as a Function of OCYDP Completion (n = 374)

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Predictor</th>
<th>$\beta$</th>
<th>SE$\beta$</th>
<th>$p$</th>
<th>Adj. Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>Successful Completion</td>
<td>-.541</td>
<td>.318</td>
<td>.088</td>
<td>.582</td>
</tr>
<tr>
<td></td>
<td>Partial Completion</td>
<td>-1.915</td>
<td>1.042</td>
<td>.066</td>
<td>.147</td>
</tr>
<tr>
<td></td>
<td>Non-completion</td>
<td>1.052</td>
<td>.424</td>
<td>.013</td>
<td>2.863*</td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td>.719</td>
<td>.325</td>
<td>.027</td>
<td>2.052*</td>
</tr>
<tr>
<td></td>
<td>Risk</td>
<td>.053</td>
<td>.018</td>
<td>.033</td>
<td>1.055*</td>
</tr>
<tr>
<td>Violent</td>
<td>Successful Completion</td>
<td>-.746</td>
<td>.464</td>
<td>.108</td>
<td>.474</td>
</tr>
<tr>
<td></td>
<td>Partial Completion</td>
<td>-19.240</td>
<td>8543.517</td>
<td>.998</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Non-completion</td>
<td>.973</td>
<td>.519</td>
<td>.061</td>
<td>2.647</td>
</tr>
<tr>
<td></td>
<td>Nature of Index</td>
<td>.379</td>
<td>.368</td>
<td>.303</td>
<td>1.461</td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td>1.353</td>
<td>.509</td>
<td>.008</td>
<td>3.870*</td>
</tr>
<tr>
<td></td>
<td>Risk</td>
<td>.045</td>
<td>.023</td>
<td>.051</td>
<td>1.046</td>
</tr>
</tbody>
</table>

Note. Adj. Odds Ratio = Adjusted Odds Ratio. For one year general reconviction, Cox & Snell $R^2 = .076$. For one year violent reconviction, Cox & Snell $R^2 = .066$.

aReference group is probation. bReference group is female. cReference group is non-violent.

* $p < .05$.

None of the youth who partially completed the OCYDP were reconvicted for a violent offence within one year of program completion. SPSS cannot correctly compute logistic regression coefficients unless all combinations of the outcome are sampled; if done, SPSS creates coefficients with large standard errors that are non-interpretable (Field, 2009). This occurred within the partial completers coefficient in the model.
specifying violent reconviction as the outcome variable. This variable was left as is, as combining two of the three categories would obscure the relationships between variables that were able to sample all combinations of outcomes (i.e., successful completers and non-completers). For this reason, the relationship between partially completing the diversion program and violent recidivism cannot be accurately estimated from this data.

Cox survival analysis was then conducted to examine whether the differing levels of OCYDP completion are associated with differences in time to reconviction through the entire follow-up period between diversion and probation samples (Table 9). For general reconviction, when holding all other variables constant, there were significant differences in recidivism rates for both successful completers and non-completers compared to probation. Youth on probation were twice as likely to be reconvicted each month as successful completers (see Figure 3) and were nearly two times less likely to be reconvicted each month compared to non-completers (see Figure 4). The overall model was significant, $x^2(5) = 47.502, p < .001$, though there was no difference in time to reconviction between partial completers and the probation sample.

For violent reconviction, only successful completers had a significantly different recidivism rate than the probation sample, as their monthly risk of being reconvicted was 2.6 times less than that of the youth on probation (see Figure 5). The overall model was significant, $x^2(6) = 34.507, p < .001$. 
Table 9

Summary of Cox Survival Analyses Predicting Time to Reconviction by Disposition Type as a Function of OCYDP Completion (n = 374)

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Predictor</th>
<th>β</th>
<th>SEβ</th>
<th>p</th>
<th>Adj. Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>Successful Completion⁴</td>
<td>-.971</td>
<td>.240</td>
<td>.000</td>
<td>.379**</td>
</tr>
<tr>
<td></td>
<td>Partial Completion⁴</td>
<td>-.699</td>
<td>.425</td>
<td>.100</td>
<td>.497</td>
</tr>
<tr>
<td></td>
<td>Non-completion⁴</td>
<td>.538</td>
<td>.267</td>
<td>.044</td>
<td>1.713*</td>
</tr>
<tr>
<td></td>
<td>Gender⁵</td>
<td>-.598</td>
<td>.223</td>
<td>.007</td>
<td>.550*</td>
</tr>
<tr>
<td></td>
<td>Risk</td>
<td>.039</td>
<td>.012</td>
<td>.001</td>
<td>1.040**</td>
</tr>
<tr>
<td>Violent</td>
<td>Successful Completion⁴</td>
<td>-1.050</td>
<td>.365</td>
<td>.004</td>
<td>.350*</td>
</tr>
<tr>
<td></td>
<td>Partial Completion⁴</td>
<td>-.638</td>
<td>.599</td>
<td>.287</td>
<td>.528</td>
</tr>
<tr>
<td></td>
<td>Non-completion⁴</td>
<td>.285</td>
<td>.405</td>
<td>.481</td>
<td>1.329</td>
</tr>
<tr>
<td></td>
<td>Nature of Index⁶</td>
<td>.491</td>
<td>.261</td>
<td>.060</td>
<td>1.633</td>
</tr>
<tr>
<td></td>
<td>Gender⁵</td>
<td>-1.039</td>
<td>.347</td>
<td>.003</td>
<td>.354*</td>
</tr>
<tr>
<td></td>
<td>Risk</td>
<td>.047</td>
<td>.016</td>
<td>.004</td>
<td>1.048*</td>
</tr>
</tbody>
</table>

Note. Adj. Odds Ratio = Adjusted Odds Ratio. ⁴Reference group is probation. ⁵Reference group is female. ⁶Reference group is non-violent. *p < .05. **p < .001.
Figure 3. Survival curve representing time to reconviction comparing successful OCYDP completers and youth on probation.
Figure 4. Survival curve representing time to reconviction comparing failed OCYDP completers and youth on probation.
Research Question Two

It was hypothesized that there would be significant differences in recidivism rates among the three OCYDP completion levels. Although comparisons of each completion level to probation provide recidivism trends between these three groups, logistic and Cox regression analysis was conducted to more adequately address hypothesis three. In light of the differences between completion level samples identified earlier, gender and risk level were entered into each model as control variables. Again, completion level was dummy coded to facilitate comparisons between each level. Each table identifies which completion level serves as the reference group for each variable.
The first model uses one-year general reconviction as the outcome and demonstrates that there are significant differences according to completion level (Table 10). When holding all other variables constant, youth who failed to complete the OCYDP were 4.5 times more likely to be reconvicted than successful completers. Non-completers were also 18.5 times more likely to be reconvicted than partial completers. There were no significant differences found between successful and partial completers. The overall test of the model was significant, $\chi^2(4) = 17.381, p = .002$, and the Hosmer-Lemeshow test revealed a good fit of the model to the data, $\chi^2(8) = 5.094, p = .748$.

For violent reconviction at one year, when holding all other variables constant, a significant difference between non-completers and successful completers was identified, as non-completers were more than four times more likely to be reconvicted. Due to the lack of violent re-offenders in the partial completers group, no comparisons could accurately be made between partial completers and the other completion levels. This model was significant, $\chi^2(4) = 12.212, p = .016$, and the Hosmer-Lemeshow test indicated that the model fit the data well, $\chi^2(8) = 3.545, p = .896$. 


Table 10

Summary of Logistic Regression Analyses Predicting Reconviction at One Year by OCYDP Completion (n = 165)

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Predictor</th>
<th>$\beta$</th>
<th>SE$\beta$</th>
<th>$p$</th>
<th>Adj. Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>Partial Completion$^a$</td>
<td>-1.399</td>
<td>1.077</td>
<td>.194</td>
<td>.247</td>
</tr>
<tr>
<td></td>
<td>Non-completion$^a$</td>
<td>1.517</td>
<td>.481</td>
<td>.002</td>
<td>4.557*</td>
</tr>
<tr>
<td></td>
<td>Partial Completion$^b$</td>
<td>-2.916</td>
<td>1.099</td>
<td>.008</td>
<td>.054*</td>
</tr>
<tr>
<td></td>
<td>Gender$^c$</td>
<td>.323</td>
<td>.524</td>
<td>.538</td>
<td>1.381</td>
</tr>
<tr>
<td></td>
<td>Risk score</td>
<td>.045</td>
<td>.034</td>
<td>.192</td>
<td>1.046</td>
</tr>
<tr>
<td>Violent</td>
<td>Partial Compliance$^a$</td>
<td>-18.721</td>
<td>8733.959</td>
<td>.998</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Non-completion$^a$</td>
<td>1.452</td>
<td>.611</td>
<td>.018</td>
<td>4.271*</td>
</tr>
<tr>
<td></td>
<td>Partial Completion$^b$</td>
<td>-20.173</td>
<td>8733.959</td>
<td>.998</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Gender$^c$</td>
<td>-.107</td>
<td>.670</td>
<td>.873</td>
<td>.898</td>
</tr>
<tr>
<td></td>
<td>Risk score</td>
<td>.049</td>
<td>.046</td>
<td>.284</td>
<td>1.050</td>
</tr>
</tbody>
</table>

Note. Adj. Odds Ratio = Adjusted Odds Ratio. For one year general reconviction, the Cox & Snell $R^2 = .100$. For violent reconviction, the Cox & Snell $R^2 = .071$.

$^a$Reference group is successful completion. $^b$Reference group is non-completion.

Lastly, Cox survival analysis was conducted (Table 11). For general reconviction, the monthly hazard rate of non-completers was four times higher than successful completers and three times higher than partial completers (see figure 6). Not surprisingly, there were no significant differences in time to reconviction between partial and successful completers. The model was significant, $x^2(4) = 24.297$, $p < .001$.

For violent reconviction, there was only a significant difference found between successful and non-completers, as, each month, non-completers were 3.5 times more likely to be reconvicted than successful completers (see figure 7). However, this model only approached significance, $x^2(4) = 9.204$, $p = .056$. 
<table>
<thead>
<tr>
<th>Outcome</th>
<th>Predictor</th>
<th>β</th>
<th>SEβ</th>
<th>p</th>
<th>Adj. Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>Partial Completion(^a)</td>
<td>.283</td>
<td>.478</td>
<td>.553</td>
<td>1.328</td>
</tr>
<tr>
<td></td>
<td>Non-completion(^a)</td>
<td>-1.423</td>
<td>.335</td>
<td>.000</td>
<td>4.149**</td>
</tr>
<tr>
<td></td>
<td>Partial Completion(^b)</td>
<td>-1.139</td>
<td>.490</td>
<td>.018</td>
<td>.320*</td>
</tr>
<tr>
<td></td>
<td>Gender(^c)</td>
<td>.190</td>
<td>.346</td>
<td>.583</td>
<td>1.209</td>
</tr>
<tr>
<td></td>
<td>Risk score</td>
<td>.018</td>
<td>.023</td>
<td>.422</td>
<td>1.019</td>
</tr>
<tr>
<td>Violent</td>
<td>Partial Completion(^a)</td>
<td>.394</td>
<td>.690</td>
<td>.568</td>
<td>1.483</td>
</tr>
<tr>
<td></td>
<td>Non-completion(^a)</td>
<td>-1.250</td>
<td>.493</td>
<td>.011</td>
<td>3.380*</td>
</tr>
<tr>
<td></td>
<td>Partial Completion(^b)</td>
<td>-0.856</td>
<td>.682</td>
<td>.209</td>
<td>.425</td>
</tr>
<tr>
<td></td>
<td>Gender(^c)</td>
<td>.180</td>
<td>.522</td>
<td>.730</td>
<td>1.198</td>
</tr>
<tr>
<td></td>
<td>Risk score</td>
<td>.025</td>
<td>.035</td>
<td>.472</td>
<td>1.026</td>
</tr>
</tbody>
</table>

\(^a\) Reference group is successful completion. \(^b\) Reference group is non-completion.
\(^c\) Reference group is female.
* \(p < .05\). ** \(p < .001\).
Figure 6. Survival curve representing time to general reconviction as a function of OCYDP completion level.
Discussion

This study was conducted to assess the effectiveness of the Ottawa Community Youth Diversion Program (OCYDP) in reducing recidivism compared to a traditional, community-based disposition (i.e., youth probation). Three hypotheses were tested to determine whether diversion to the OCYDP reduces recidivism at a greater rate than probation and whether the effectiveness of the program is associated with its completion, rather than as a result of mere diversion from the traditional justice system. The interpretation of the results, with respect to the stated hypotheses, and the implications of the findings will be discussed here.
Hypothesis One

Hypothesis one predicted that youth diverted to the OCYDP would have lower recidivism rates than youth sentenced to a period of probation. The initial results examining the ability of disposition type to predict reconviction provide support for this hypothesis. It appears that referring youth, after the laying of a charge, to the OCYDP reduces their likelihood of reconviction compared to a group of youth sentenced to probation, even when considering risk level, age, nature of index offence, and the gender of participants. These results are consistent with the findings of a recent diversion meta-analysis, which concluded that diversion programs providing interventions to medium-risk youth were significantly more effective in reducing recidivism than traditional justice system processing (Wilson & Hoge, 2011). These findings are also consistent with hypotheses derived from labelling and differential association theories as well as research indicating that mere contact with the judicial system can increase the likelihood of re-offending.

An alternative explanation for the effectiveness of diversion suggests that studies demonstrating the ability of diversion to reduce recidivism are, in fact, capturing a decrease in the likelihood of apprehension rather than a decrease in offending. It is argued that youth who are conventionally processed, rather than diverted, are at a greater risk of falling under the ‘radar’ of the justice system; this results in an increased likelihood of being punished for their misconduct, rather than an actual increase in recidivistic behaviour (Chaple, 2011). While this view is often presented as opposing the previous theories explaining diversion’s effectiveness (i.e., labelling and differential association theories), it is likely its effectiveness is associated with both.
As previously discussed, there is a large body of literature demonstrating the detrimental effects of justice system exposure on both the charging practices of police as well as the offending behaviour of youth (Bernburg & Krohn, 2003; Huizinga & Henry, 2008; Huizinga et al., 2003). For example, McAra & McVie (2007) followed a cohort of 4,300 youth and found that those who had been charged by the police in previous years were over seven times more likely to be charged by police at age 15, even when controlling for recent history of police contact and self-reported involvement in offending. Additionally, they found that youth who were processed the farthest into the justice system (i.e., brought to a hearing) self-reported significantly more involvement in serious offending over the following year. Although technical violations were not coded as reconvictions, it is likely that diversion’s effectiveness, and therefore that of the OCYDP, can be attributed to both perspectives. Utilizing police contacts or arrests as the recidivism measure would likely provide a more accurate assessment of the influence of increased offender awareness on the part of the police.

The results of Lipsey’s (2009) meta-analysis on youth interventions, indicating that good treatment is not context-dependent, provides another strong explanation for the effectiveness of this diversion program. The OCYDP was developed with the RNR principles in mind and concentrates on providing differing levels of interventions according to risk level as well as targeting criminogenic need areas. It may be that the effectiveness of this program is evidence of the effectiveness of RNR and not necessarily that of diversion. Although the Youth Justice Services Division of the MCYS mandates Probation Services to follow the risk and need principles of rehabilitation (G. Steeds, personal communication, July 20, 2011), the data provided by the MCYS for this
evaluation prevents even a superficial analysis of RNR adherence. Although the findings of the diversion meta-analysis by Wilson and Hoge (2011) discredit the conclusion that diversion is only effective when providing treatment, this study cannot directly test that finding. A comparison of OCYDP youth, youth sentenced to a period of probation, and a matched group of youth who were simply cautioned would provide further evidence to the impact of diversion itself.

The greater effectiveness of the OCYDP in reducing reconvictions is not evident, however, when limiting the examination of recidivism rates to one year after OCYDP/probation completion. In fact, no significant differences were found between the recidivism rates of diverted youth and youth on probation for both general and violent recidivism at one year. Two explanations can be offered for this finding. It may be that youth are being convicted for offences that took place prior to or during OCYDP/probation participation. Time between offence date and conviction date is contingent on a number of factors (e.g., seriousness of offence, resources of the jurisdiction) and this can create considerable variability in length of processing time (Carcach & Leverett, 1999; Ramker, 1983).

The second explanation considers that the number of recidivists accumulates over time, as longer follow-up periods increase recidivism base rates (Carcach & Leverett, 1999; Latimer, 2001; Seto, Hanson, & Babchishin, 2010). These base rates, however, are non-linear and typically result in most recidivism occurring within the first few years after release (Carcach & Leverett, 1999). The longer an offender remains crime-free in the community, the lower their individual probability of recidivism becomes (Carcach & Leverett, 1999; Harris & Hanson, 2004). For these reasons, it could be argued that the
results derived from the survival analysis are more representative of program effectiveness than those determined from only one year in the community.

**Hypothesis Two**

The analyses testing hypothesis one indicated that youth on probation failed more quickly than those referred to the OCYDP. However, similar to most treatment programs, there were a number of youth who failed to complete the diversion program. Hypothesis two suggested that the more satisfactory the OCYDP completion level (e.g., closer to successful completion), the greater the reduction in recidivism for diverted youth compared to youth on probation.

Grouping diverted youth by completion level revealed that, contrary to the overall findings of hypothesis one, youth who failed to complete the OCYDP had significantly higher recidivism rates than youth on probation. This is consistent with previous offender treatment literature demonstrating that youth who fail to complete treatment programs are at a higher risk of recidivating compared to those who remain untreated (Huebner & Cobbina, 2007; McGuire et al., 2008). While the treatment of youth on probation is unclear (and the assumption that they remain untreated is refutable), this higher recidivism for non-completers is consistent with theories purporting that factors associated with failing to complete a program are also associated with recidivism (Wormith & Olver, 2002). Following this theory, youth who failed to complete the OCYDP could have been, for example, more impulsive, less educated, and/or have greater negative attitudes towards treatment.

Results for hypothesis two also indicated that successful completers had significantly lower recidivism rates than matched youth on probation. This finding is
consistent with meta-analyses from both the treatment completion literature (McMurran & Theodosi, 2007) as well as those examining the RNR principles of rehabilitation (Andrews & Bonta, 2010). Successful completers have a higher likelihood of benefiting from the effects of the received treatment and often demonstrate greater motivation and a more positive outlook on programming (Seager et al., 2004).

There was no significant difference in recidivism rates of youth who only partially completed the OCYDP and youth on probation. The power of comparison between these two groups was restricted due to the considerable difference in samples sizes and the small sample of partial completers. However, when considering the effect sizes, partial completers were more than six times less likely to be reconvicted for a general offence in the first year of follow-up and two times less likely to be reconvicted throughout the entire follow-up period. This finding is discussed more thoroughly in the next section, though it is clear that future studies, with larger samples sizes, are needed.

If conclusions regarding the effectiveness of the OCYDP were limited to the analysis for hypothesis one, one would mistakenly conclude that mere diversion to the OCYDP is effective, rather than the interventions that are associated with this program. The results of the analysis considering the differing completion levels indicate that the effectiveness of this program is not primarily tied to the diversion of youth; the benefits are realized primarily for those who comply with conditions.

**Hypothesis Three**

Lastly, it was hypothesized that successful completers would have lower recidivism rates than both partial and non-completers. In line with the offender treatment literature, successful completers had lower reconviction rates than non-completers; the
lack of difference between successful completers and partial completers, however, was unexpected. While a larger sample of partial completers is required to make any sound conclusions, this finding is worthy of discussion. Within the OCYDP, partial completers successfully complete a portion of their referrals. For example, a youth referred to two treatment programs must complete a minimum of one service in its entirety in order to be considered a partial completer rather than non-completer. These youth likely do not represent the typical ‘drop-outs’ as they have demonstrated some commitment to programming and have successfully completed at least one treatment program.

There has been evidence to suggest that time in treatment reduces recidivism, whether the offender successfully completes the program or not (Bourgon & Armstrong, 2005; Peters, Haas, & Hunt, 2001). In fact, a number of meta-analyses have demonstrated the linear relationship between time in treatment and treatment effectiveness for both youth and adult offenders (Landenberger & Lipsey, 2005; Lipsey, 1992). Youth who partially complete the OCYDP often spend more time in services than non-completers and likely benefit from the criminogenic need-based services they do complete, regardless of whether they complete all referrals.

Although the lack of information regarding the treatment of youth on probation precludes any conclusions concerning what aspects of the OCYDP are effective (e.g., diversion and/or RNR adherence), it appears clear that successful completion of the OCYDP reduces reconvictions at a greater rate than periods of probation.

Implications

For front line workers. With more than 50% of youth accused of a crime being diverted in Canada, the effectiveness of youth diversion programs has considerable
implications for practitioners. Directly, this evaluation provides evidence of the
effectiveness of a diversion program that is highly utilized in the city of Ottawa. The
OCYDP receives roughly 350 referrals each year and has accepted offenders since 2006
without an evaluation into its influence on youth, if any. This evaluation should serve to
validate (if not, justify) its role as an important alternative to youth probation for charged,
medium risk youth. Ideally, it will also influence the funding allocated to the OCYDP, as
programs are more likely to be subsidized if they are able to demonstrate practical utility

More broadly, this evaluation provides evidence of the success of a diversion
program adhering to RNR. Due to the considerable variation in the design of youth
diversion programs (Wilson & Hoge, 2011), this program could act as a general
framework for other developing diversion programs with similar targets.

This evaluation could also serve as an opportunity for the Ottawa Probation
Services to examine their interactions with youth and consider how to provide services in
the community more effectively.

For researchers. Although this evaluation has provided some important practical
outcomes, it has also served to highlight some areas that require further investigation.
One aspect of diversion that was not examined within this study is the effectiveness of
the OCYDP for uncharged youth. As the diversion of offenders is associated with the
avoidance of negative labels, a comparison of pre-charge and post-charge youth involved
in the same program would provide an indirect examination of the validity of labelling
theory, as one group receives greater justice system processing than the other. As this
evaluation was unable to specifically identify the more effective aspects of the OCYDP, little evidence can be provided for the influence of labelling or differential association.

Future studies assessing similar programs should also take additional steps to examine the most effective aspect of the program and differentiate between the influence of diversion and RNR. As mentioned previously, studies that include an additional matched comparison group that has only been cautioned and additional information surrounding the treatment of youth on probation would help identify what aspects of the program are effective.

This study has also highlighted the need for program evaluations sampling equally from a variety of completion levels. While this evaluation utilized large enough sample sizes to maintain sufficient statistical power for accurate analyses in most cases, larger samples of each group (e.g., partial and non-completers) would provide more consistent results.

Lastly, future studies should continue to examine different definitions of success, rather than primarily focusing on recidivism. There are a number of goals in dealing with youth involved in the criminal justice system (e.g., treatment, accountability, reduction in public concern), therefore, studies should be liberal in the outcomes they assess.

Limitations

Due to the considerable implications of this research, it is important to address the limitations of this study. Although a retrospective design is more cost- and time-effective, there are limitations to this format. As retrospective studies make use of existing data, random assignment of participants is not possible. Although youth were matched on a number of factors (e.g., risk level, gender), this design limits control over unknown
confounding variables. The use of existing data also restricts analysis to the variables that were documented according to the discretion of record-keepers and program policies. For example, the record keeping practices of the OCYDP prevented analysis of non-completers exposed to some treatment (e.g., who failed to finish any of their referrals) and youth who agreed to participate but did not attend any programming.

Similarly, the author had no control over the assessment of risk and must trust the scoring of the assessors. Although youth were assessed for level of risk using the same validated risk assessment tool (i.e., YLS/CMI), they were assessed by two different groups of youth workers with differing levels of training; therefore, differences in scoring could have occurred.

The generalizability of results should also be considered with caution. This evaluation considered post-charge and, primarily, medium risk youth; the use of diversion with high-risk and pre-charge offenders cannot be surmised from these results. Because of the differing components and models of diversion programs, the ability of the OCYDP to reduce recidivism should not be generalized to all diversion programs, but serve only as another example of potential outcomes. The use of youth probationers as a comparison group precludes the generalizability of results to other intervention levels within the justice system (e.g., incarceration, intensive supervision) as well as other alternative programs with different models (e.g., alternative sanctions programs).

The samples were chosen up until December 2009, therefore, some youth were only followed-up for a little over a year. Longer follow-up periods would likely result in a more robust study as it would provide a larger sample for longer periods of time which, as discussed, provides a more accurate estimate of recidivism.
Finally, there are limitations with the outcome measure used. Due to the limitations of the data, youth were followed-up after program completion or the expiration of their probation order. This prevents an examination of their criminal behaviour throughout their disposition. The use of convictions, and official records in general, is also considered a conservative measure of recidivism and likely underestimates crime (Carcach & Leverett, 1999; Moffitt, 1993). This evaluation did not examine any other potential outcomes (e.g., reduced cost to system, changes in pro-criminal attitude, better academic performance) and only considers success as a reduction in recidivism. As the OCYDP has other program goals, these results do not serve to evaluate the overall effectiveness of the program, but only in its ability to reduce recidivism.

Conclusion

This study served to evaluate the Ottawa Community Youth Diversion Program in its ability to reduce recidivism compared to a traditional, community-based disposition. While results initially demonstrated that diversion was overall more effective than youth probation in reducing reconvictions, examining the diversion sample by program completion level demonstrated that mere diversion is not effective. It appears that the completion of treatment within the OCYDP is associated with the recidivism reduction, as those who failed to complete the program had significantly higher recidivism rates than the comparison sample of youth on probation. Youth who successfully completed the OCYDP had significantly lower reconviction rates than youth on probation.

For post-charge, medium risk youth, the OCYDP is more effective in reducing recidivism than youth probation. While this has clear practical implications, this study
has also highlighted the need for evaluations utilizing additional comparison groups (e.g., pre-charge youth, cautioned youth) to further examine the source of this program’s effectiveness.
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