

**VALIDATION OF THE YOUTH LEVEL OF SERVICE/CASE MANAGEMENT
INVENTORY WITH SASKATCHEWAN YOUNG OFFENDERS**

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Fulfillment of the Requirements for the Degree of Master's in Education in the
Department of Educational Psychology and Special Education**

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By

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Abstract

The Youth Level of Service/Case Management Inventory (YLS/CMI), an instrument developed by Hoge and Andrews (1996a; 1996b), was designed to determine risk of recidivism for young offenders. The YLS/CMI's development was based on the Personal, Interpersonal, and Community-Reinforcement theory (Andrews & Bonta, 1998) which proposes that antisocial attitudes, associates, behavioral history, and personality are the most important predictors of criminal behavior. The current investigation examined the predictive validity of the YLS/CMI in predicting recidivism for Saskatchewan Young Offenders as well as investigating the roles of antisocial attitudes, associates, criminal history, and personality in predicting future criminal behavior for this population. Further, the study explored the effectiveness of the YLS/CMI to predict recidivism for Aboriginal young offenders as well as for male and female young offenders. Relationships among the YLS/CMI composite score and subscale scores and the two measures of recidivism were investigated through correlations. Results revealed significant positive relationships between the composite and subscale scores and both outcome measures with some differences within the subgroups noted. Results also indicated that criminal history, negative peers and antisocial attitudes were predictive of reoffending behavior. Antisocial personality, however, was not predictive of either measure of recidivism. Overall, it was concluded that the YLS/CMI demonstrated adequate predictive ability with Saskatchewan Young Offenders.

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CHAPTER 1

INTRODUCTION

Organization of the Document

This document is organized into five chapters. The first chapter identifies the purpose of the research, presents the questions to be investigated and a synopsis of why the research is important in the context of the current state of practice.

The second chapter offers the reader a review of the literature in the area of correlates of criminal behavior and recidivism followed by a brief history of the development of risk assessment. Next, a unified theory of criminal conduct is presented and a review of the risk assessment tool to be used in the present study is offered, along with the empirical evidence and available psychometric data for the tool.

The third chapter presents the methodology of the study outlining the participants and sampling procedure. A description of the materials used in the study along with the sources of information used to collect the risk assessment and recidivism data are presented. Next, the procedure for data collection is offered followed by a brief discussion regarding confidentiality of subjects and reporting of results. Finally, the statistics to be used for analysis of the data are presented.

The fourth chapter is a discussion of results of data analysis. Finally, chapter five will present a discussion of the results. Appendices follow as outlined in the table of contents.

Purpose of the Study

One of the purposes of the study was to replicate results found by Hoge and Andrews' (1996a; 1996b) study of the Youth Level of Service/Case Management Inventory (YLS/CMI). At times, research is conducted to provide evidence to support or reject a theory. Based on the results from research, the theory is either supported, refined, or rejected. Thus, replication research is important to confirm results from previous studies and to provide additional evidence for the theory being investigated. The YLS/CMI is based on a theoretical explanation of criminal conduct which proposes that antisocial attitudes, associates, behavioral history, and personality are the most important predictors of criminal behavior. Previous investigation with the YLS/CMI revealed some support for this premise (Hoge & Andrews, 1996a). The investigators found that the subscales measuring Family Circumstances/Parenting and Attitude/Orientation significantly predicted new convictions. Further, it was found that the subscales measuring Family Circumstances/Parenting, Peer Relations, Family Circumstances/Parenting, and Education/Employment all significantly predicted any reoffending (including offences for which the youth was not convicted of). It is important to note that criminal history was not included in the Hoge and Andrews (1996a) results as, according to the investigators, data could not be coded for the items as represented in the scale. Therefore, evidence supporting the efficacy of antisocial attitudes and peer relations as predictors of reoffending behavior was found, although support for personality and criminal history was not provided. This study investigated the role of criminal history in predicting future reoffending, as well as further examining the role of antisocial attitudes, associates, behavioral history, and personality as they

relate to reoffending behavior.

Another purpose of the study was to determine the YLS/CMI's efficacy in determining recidivism in Saskatchewan Young Offenders. The overall risk level provided by the YLS/CMI was expected to be a significant predictor of whether a youth will recidivate, with recidivism defined as a new charge or conviction against the Criminal Code of Canada and/or the Young Offenders Act. Thus, a positive relationship between level of risk and reoffending rate was expected. That is, those offenders who were classified as high risk should have significantly higher recidivism rates than those classified as medium risk. Similarly, those offenders who were classified as medium risk should have significantly higher recidivism rates than those classified as low risk. In addition to determining the predictive efficacy of the YLS/CMI, this evidence provides further evidence of the instrument's ability to discriminate between young offenders.

Research Questions

The YLS/CMI, an instrument developed by Hoge and Andrews (1996a; 1996b), was designed to determine risk levels of and predict future criminal behavior in young offenders. Little research has been conducted, however, to determine the predictive validity of this instrument with young offenders, and none has been conducted in Saskatchewan. The following research question will be used to address this concern:

1. To what extent is the YLS/CMI predictive of future criminal behavior in Saskatchewan Young Offenders?

The second research question concerns the efficacy of antisocial attitudes, peer relations, behavioral history, and personality as predictors of future criminal behavior:

2. How effective are antisocial attitudes, peer relations, behavioral history, and

personality in predicting future criminal behavior in Saskatchewan Young Offenders?

Statement of the Problem

Youth crime is a politically charged subject. The Young Offenders Act (YOA), which speaks to prosecution, intervention, and rehabilitation of youths convicted with Criminal Code of Canada charges between the ages of 12 and 18, has been criticized as an ineffective means of dealing with youth crime. Recent amendments to the YOA have been highly publicized as a means of ‘getting tough’ with young offenders and the recent proclamation of the new Youth Criminal Justice Act (YCJA) attests to the fact that there is a general dissatisfaction with the youth criminal justice system as a whole. The increasing pressure on the justice system to hold youth accountable for their behavior with tougher sentences has put a measurable strain on the resources available to young offenders. In terms of secure custody institutions in Saskatchewan, numbers of sentenced and remanded youth have hit an all-time high in the past decade, forcing the Department of Social Services to open several contingency institutions in order to house offenders. For example, currently in the province of Saskatchewan, there are 176 permanent and 68 temporary secure custody spaces available for male young offenders. In 1998, male young offender numbers exceeded the capacity three out of twelve months, forcing extra contingency beds. In addition, program delivery within institutions has suffered as resources (e.g., staffing, treatment beds, professional services) are limited.

Professionals working with youth who commit crimes are constantly making decisions that affect the young offender, the justice system, and society. These decisions include recommendations for levels and lengths of disposition, treatment, access to the

community, and supervision during probation periods just to name a few. These decisions are often based on the young offender's criminal history, severity of current crime, and current institutional behavior if incarcerated and are generally subjective rather than objective. Thus, statistically proven correlates of recidivism are rarely used in an objective manner to make these important decisions.

A valid assessment of individual risk, or likelihood that an individual will reoffend, can start to alleviate some of these concerns. A risk assessment that demonstrates good predicative validity can identify those individuals who are in greatest need of interventions and provide extra information for sentencing decisions. In addition, identification of individual areas of need (e.g., family, substance abuse, mental health issues) can help personalize case management goals and treatment plans of offenders rather than providing the same generic caseplan for all offenders as is generally the case now. Further, areas identified as strengths can be built upon to help the youth experience success.

The recent emergence of risk assessments, instruments that assess the young offender's risk and needs factors and provide a level of risk for recidivism, provide additional information in a comprehensive and objective manner for decision making. An example of such an instrument is The Youth Level of Service/Case Management Inventory (YLS/CMI) developed by Hoge and Andrews (1996a; 1996b). For risk assessments, specifically in this case the YLS/CMI, to be helpful, their predictive validity needs to be investigated and results replicated.

In 2000, Saskatchewan Social Services committed to introducing a risk assessment instrument to the young offenders system. After a comprehensive

investigation involving a reference committee representing all provincial stakeholders in the Young Offenders System, the Level of Service Inventory - Ontario Revision (LSI-OR) with minor revisions, was chosen for implementation. The first training for front-line workers with the instrument, renamed the Level of Service Inventory - Saskatchewan Youth Edition (LSI-Sk Youth Edition), was held in Spring, 2002 with the intent of having the tool determining service delivery and resource allocation by Spring 2003, coinciding with the implementation of the federal Youth Criminal Justice Act. Both the YLS/CMI and the LSI-Sk Youth Edition evolved from the Level of Service Inventory and measure risk for recidivism in a similar manner. As an investigation into the validity of risk assessment with Saskatchewan Young Offenders has not been conducted to date, the present study examining the YLS/CMI has potential to offer valuable information to the Young Offenders System in demonstrating the predictive efficacy of risk assessment.

Hoge and Andrews (1996a; 1996b) used a standardization sample of 100 young offenders assigned to a youth court worker in an urban area in Ontario. Based on the results of this standardization, cut-off scores were determined describing level of risk (i.e., low, moderate, and high). The authors cautioned that further research needs to be conducted in order to ascertain the validity of these cut-offs. It was the intent of this study to provide further evidence of the YLS/CMI's efficacy in predicting recidivism in Saskatchewan Young Offenders.

Survey of the Young Offender Population: Nationally and Provincially

In a national context of declining crime rates during the late 1990's, Saskatchewan has experienced an opposite trend. Youth crime reports for Canada revealed that Saskatchewan charged more youth than any other province, brought youth to court over

twice as often as the national average, second only to Manitoba, and sentenced youth to custody at a rate over double than that of the national average (Canadian Center for Justice Statistics, 2000). This, in addition to a disproportionate representation of Aboriginals in the criminal justice system in relation to the overall population (LaPrairie, 2001), has raised concerns about the juvenile justice system overall in the Province of Saskatchewan.

To provide a brief context of the Youth Justice System in Saskatchewan, some statistics supplied by Saskatchewan Department of Social Services (1999), the agency responsible for delivering young offender programming in Saskatchewan, are presented. For the month of July, 1999, young offender provincial statistics (inclusive of Alternative Measures) revealed that of 3015 open Young Offender cases, 77 percent of those cases were male youth. Further, 50 percent of the young offender population was Aboriginal. When looking at specific regions, Saskatoon statistics revealed that of 536 Young Offender cases, 71 percent were male adolescents and 43 percent Aboriginal adolescents. In North Battleford, of 222 Young Offender cases, 75 percent were male and 63 percent were Aboriginal. A second provincial snapshot encompassing the month of March, 2001, excluding Alternative Measures cases, indicates that 79 percent and 61 percent of the Young Offender cases were accounted for by males and Aboriginals, respectively. When the numbers are further broken down into specific regions, of 531 Young Offender cases in Saskatoon, it was revealed that 77 percent were male and 54 percent were Aboriginal. North Battleford statistics revealed that of a Young Offender population of 155, 79 percent and 72 percent of the cases were accounted for by male and Aboriginal youth respectively. Thus, overall in Saskatchewan, male adolescents accounted for

approximately three-quarters (77 to 79 percent) of youth crime with females accounting for the remaining quarter (21 to 23 percent). Aboriginal youth accounted for approximately half of the young offender cases provincially (50 to 60 percent) with non-Aboriginal (including unknown ethnicity) accounting for the remaining half (40 to 50 percent).

The rates of Aboriginal youth offending indicated in the Saskatchewan statistics is a trend also seen nationally. In Canada, Aboriginals come into contact with the justice system at rates disproportionate to their representation in the general population. Boe (2000) reported that national statistics for federal offender populations revealed that approximately 16 percent of their population is Aboriginal whereas Aboriginals made up only 3 percent of the Canadian population (Boe, 2000). According to Correctional Service Canada (1999), Aboriginal people in Saskatchewan were incarcerated at a rate 35 times higher than non-Aboriginal people. Young offender statistics reflected the same trend. As noted above, in Saskatchewan, for the month of July, 2001, Aboriginals accounted for 61 percent of the young offender population, yet they constituted 11 percent of Saskatchewan's population as of 1996 census (Statistics Canada, 1996).

Definitions

Dynamic variables: Predictors of criminal behavior that are receptive to change; also referred to as criminogenic needs

Criminogenic needs: Defined as those risk factors which have the ability to change and, when targeted for intervention, can reduce the likelihood of future criminal behavior.

Index offence: The original offence that allowed the youth to be eligible for the

study

Recidivism: Any new conviction against the Criminal Code of Canada or Young Offenders Act.

Responsivity factors: Defined as the characteristics of the youth or their circumstances that are not directly associated with antisocial behavior but are relevant to the youth's response to interventions

Risk assessment: A means of predicting the likelihood of general recidivism (i.e., risk of reoffending behavior).

Static variables: Predictors of criminal behavior that do not change over time (e.g., criminal history; gender)

CHAPTER 2

REVIEW OF THE LITERATURE

Overview of the Correlates of Criminal Behavior Research

The roots of research attempting to identify characteristics related to criminal behavior in an attempt to distinguish criminals from non-criminals can be found in Lombroso's work conducted in the late 1800's. Although elementary, Lombroso's objective and methodical endeavors resulted in what can be thought of as an early type of risk assessment scale. According to Lombroso, born criminals or 'atavists' were physically different from the occasional, habitual, or even mentally-ill criminal; atavists were also physically different from non-criminals (Andrews & Bonta, 1998). Thus, Lombroso was able to distinguish atavists from both a criminal and general population based on several variables and from this classification, began to make predictions around future behavior as well as interventions to limit criminal behavior. Although Lombroso's theory was criticized for methodological flaws (i.e., Lombroso's sample was made up of incarcerated individuals, all of whom were not necessarily criminals; Barken, 1997), it provides an early example of the interest in differentiating criminals from non-criminals with an attempt to predict who will behave in a criminal manner.

Researchers studying criminal behavior continued to be interested in identifying characteristics that would be predictive of deviant or criminal behavior. In a study of historic and empirical value, Glueck and Glueck (1950) investigated the causes of delinquency using environmental and personal variables with a sample which consisted

of 500 delinquent and 500 non-delinquent adolescent boys from similar neighborhoods. Environmental and individual personal data were collected through interviews with the subjects, the subjects' relatives, and other involved individuals such as teachers and social workers. Outcome data were operationalized in several ways, including violations of probation, maladaptation in an institute, recidivism, delinquency, and neuroticism. Based on results from the data collection, Glueck and Glueck identified temperament, attitudes, cognition, family, and environment as predictive of criminal behavior in juveniles. In 1957, Glueck and Glueck used the data collected in earlier studies to create prediction tables to be used to discriminate between juveniles who would recidivate and those who would not. The authors identified several criminogenic characteristics such as family functioning, achievement problems, behavior problems in school, age of first onset of antisocial behavior, and time between onset of antisocial behavior and first arrest as predictive of recidivism.

Glueck and Glueck (1957) highlighted the importance of prediction of delinquency and further recidivism for juveniles as prediction could offer guidance for determining sentence length, community accessibility, and treatment interventions for both juvenile delinquents and adult criminals. The authors suggested that:

“Some device has long been necessary in the field of criminology to subject to a reasonable conceptual discipline the sprawling mass of fact, theory, and dictum developed in numerous investigations and writings. We know of no more promising disciplinary device than that the carefully constructed prediction table. Its very essence consists of a focusing on the relevant and a cutting away of the adventitious and incidental (p. 17)

They also stated that identification of characteristics statistically proven to be predictive of criminal behavior begin to isolate causal factors “from a widespread and confusing network of *possible* biologic and sociocultural influences” (p. 16), and thus begin to

objectify decisions made in regards to juvenile delinquents.

The Glueck research inspired other investigators to continue examining predictive variables for criminal behavior. In fact, Andrews (1995) contended that “the largest body of well-established research findings in the whole of criminology is that devoted to the prediction of the criminal conduct of individuals” (p. 36) attesting to a significant interest from both social institutions and researchers in refining the art of predicting criminal conduct. Due to the proliferation of research in the correlates of criminal behavior, meta-analysis has become key in making sense of the literature. The emergence of meta-analysis as a statistical, quantitative, and methodical review of existing research studies has contributed to the investigation of predictive variables and criminal behavior. Meta-analysis is the quantitative counterpart to the literature review which attempts to extrapolate themes from a number of studies. That is, meta-analysis transforms results from a number of studies into a common statistic, effect size, which allows for comparisons (Bonta, Law, & Hanson, 1998). For example, some studies found that substance use is predictive of reoffending behavior for juveniles whereas other investigations do not confirm this relationship (Cottle, Lee, & Heilbrun, 2001). Thus, meta-analysis permits broad themes to appear from investigations exploring common common areas of interest (i.e., prediction of reoffending behavior), albeit losing the finer points of individual studies (Lipsey, 1995). The prominent meta-analytical studies will be reviewed to provide an overview of the research in correlates of criminal behavior. First, an important study reviewing criminal prediction literature and using a different statistical procedure for identifying empirically supported variables for prediction will be presented.

Meta-analyses

Prior to the refinement of meta-analysis as a statistical method, Loeber and Dishion (1983) reviewed and synthesized prediction studies on delinquency from 1962 to 1980 in order to identify variables that predict criminal behavior across a number of studies using a relative improvement over chance (RIOC) ratio. The authors were interested in the etiological roots of delinquency in addition to identifying characteristics that are predictive of reoffending behavior.¹ Based on their findings, Loeber and Dishion categorized and rank ordered variables predictive of delinquency into four areas: 1) family management composite measures (e.g., overall family functioning; supervision; parenting styles); 2) behavior (e.g., truancy; lying; stealing); 3) criminal or antisocial behavior of other family members; and 4) poor educational achievement. Factors predictive of recidivism were similar to those predictive of delinquency: 1) behavior (e.g., truancy; stealing; and lying); 2) child's problem behavior; 3) history of delinquent behavior; and 4) antisocial or criminal behavior in other family members. The authors noted that socioeconomic status was the weakest predictor of recidivism. They also observed that although the variables for predicting both delinquency and recidivism are similar, family functioning and educational achievement were not included as predictors in the recidivism literature reviewed in this study. In their discussion of the results of their study, Loeber and Dishion (1983) recognized the utility of identifying both personal and environmental variables when predicting recidivism. The authors further identified

1

Although a subtle nuance, there is a difference between the two as the research studies different populations, the former being samples including offending and non-offending subjects to determine who will become delinquent, and the latter studying samples of identified delinquents in an attempt to determine who will recidivate. As such, different risk factors may be predictive of different behavior, highlighting the importance of defining a study's sample.

that composite measures of variables were stronger predictors of future behavior than individual variables.

In a study investigating the predictors for adult offender recidivism, Gendreau, Little, and Goggin (1996) employed meta-analysis using one hundred and thirty-one studies. Predictive variables were grouped into static and dynamic groups, with individual variables further collapsed into one of eight domains. Thus, the investigators categorized the variables as follows: Age/Gender/Race, Criminal History, Family Factors, Intellectual Functioning, and Social Economic Status as static predictors; and Criminogenic Need Factors, Personal Distress, and Social Achievement as dynamic predictors. Results indicated that both of the broad static and dynamic groups were significant predictors of recidivism, with the static domain being a significantly better predictor of future reoffending. Further, although all of the eight predictive domains were predictive of recidivism, the domains of criminal history and criminogenic needs were significantly better predictors as compared to the other domains. These results reinforced the concept of inclusion of dynamic variables when attempting to determine an offenders risk to recidivate, both to increase the power of the predictive instrument in addition to offering guidance in regards to intervention strategies for risk management and reduction.

The aforementioned meta-analysis focused on the investigation of general recidivism of adult offenders and as such, posed limitations for generalizing results to specialized populations. Meta-analyses exploring the efficacy of predictive variables for specialized offender groups (i.e., the mentally disordered offender; Bonta et al., 1998) and for specific types of reoffending (i.e., sex offending; Hanson & Bussiere, 1998) have been

conducted to address the issue of generalizability and to determine whether the predictor variables for recidivism differ with respect to different offender groups or offence types. Overall, the results of the meta-analyses indicate that the major predictors of general and violent recidivism appear to be comparable for offender groups and to some extent, offence type. Antisocial personality and criminal history were the best predictors of recidivism for mentally disordered offenders, violent and general recidivism, and general recidivism of sexual offenders (Andrews & Bonta, 1998).² Sexual reoffending behavior by sex offenders specifically was best predicted by sexual criminal history and factors related to sexual deviance.

To date, two meta-analyses have investigated predictive variables (i.e., risk factors) for a youthful sample. Simourd and Andrews (1994) investigated risk factors of delinquency and recidivism with a focus on gender. Specifically, the authors sought to determine the important risk factors for each gender and to determine whether specific risk factors were better predictors for either gender based on the hypothesis, based on the Psychology of Criminal Conduct theory, that there would be no significant differences between genders for risk factors. Risk factors were grouped into eight categories: lower social class, family structure or parental problems, personal distress, minor personality variables, poor parent-child relations, educational difficulties, temperament or misconduct problems, and antisocial peers or attitudes. Results from the meta-analysis indicated that the groups did not differentiate on the risk factors that predict delinquency

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Andrews and Bonta (1998) theory of criminal behavior (Psychology of Criminal Conduct) contends that major correlates of criminal behavior are the same despite race, gender, class, and the presence or absence of a mental disorder. That is, criminal history, antisocial cognitions, criminal associates, and antisocial personality are the best predictors of recidivism. This theory will be further discussed later in the chapter.

or recidivism; for both groups, the strongest risk factors were (in descending order): antisocial peers or attitudes; temperament or misconduct problems; educational difficulties; poor parent-child relations; and minor personality variables. Additionally, no one factor was more important for either gender in predicting future criminal behavior. The authors further identified other risk factors that bear more investigation, including lack of attachment to convention and sexual behavior, which demonstrated strong correlations with delinquency. Other promising areas included victimization, illegitimate opportunity, lack of legitimate opportunity, lack of hobbies or involvement, accommodation problems, and self-concept issues. Overall, the authors conclude that the risk factors for delinquency are the same regardless of gender with the most important risk factors identified (i.e., antisocial peers or attitudes, temperament or misconduct problems, educational difficulties, poor parent-child relations, and minor personality variables) supporting the psychology of criminal conduct theory as presented by Andrews and Bonta (1998).³

Cottle et al. (2001) conducted a meta-analysis focusing on research that investigated juveniles and risk factors that predict recidivism with this group. This meta-analysis differs from Simourd and Andrews (1994) in the sense that it included studies focusing on juvenile offender populations and investigating recidivism rather than first-time delinquency. The authors identified twenty-two studies that met the above stated criteria. Following the method of previous meta-analysis, Cottle et al. divided the predictors from the various studies into eight groups: demographic information; offence history; family and social factors; educational factors; standardized test scores; substance

³The issue of gender and criminal behavior is readdressed later in this chapter.

use history; clinical factors; and formal risk assessment. The authors reported that the strongest individual predictors of recidivism were younger age at first commitment, younger age at first contact with the law, and a history of non-severe pathology. Other significant variables, in descending order, were: family problems; conduct problems; ineffective use of leisure time; delinquent peers; length of first incarceration; number of out-of-home placements; number of prior commitments; type of crime; standardized achievement score (inverse relationship); substance abuse; full-scale IQ score (inverse relationship); history of special education; risk assessment scores; history of abuse; gender (male); verbal IQ score (inverse relationship); single parent; race (minority); socioeconomic status; and number of prior arrests. Notably, the authors did not investigate the predictive power of the eight categories as composites or group them as static and dynamic factors which has been done in prior meta-analyses. They did, however, mention the importance of domains when designing risk assessment tools and dynamic factors when considering interventions. Further, the finding that risk assessment scores demonstrated a weak relationship relative to the other predictive factors was not discussed by the authors.

A Brief History of Risk Assessment

The emergence of risk assessment is intimately related to the research investigating the correlates of criminal behavior. The data collected in an effort to identify characteristics predictive of criminal behavior were quickly seen to be important in developing methods of classification of offenders in relation to risk for criminal and reoffending behavior. In an attempt to organize the immense amount of research in the area of prediction and risk assessment, the concept of generations has been introduced.

Although Wormith (2001) cautioned that this classification system for risk assessment is reductionist and suggests a developmental process, the organization around generations offers some sense of the history of risk assessment.

Generations of risk assessment

Risk assessment instruments have been delineated into three different categories: first, second, and third generation risk assessment instruments (Andrews & Bonta, 1998; Bonta, 1996). First generation risk assessments involved the collection of information on an individual and is often referred to as clinical judgement. This was generally accomplished through interviews with the client and significant others (e.g., parents, other caregivers, teachers, employers, and other professionals involved with the individual). Once the information was gathered, general conclusions were drawn and recommendations concerning dispositions and treatment were offered. Although the information gathered by this means was helpful and meaningful, it also represented personal biases in that only information considered important to the interviewer was collected and interpreted in the final report. Because of the subjective nature of first generation risk assessments, decisions as to who will re-offend may have been function of the client/clinician relationship and the latter's personal knowledge of criminal behavior rather than empirically proven predictive criteria (Bonta, 1996). Thus, the same individual may receive different ratings of risk from different professionals. First generation risk assessments have historically been used by individuals working with offenders and, at times, reflect 'gut' feelings about an individual's risk to re-offend based on previous knowledge of the offender. Theoretical development as to the etiology of criminal conduct, and subsequent research reporting the increased efficacy of actuarial

methods of risk assessment as compared to clinical prediction (i.e., Grove, Zald, Lebow, Snitz, & Nelson, 2000), paved the way for the development of more objective ways of assessing risk, leading to second and third generation risk assessments.

Second generation risk assessments are an objective means of assessing risk. They are comprised of variables found in research to correlate highly with criminal conduct as well as having the ability to differentiate between criminals and non-criminals (Bonta, 1996). This class of risk assessment instrument demonstrate good predictive value and are an improvement over the subjective decisions provided by first generation risk assessments. Their weakness, however, lies in the fact that only static variables are assessed (i.e., factors that do not change, such as criminal history). By relying only on static variables, an individual's risk never changes (Bonta, 1996; Gabor, 1986). Further, second generation risk assessments do not provide intervention and treatment information; rather, they provide classification information from which supervision and treatment decisions are made (e.g., the amount of parole supervision needed or the intensity of treatment required). Finally, second generation risk assessments are atheoretical in that their development is not guided by theory (Andrews & Bonta, 1998).

Third generation risk assessments address the weaknesses of second generation assessments in that they include dynamic variables (e.g., family dynamics, job stability, peers and companions). Dynamic risk factors are also referred to as criminogenic needs and are defined as those risk factors which have the ability to change and, when targeted for intervention, can reduce the likelihood of future criminal behavior. The use of dynamic variables allows for changes in levels of risk as these variables can change. Dynamic variables also provide insight into the needs of the offender and highlight areas

for treatment and intervention. An additional improvement to third generation risk assessments is that they are based on theory. An example of a third generation risk assessment is the Youth Level of Service/Case Management Inventory (YLS/CMI) developed by Hoge and Andrews (1996a). The theoretical basis of the YLS/CMI will be presented followed by an introduction and description of the instrument.

Theory of Criminal Behavior

When studying criminal behavior, three questions of interest consistently arise: 1) Why are some groups of people more likely than others to commit crime; 2) Why is crime more prevalent in some areas than in others; and 3) Why do some individuals commit crime while others do not? (Andrews & Bonta, 1998; Barken, 1997; Tierney, 1996). Sociological perspectives have historically been interested in the first two questions when studying criminal behavior whereas psychology and biology have been concerned with the third question. Andrews and Bonta (1998) stated that sociological theories, with the exception of Sutherland's Differential Association theory, have been unsuccessful in providing empirically supported explanations for criminal conduct because sociology, as a discipline, does not accept the contributions of psychology and the relevance of individual differences as an explanation of criminal behavior. The authors went so far as to say the discipline of sociology is "antipsychological" (pp. 14). Further, Andrews and Bonta (1998) stated that the contributions of biology have been dismissed from sociology based on the inherent ideology of sociology to resist explanations that blame the individual; rather, a focus on social structure and society as a whole is preferred. Barken (1997) addressed this criticism and stated that although it is true that sociology generally tends to look beyond the individual for explanations of

criminality, social process theories attempt to incorporate psychological concepts (e.g., Sutherland's Differential Association theory).

To bridge the gap between the disciplines, a unified approach to explaining criminal conduct is necessary. Andrews and Bonta (1998) attempted to integrate the different disciplines and provide a theory based on the empirical evidence generated from the three approaches (i.e., biology, sociology, and psychology). The authors' approach to examining criminal behavior is guided by the principles of the Psychology of Criminal Conduct (PCC) which will be introduced in subsequent text, followed by an unified approach to criminal conduct, the Personal, Interpersonal, and Community-Reinforcement (PIC-R) perspective.

The Psychology of Criminal Conduct (PCC)

PCC is guided by certain values and principles. These include a respect for the complexity of human behavior which encompasses respect for individual differences and a search for a holistic understanding of human behavior (Andrews & Bonta, 1998). The authors accepted the contributions of social structure made by sociologists in explaining criminal behavior (e.g., ethnicity, gender, social class), as well as the contributions of biology and psychology (i.e., individual differences which include biology, personality, cognition, and behavioral history in addition to relationships in the domains of home, school, work and leisure). Thus, criminal behavior is discussed in relation to the contributions made from different disciplines and is considered a subfield of both criminology and human psychology.

Andrews and Bonta (1998) stated that the objective of PCC is to understand (through rational empirical inquiry) variations (both interindividual and intraindividual)

in the delinquent and criminal behavior of individuals. From this empirical understanding, a theoretical and practical understanding of criminal conduct is desired that allows for prediction of future criminal behavior as well as effective interventions and treatments.

Based on the ideology that criminal behavior is complex and the etiology stems from a broad range of factors (i.e., from social structure to individual differences), a theory of criminal behavior has been proposed by Andrews and Bonta (1998). The PIC-R theory will be presented with key principles highlighted.

Personal, Interpersonal, and Community-Reinforcement (PIC-R)

PIC-R is described as a “broad social learning perspective on human conduct” (Andrews & Bonta, 1998, p. 150) whose principles of conduct draw heavily from the principles of behavioral and social learning theories due to their empirically proven efficacy for explaining behavior. As suggested by its name, PIC-R acknowledges factors at the personal, interpersonal, and community levels as contributing to criminal behavior.

PIC-R is an empirically-driven approach to explaining criminal behavior in the sense that it has taken empirically supported correlates of criminal behavior and organized them in a coherent, rational manner. Andrews and Bonta (1998) state that, “building theories on the basis of existing data may be characterized as ‘dustbowl empiricism’ the extreme. Limitations admitted, the radical empirical approach to building theoretical understanding at least has the potential of organizing knowledge in a rational manner” (p. 144). The most robust correlates of criminal behavior are antisocial attitudes, antisocial associates, criminal history, and antisocial personality (Andrews & Bonta, 1998; Gendreau et al., 1996) which Andrews and Bonta (1998) referred to as the

Big Four. These four constructs provide a basis for investigating the etiology of criminal behavior; other factors include individual differences such as biology, family, and social class.

The principles of behavioral analysis according to PIC-R are outlined in Andrews and Bonta (1998) and are included in Appendix A. One of the basic tenets of PIC-R is that all behavior is learned in the same manner; that is, criminal behavior is learned in the same manner as non-criminal behavior and both are guided by the same principles. PIC-R also states that all behavior is under the control of antecedent and consequent factors and that inter- and intraindividual variations of behaviors are due to variations in the rewards and costs for that behavior. These reward/cost contingencies are broadly influenced by social structures such as economy, culture, and politics. Further, antecedents and consequences for the behavior arise from four sources: 1) the individual (personally mediated events); 2) other persons (interpersonally mediated events); 3) the act itself (nonmediated or automatic and habitual events); and 4) other aspects of the situation. An important premise of PIC-R is the density of reinforcement (i.e., rewards and costs). Density of reinforcement refers to “the number, variety, quality and magnitude of rewards as well as the immediacy, frequency and regularity with which they are delivered” (p. 155). Finally, the impact of physical, cognitive and developmental individual differences and the impact these have on an individual’s source of control are noted. For example, interaction with the environment is mediated by one’s cognitive abilities. That is, an individual who is cognitively low functioning will experience different interactions with the environment and thus have different density of reinforcements from the sources of control than a cognitively high functioning individual.

The principles that guide PIC-R reflect contributions from radical behaviorism (e.g., rewards/costs and antecedent/consequent control) and social learning and differential association (e.g., the influence of associates, sources of control, and the premise that all behavior is learned in the same manner). Furthermore, contributions from general psychology (e.g., individual differences), sociology (e.g., social structure such as politics, culture, and economics), and biology (e.g., cognition, temperament) are acknowledged. Thus, PIC-R provides an interdisciplinary and unifying explanation of criminal conduct.

Race, Gender and Crime

Theories of criminal behavior have historically been based on research investigating European descent, male offending. At best, the research includes a small sample of female offenders. Several investigators questioned the utility of using European male generated theories of offending, and subsequent risk assessment instruments, when discussing female and First Nations offenders (Hann & Harman, 1992; Chesney-Lind, 1997; Funk, 1999). Others reported that factors which lead to general criminal behavior do not differ in a statistical sense for the genders or races (Bonta, 1989, Bonta, Lipinski, & Martin, 1992; Rantakallio, Myhrman, & Koironen, 1995; Simourd & Andrews, 1994; Steffensmeier & Allen, 1996) and that risk assessment instruments predict recidivism equally well for both males and females and ethnic groups, specifically persons of First Nations descent (Bonta, LaPrairie, & Wallace-Capretta, 1997; Ilacqua, Coulson, Lombardo, & Nutbrown, 1999; Jung & Rawana, 1999). PIC-R acknowledges the individual differences that may arise as a result of gender or race (i.e., density of reinforcement that is experienced and broad sociological structures that influence an individual) and contends that the correlates of criminal behavior will be the same for

everyone, regardless of race or gender.

The Youth Level of Service/Case Management Inventory (YLS/CMI)

Brief History

Hoge and Andrews (1996a; 1996b) developed a risk assessment instrument for use by professionals working with young offenders, the YLS/CMI. This instrument is based on the guiding principles of PCC as outlined previously and as such, is designed to incorporate information from a broad range of factors. The YLS/CMI evolved from the Youth Level of Supervision Inventory (YLSI; developed by Andrews, Robinson, & Hoge in 1984) which was developed from the Level of Supervision Inventory (LSI; developed by Andrews in 1982), a risk assessment for adult offenders. The original YLSI included 112 risk/need items which were divided into 10 subscales. The YLS/CMI retained 42 of the 112 items; retention of the 42 items was based on previous research indicating their high correlation with criminal behavior. Other improvements of the YLS/CMI over the YLSI include the addition of responsivity items, a professional override feature, and a direct linkage between assessment and case management for the offender (Andrews & Hoge, 1996b)

Description of the YLS/CMI

The YLS/CMI is a standardized instrument designed to assess the risk, need, and responsivity factors of young offenders. It is intended to provide information regarding the young offender's risk of general recidivism in addition to highlighting relevant areas of intervention in order to reduce risk. Thus, the YLS/CMI represents an amalgamation of prediction of criminal behavior with case management goal setting (e.g., treatment

issues). The YLS/CMI contains six components: 1) Assessment of Risks and Needs, 2) Summary of Risk/Need Factors, 3) Assessment of Other Needs/Special Considerations, 4) Your Assessment of the Client's General Risk/Need Level, 5) Contact Level, and 6) Case Management. A copy of the YLS/CMI is included in Appendix B.

Variables included in the first component, Assessment of Risks and Needs are based on empirical evidence meaning that all variables which have demonstrated empirical support as being associated with criminal behavior are incorporated. These variables are considered to be both dynamic and static and are organized into 8 subscales: 1) Prior and Current Offences/Dispositions, 2) Family Circumstances/Parenting, 3) Education/Employment, 4) Peer Relations, 5) Substance Use, 6) Leisure/Recreation, 7) Personality/Behavior, and 8) Attitudes/ Orientation. Items which apply to the youth are checked in each subscale and the number of items checked is then recorded. An overall risk level for each subscale is subsequently determined with cut-offs provided for each subscale (e.g., for the Prior and Current Offenses/Dispositions subscale, low risk = 0 items, moderate risk = 1-2 items and high risk = 3-5 items). It should be noted that these cut-off scores are to be viewed tentatively as normative data for the YLS/CMI is preliminary (Hoge & Andrews, 1996b). Descriptors are provided for each individual item to aid in scoring. The second component, Summary of Risks/Needs, allows for an overall risk level based on the adding of all subscale scores in addition to providing an overview of the levels of risk in the different areas. Four ranges of risk are provided: low; moderate; high; and very high.⁴

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It has been noted by Wormith (2001) that reducing a continuous variable such as a composite score of risk into categories introduces inaccuracies in assessment and prediction. One of these errors is that when an offender is categorized into one of the

The third component, Assessment of Other Needs/Special Considerations, provides a survey of items which Hoge and Andrews (1996b) stated may be relevant to disposition or treatment decisions, although they may not necessarily be associated with criminal behavior. Many of these items are labeled responsivity factors. Responsivity factors “refer to characteristics of the youth or their circumstances that are not directly associated with antisocial behavior but are relevant to the youth’s response to interventions” (Hoge, unpublished manuscript, p. 9). Thus, they are factors that may affect an individual’s response to treatment. The fourth component, Your Assessment of the Client’s General Risk/Need Level, allows the professional to provide his/her classification of the youth. In most cases, the classification will be the same as the one provided by the risk assessment. Extenuating circumstances not measured by the risk assessment, however, may increase or decrease risk. For example, if an abusive spouse or adult has left the home, the risk for the youth may decrease as the family may become a more stable environment. Thus, the ‘professional override’ option is provided with a requirement to comment as to why the override was used. Sections five and six (Contact Level and Case Management Plan respectively) provide an opportunity for the professional to determine level of supervision required for the youth as well as developing case management goals.

As noted above, the items included in the first component of the YLS/CMI are based on their empirically demonstrated association with criminal conduct. They are then

four risk categories, their individual probability of recidivism is based on averages of the category rather than their individual score. Thus, the practice of classifying the risk of an individual into categories has been questioned, with the option being the creation of norms tables for complete range of scores on the instrument.

grouped into separate categories as a means of organizing the information and providing risk levels for the separate categories. Composite scores of risk are considered to be better predictors of recidivism (Gendreau et al., 1996; Loeber & Dishion, 1983), thus, the subscale score should provide a more accurate predictor of risk than specific items would. A brief look at empirical evidence for each category and items will ensue.

Empirical Evidence

Criminal History

The premise that past behavior is the best predictor of future behavior has long been held in behavioral and social learning theories. This is particularly true when rewards, or lack of punishment, for the behavior is experienced by the individual (e.g., principles of learning provided by behaviorists, Sutherland, and Andrews and his colleagues). Further, the more often a behavior occurs, the likelihood of the behavior reoccurring is increased. PCC includes criminal history as one of the “Big Four” correlates of future criminal behavior.

This basic premise also stands for criminal behavior. Research consistently showed that one of the best predictors of future criminal behavior is past criminal behavior (Andrews & Bonta, 1998; Baird, 1985; Gendreau et al. 1996; Loeber & Dishion, 1983). Loeber and Dishion (1983) reviewed the delinquency literature from the United States and abroad and computed a measure of predictive efficiency for each of the predictors researched. The authors provided evidence that prior delinquent behavior improved prediction of future delinquent behavior with RIOC (relative improvement over chance) values ranging from 30.4 percent to 60.0 percent (average of 40 percent). In other words, the chance of correctly predicting future criminal behavior was increased, on

average, by 40 percent when prior criminal behavior was used as a predictor variable. Baird's (1985) review of the literature suggested that "prior criminal involvement indices such as age at first adjudication, number of prior adjudications, and number of prior commitments were the best predictors of future [criminal] behavior" (p. 34). In Cottle et al.'s (2001) meta-analysis of predictors of recidivism for juveniles, younger age at first commitment and younger age at first contact with the law were the strongest individual predictors. Further, the offence history domain, as defined by the authors, overall significantly predicted recidivism. Jung and Rawana (1999) reported similar findings across gender and race (i.e., Aboriginal versus non-Aboriginal); criminal history revealed the strongest relationship with recidivism.

Criminal history is a static risk factor as it is unchangeable. The YLS/CMI measures criminal history in its Prior and Current Offences/Dispositions subscale which is made up of five items. The items survey for prior dispositions and offences with a lengthier criminal history resulting in a higher risk level.

Family Dynamics

Loeber and Dishion (1983) stated that family functioning is an important predictor of delinquency and suggested that "it is likely that parents' child-rearing practices set such families apart from less delinquent families" (p. 87). Further, the authors hypothesized that parents of delinquent youth have less parenting skills than parents of non-delinquent youth. Ineffective parenting styles include the use of few rules, ineffective use of discipline, and inadequate supervision of children. The authors reported that composite predictors of family dynamics (i.e., combination of a number of the above-mentioned issues) improved prediction by 32 percent to 63 percent. Baird

(1985) included lack of parental control as predictive of a child's future criminal behavior. In Gendreau et al.'s (1996) meta-analysis of 131 studies of recidivism predictors for adult offenders, family rearing practices (lack of supervision and affection, conflict and abuse; effect size of .14) and family structure (separation from parents, broken home, foster parents; effect size of .09) were identified as significantly correlating with criminal behavior. Although these effect sizes may not appear to be significant in a practical sense (i.e., they do not appear large), the number of studies (131) and correlations with recidivism (1,141) generated by the meta-analysis and contributes to their power (Gendreau et al., 1996). Cottle et al. (2001) reported that the family and social factor domain overall was a strong predictor of recidivism. Individual predictor items within this domain that demonstrated significant predictive ability include: victim of abuse; reared by a single parent; number of out-of-home placements; and family problems.

The items surveyed in the Family Circumstances/Parenting subscale of the YLS/CMI include: inadequate supervision, parental difficulty in controlling behavior, inappropriate parental discipline, inconsistent parenting, poor father/child, and mother/child relations. These items are reflective of the literature presented above. They are considered dynamic in that there is a possibility of changing family relations through intervention. These areas are also considered criminogenic as dysfunctional family relations can contribute to offending.

Education and Employment

Loeber and Dishion (1983) reported that underachievement in school, particularly high school, improved prediction of delinquency by approximately 34 percent.

Underachievement in school was operationalized as being retained a grade before age 15 and achieving a grade point average below C. Truancy is also evidenced to increase the likelihood of correctly predicting delinquent behavior by 26 percent. Andrews and Bonta's (1998) review of developmental factors of delinquency includes school problems such as lack of school commitment, academic failure, and dropout as predictive of criminal behavior. Cottle et al.'s (2001) meta-analytic results reported that a history of special education was a significant predictor of recidivism. School attendance and school report of achievement did not reveal significance for recidivism, although standardized achievement scores revealed an inverse significant relationship with recidivism. Verbal and full scale IQ scores were also noted to be significant individual predictors, where as performance IQ scores were not.

The Education/Employment subscale of the YLS/CMI includes items assessing disruptive classroom behavior, disruptive behavior on school property, low achievement, problems in relationships with peers and teachers, truancy, and unemployment, the latter only if the youth should be seeking employment.

Peer Relations

Peer association has been widely studied as a predictor of criminal behavior. It has long been noted that delinquent youth socialize with other delinquent youth and this association produces strong correlations in all studies. Gendreau et al. (1996) found that antisocial companions was the best predictor of criminal behavior with an impressive effect size of .21. Baird (1985) included negative peer relationships as one of the 'universal' predictors of criminal behavior. Andrews and Bonta (1998) stated that they have failed to come across a study that used antisocial associates as a criterion that did

not produce significant correlations with criminal behavior. Cottle et al. (2001) and Jung and Rawana (1999) identified association with delinquent peers as a significant individual predictor of recidivism in youth.

The Peer Relations subscale of the YLS/CMI includes items measuring contact with delinquent acquaintances and friends as well as no contact with prosocial acquaintances and friends. PCC identifies peer relations as one of the “Big Four.” Social learning theory, PCC, and PIC-R emphasize the importance of learning from role modeling; as such, peer relations are important in terms of learning socially acceptable/unacceptable behaviors. They are also an important source of contingencies (i.e., rewards and costs) for behavior. These items are considered dynamic or criminogenic factors in that they have the potential of contributing to criminal behavior in the case of antisocial associates. They are also available for intervention (e.g., decrease delinquent associates and increase prosocial associates).

Substance Abuse

It is widely accepted among professionals working with offenders that substance abuse is a prevalent problem. In regards to young offenders, substance abuse in the family may lead to neglect, abuse, and general family dysfunction. The young persons themselves may begin to use alcohol and drugs partly as a learned behavior (e.g., having watched their parents use) and partly as a means of escape. Alcohol and drugs are thought to contribute to the disinhibition of control over a number of behaviors which may lead to criminal behavior (Andrews & Bonta, 1998). At times, criminal acts are conducted in order to obtain illicit substances (e.g., performing a break and enter in order to obtain goods to sell to buy drugs). Possession of drugs and alcohol are both criminal

acts for young offenders. Thus, the use of drugs and alcohol is widely seen as associated with criminal behavior.

Loeber and Dishion's (1983) review of the literature did not report substance use on its own as a predictor of criminal behavior. Substance abuse was included in some composite measures reviewed by the authors (other behaviors included promiscuity and fighting) which improved prediction by 68 percent. Drug/chemical and alcohol abuse are identified by Baird (1985) as predictive of continued criminality for juveniles. Gendreau et al. (1996) found substance abuse to be significantly correlated with criminal behavior demonstrating an effect size of .10. Cottle et al. (2001) reported that substance abuse, but not substance use, is predictive of recidivism; Jung and Rawana (1999) also reported that substance abuse as a composite measure is predictive of reoffending behavior.

The Substance Abuse subscale measures the youth's drug and alcohol use as well as whether substance abuse interferes with daily living and is contributing to offending.

Leisure and Recreation

The Leisure/Recreation subscale of the YLS/CMI surveys how the youth spends his/her spare time and prosocial activities. This subscale is based on the premise that the fewer prosocial activities the youth is involved in, the less attached he is to society (reflective of Durkheim's mechanisms of behavior control). Furthermore, if the youth is not involved in prosocial activities, he/she does not have the opportunity to associate with other prosocial youth. Thus, if leisure time is unproductive and unstructured, the likelihood of becoming involved in criminal activities is thought to increase.

Osgood, Wilson, O'Malley, Bachman, and Johnston (1996) studied the leisure activities of 1,700 eighteen- to twenty-six-year-old males and females in order to

investigate how leisure time is related to several deviant activities (i.e., criminal behavior, alcohol, marijuana, and other drug use, and dangerous driving). Leisure activities were grouped as structured or unstructured activities with the latter referring to activities that carry no agenda for how time is to be spent. Presence or absence of authority figures during activities was also investigated. Osgood et al. hypothesized that “situations conducive to deviance are especially prevalent in unstructured socializing activities with peers that occur in the absence of authority figures” (p. 651). It was concluded that participation in unstructured, unsupervised activities (e.g., riding around with friends, visiting with friends, going to parties, and evenings out) demonstrated a positive significant correlation with criminal activity ($R^2 = .0188$). Although the correlation does not appear significant in a practical sense (i.e., it is quite small), the large sample size employed by Osgood et al. contributes to its power. Cottle et al. (2001) and Jung and Rawana (1999) both reported ineffective use of leisure time as predictive of recidivism.

The Leisure/Recreation subscale of the YLS/CMI surveys the youth’s involvement in organized activities and hobbies in addition to determining whether spare time is used productively.

Personality and Individual Differences

As discussed at the beginning of this paper, criminological and sociological perspectives of criminal behavior generally dismiss the contributions of personality and individual differences offered by psychology and biology. PCC includes indicators of an antisocial personality as one the strongest predictors of criminal behavior (i.e., as one of the “Big Four”). An abundance of research investigating personality correlates of criminal behavior has forced the issue to the forefront as individual differences that

distinguish criminals from non-criminals have been discovered and replicated. Although a 'criminal personality' is not evidenced, or in most cases even suggested, several personality traits have been found to correlate with criminal behavior.

Caspi, Moffitt, Silva, Stouthamer-Loeber, Krueger, and Schmutte (1994) investigated the relation between personality traits and criminal behavior with a diverse sample (i.e., samples from both New Zealand and Pittsburgh, both males and females, and different age groups sampled). Three sources of information regarding delinquent behavior were used (i.e., self report of delinquency, official juvenile records, and reports of delinquent behavior from teachers and parents). Results revealed robust personality correlates across gender, ethnicity, nationality, and age with criminal behavior. These traits include responding to frustrating events in an aggressive manner, feelings of harassment, an adversarial attitude to interpersonal relationships; this constellation of traits was called a Negative Emotionality Personality. Also, a low Constraint Personality characterized by impulsivity, danger-taking, and rejection of conventional norms was also correlated with criminality. Gendreau et al.'s (1996) meta-analysis of the adult offender literature found that an antisocial personality (measured by various psychological tests including the MMPI) was significantly correlated with criminal behavior revealing an effect size of .18. Cottle et al.'s (2001) meta-analysis of the youth offending literature revealed that conduct problems (identified as presence of conduct-disorder symptoms) and non-severe pathology (defined as stress, anxiety) were significant predictors of recidivism. Jung and Rawana (1999) also reported personality and behavior composite measures as predictive of reoffending behavior in young offenders.

The Personality/Behavior subscale of the YLS/CMI surveys the following

behaviors: inflated self-esteem, physically aggressive, tantrums, short attention span, poor frustration tolerance, inadequate guilt feelings, and verbally aggressive. It should be noted that behaviors reflective of an 'antisocial personality' rather than personality traits are used as behaviors are observable and involve less personal subjectivity in rating.

Antisocial Attitudes

PCC includes antisocial attitudes as one of the "Big Four" correlates of criminal behavior. The authors suggested that antisocial attitudes (e.g., supportive of criminal values and rejecting of conventional attitudes) contribute to criminal behavior in that they provide attitudes, values, beliefs, and feelings favorable to crime. Gendreau et al.'s (1996) meta-analysis found that antisocial attitudes, characterized by attitudes supportive of an antisocial lifestyle, were significantly correlated to criminal behavior with an effect size of .18. Hoge, Andrews, and Leschied (1994) studied 338 young offenders (both males and females) to determine the effect of family dynamics, negative peer associations, and antisocial attitudes on reoffending. Outcome measures were the number of current and past convictions for serious offences (Serious Crime Index; SCI) and the total number of new convictions recorded during a 12 to 18 month follow-up (New Convictions Index; NCI). Results indicate that for both genders, antisocial attitudes were positively and significantly correlated with both SCI and NCI (males: $r = .27$ and $.32$ respectively and females: $r = .20$ and $.19$ respectively). Jung and Rawana (1999) reported that antisocial attitudes and orientation was a significant predictor of recidivism. Unfortunately, Cottle et al. (2001) did not include antisocial attitudes as a predictor variable.

The Attitudes/Orientation subscale of the YLS/CMI includes the following items:

antisocial/procriminal attitudes, reluctance to seek help for changing behavior, actively rejecting help for changing behavior, defiance of authority, and callousness for others' feelings.

Psychometric Data for YLS/CMI

Preliminary psychometric statistics were reported by Hoge and Andrews (1996b) based on a standardization study for the YLS/CMI in Ontario. The sample for the study consisted of 338 youths who had been convicted of a Criminal Code or Young Offender Act offence and had been adjudicated and sentenced to probation, open and secure custody. The YLS/CMI was scored based on information from the Predisposition Report (PDR). Outcome measures were based on the youths' actions after their disposition was completed with the follow-up ranging from 12 to 18 months. The outcome measures included: 1) Compliance with Conditions, as indicated by Probation Officers; 2) Overall Adjustment, measured by a scale used by Probation Officers in Ontario; 3) New Convictions, based on information from the courts; and 4) Any Reoffending which measured any criminal activity following the disposition whether a charge had been laid or not.

Means and standard deviations for both males and females in seven of the eight subscales were provided (Criminal History was not presented as data was not coded). Significant differences between genders were calculated with *t*-tests. Results indicate that mean scores for the Family Circumstances/Parenting, Substance Use, and Leisure/Recreation subscales were significantly higher for females than for males. Likewise, overall risk level was significantly higher for females than males. Reliability coefficients for each of the seven subscales were also calculated with

coefficients ranging from .62 to .76 reported, revealing adequate internal consistency. Subscale intercorrelations were also provided.

Evidence for criterion validity was provided by comparing the subscale means with level of disposition (i.e., probation, open custody, and secure custody). A linear relationship was demonstrated which reflected higher means with increased level of disposition suggesting that as level of disposition increases, risk in each of the subscale areas increases. All differences were significant at the .05 level. Correlations between subscales and outcome measures provided further evidence for criterion validity. All subscales revealed positive and significant (i.e., $p < .05$) correlations with the Any Reoffending and New Convictions outcome measures, suggesting that higher risk levels are associated with higher reoffending rates. Negative and significant (i.e., $p < .05$) correlations between all subscales and the Compliance with Conditions and Overall Adjustment outcome measures are reported, suggesting that higher risk levels are associated with lower levels of compliance to conditions and overall adjustment.

Evidence for predictive validity was demonstrated through the use of multiple regression analysis of the subscales and outcome measures. Family Circumstances/Parenting, Peer Relations, and Education/Employment revealed beta weights of .19, .15, and .14 respectively when predicting Any Reoffending ($R^2 = .47$; $p < .001$). Attitudes/Beliefs and Family Circumstances/Parenting demonstrated beta weights of .21 and .14 respectively when predicting New Convictions ($R^2 = .31$; $p < .001$). Family Circumstances/Parenting, Attitudes, Peer Relations, and Substance Abuse revealed beta weights of -.24, -.18, and -.14 respectively when predicting Compliance with Conditions ($R^2 = .43$; $p \leq .001$). Finally, Education/Employment, Attitudes/Beliefs,

and Leisure/Recreation demonstrated beta weights of -.21, -.19, and -.15 respectively when predicting Overall Adjustment ($R^2 = .53$; $p < .001$).

Preliminary psychometric statistics for the YLS/CMI appear encouraging. However, more research using this instrument must be conducted in order to determine the generalizability and predictive validity of the YLS/CMI over time.

CHAPTER 3
METHODOLOGY

Participants

Participants for the study were chosen based on the following criteria:

1) adjudicated as a Young Offender (i.e., have been convicted of an offence against the Criminal Code of Canada or the Young Offenders Act between the ages of twelve (12) and seventeen (17);

2) were eligible for reoffending behavior during the follow-up phase of the study. (Eligible for reoffending referred to whether the youth was in a position to recidivate. A youth serving either an open or closed custody disposition or living in a group or open custody home was not considered eligible to reoffend as that youth was residing in a structured environment under the sanctions of the Young Offenders Act. If a youth had: a) been sentenced to a probationary period or community disposition; b) been reviewed out of custody to probation or no disposition situation; or c) completed his/her custody disposition and released to a probation or no disposition situation, the youth was then considered eligible for reoffending); and

3) assigned to a Community Youth Worker in the North Battleford and Saskatoon region as of May 31, 2001.

Sample

Random sampling of Young Offenders across the province would have been the

ideal way to obtain a sample. This type of sampling was not feasible, given logistical and practical barriers. At the time of this study, there was no existing data base describing the risk level of Saskatchewan Young Offenders and the person resources and time required to collect information provincially was unavailable for the study. As a result, the following details were taken into consideration when deciding on sampling procedures.

To ensure sample sizes that would allow for meaningful statistical analyses, a sample size of one hundred (100) was collected. An arbitrary start date of May 31, 2001, was chosen by the investigator to begin data collection for Phase I. Thus, after this start date, any youth fitting the above criteria was included in the study. Selection of participants continued until 100 participants were obtained.

The Young Offenders Offices of the North Battleford and Saskatoon region, and custody institutions in the North Battleford and Saskatoon area, were chosen for the current study for several reasons. First, they were in close proximity to the investigator which made access to participants logistically feasible. Second, choosing participants from these areas provided a cross-section of rural/urban and Aboriginal/non-Aboriginal youth, allowing for group comparisons. Finally, initial contact with supervisors of Young Offenders Departments in the Saskatoon and North Battleford region revealed that inclusion of the aforementioned areas would provide an adequate number of participants for the study.

Subjects for the sample were collected between May 31, 2001, and September 27, 2001. Although an initial sample of 100 subjects was collected, six cases were dropped from analyses. Two cases were not used as the youths' files were transferred to different regions and the data for these youths were not available. Three additional cases were

dropped as the youths' files did not include the necessary data for the analyses. For these cases, current Predisposition Reports were not available, and the assigned Youth Workers were not familiar enough with the subjects to confidently supply valid information in order to complete the YLS/CMI. The final case was dropped, as the case became delayed in the court system and further data were not available. Although the youth was adjudicated, the disposition for the offence was delayed to determine competency of the youth. As a result, the final sample size for this study was 94 subjects.

Materials/Instruments

YLS/CMI

The YLS/CMI is a standardized instrument designed to assess for the risk, need, and responsivity factors of young offenders. The YLS/CMI is made up of six parts, two of which will be used in the current study: 1) Assessment of Risks and Needs; and 2) Summary of Risk/Need Factors. Part I, Assessment of Risks and Needs, contains 42 items which are organized into eight subscales: 1) Prior and Current Offences/Dispositions; 2) Family Circumstances/Parenting; 3) Education/Employment; 4) Peer Relations; 5) Substance Use; 6) Leisure/Recreation; 7) Personality/Behavior; and 8) Attitudes/ Orientation. Items which apply to the youth are checked in each subscale and the number of items checked is then recorded; an overall risk level for each subscale is subsequently determined with cut-offs provided for each subscale (e.g., for the Prior and Current Offences/Dispositions subscale, low risk = 0 items, moderate risk = 1-2 items and high risk = 3-5 items). Descriptors are provided for each individual item to aid in scoring. Part II, Summary of Risks/Needs, allows for an overall risk level based on the adding of all subscale scores in addition to providing an overview of the levels of risk in

the different areas. Four ranges of risk are provided: low (0-8); moderate (9-22); high (23-34); and very high (34-42).

Sources of Information for YLS/CMI

The following sources of information were used by the investigator to complete the Assessment of Risks and Needs component of the YLS/CMI.

Community Youth Worker. Upon entering the Young Offender system, each youth is assigned a Community Youth Worker; this worker remains with the youth as long as the youth stays in the assigned region. The Community Youth Worker is generally very familiar with the young person's situation as they have personal contact with the family, prepare reports for the courts, and follow the youth's disposition until complete. Community Youth Workers were contacted by the investigator for clarification of information.

Predisposition Reports. Predisposition reports (PDRs) are multi-source documents written by the Community Youth Workers for the Youth Court. These documents are required by the Youth Court Judges for disposition decisions. Information contained in the PDR includes family history, current family makeup, educational history, psychological interventions, work history, prior offending history, prior disposition history, current offences, victim responses, youth's response to current offences, youth's leisure activities, drug and alcohol use, and youth's current health. Information for the PDR is collected by the Community Youth Worker from several sources through semi-structured interviews including the youth, parents/guardians, educators, victims, other professionals involved with the youth, individuals in the community, to name a few. Much of the information required to write the PDR is similar

to what is needed to complete the Assessment of Risks and Needs component of the YLS/CMI. A copy of the format and information required to be included in a PDR is offered in Appendix C.

Judicial Interim Release Reports. A Judicial Interim Release (JIR) Report is a document ordered by the Youth Court and prepared by a Community Youth Worker or JIR worker. In the course of preparing this report, the worker explores alternatives to a remand in custody, allowing the Youth Court to determine whether a youth can be released pending a conviction and disposition. The purpose of a JIR Report is to ascertain whether a place of residence offering adequate adult supervision is available to the youth. Information for this report is gathered through semi-structured interviews with the youth's family, school personnel or employer, and any other agencies and community resources the youth is involved with.

Psychological Reports. Some young offenders may have had Court Ordered Psychological Assessments. These reports typically include a personal and family history, details surrounding the current offence, cognitive and achievement assessment, and various types of personality assessments. A summary and recommendations are also included in the report.

Outcome Measures

For the purposes of this study, recidivism was defined as involvement in criminal behavior. Research investigating the efficacy of risk assessments use a variety of methods to measure recidivism such as self-report of criminal behavior, adjustment and compliance to probation orders or during post-disposition phase, and official court records (charges and convictions). This study employed the latter method for two

reasons. Self-report of any criminal activity by the youth in this sample was not possible as the researcher did not have access to the youth. Rather, only file information was used to gather information. Secondly, court records are objective measures of criminal behavior because of the due process involved and as such, it can be argued that they are better measures of recidivism than observations about compliance or adjustment which may be biased due to client/youth worker relationship, particularly in Saskatchewan where no objective measures of compliance or adjustment are used.

To measure recidivism, two outcome measures were used for this study. First, recidivism was operationally defined as receiving a charge in the six-month follow-up period, measured in a binary manner (yes/no). Evidence of a conviction in the six-month follow-up was also collected and operationally defined as the second measure of recidivism, again as a dichotomous variable. Records of both charges and convictions were used for two reasons. Due to the nature of this study, that is, a six-month follow-up period, it was conceivable that youth may have been charged in the follow-up period but not been convicted of the charge due to the court process. In Saskatchewan, the average court processing time for Young Offenders is approximately two to three months. This could have potentially translated into charges outstanding in front of the court by the end of the six-month follow-up period if the youth had been charged late in the follow-up period. Secondly, youth who were charged with a Criminal Code or Young Offenders offence, even if they were not convicted of the offence, could be interpreted to be adjusting poorly to their community dispositions as they are coming in contact with the police.

Sources of Information for Recidivism

The sources of information that were used in collecting recidivism data were as follows.

File Recordings (Quarterly Summaries). While a youth is on probation, file recordings are maintained by the CYW. These recordings summarize any contact the CYW has with the youth and family as well as any contact with other agencies involved with the youth including treatment agencies, school/employer, and other community resources. On a quarterly basis (every three months), these file recordings are summarized providing a synopsis of young person's functioning while on probation.

Warrants of Conviction. Official documents provided by the Youth Court confirming convictions and dispositions are maintained in a youth's file.

Criminal Police Information Records (CPIC). Royal Canadian Mounted Police (RCMP) maintain an information system charges and convictions. RCMP detachments in both North Battleford and Saskatoon were contacted to provide CPIC information on the youth in the sample.

Police Information Records System (PIRS). In addition to RCMP, Saskatoon also has a City Police force. The Saskatoon City Police maintain an autonomous information system of charges and convictions. The Saskatoon City Police were supplied with the names of the youth included in the sample who then provided information on charges and convictions from their data base.

Judicial Automated Information Network (JAIN). Court services in Saskatchewan utilize an automated information system (JAIN) to track court proceedings in Saskatchewan. The researcher searched JAIN to obtain recidivism data for the sample.

Procedure

Data for this study was collected in two phases: a) Phase I: Risk Assessment Data Collection and b) Phase II: Recidivism Data Collection.

Phase I: Risk Assessment Data Collection

All youth adjudicated and receiving probation as of May 31, 2001, and thereafter in the cities of North Battleford and Saskatoon were eligible for the current study.

Furthermore, all youth released to probation or no disposition situation as of May 31, 2001, and thereafter were also eligible for the study. This included youths from secure custody settings (i.e., North Battleford Youth Center, and Kilburn Hall Youth Center), open custody settings (i.e., Drumming Hill Youth Center, Yarrow Youth Farm, Prince Albert Youth Residence, Nesbitt Youth Center) and open custody homes with an assigned Community Youth Worker in the Saskatoon or North Battleford areas.

The above-mentioned custody facilities were contacted to determine which youths would be finished their dispositions and returning to a home environment as of May 31, 2001, and thereafter. Similarly, the Young Offenders Offices in North Battleford and Saskatoon were contacted to obtain a list of individuals placed on probation on May 31, 2001, and thereafter. Upon receiving notice that a youth was eligible for the current study, the youth's file was reviewed. Based on file information, in particular Predisposition Reports and discussions with Community Youth Workers, Parts I and II of the YLS/CMI were completed by the investigator.

Phase II: Recidivism Data Collection

After a six-month period, which was based on each participant's eligibility for reoffending date, recidivism data were collected for each subject. Reoffending was measured as any new charge or conviction against the Criminal Code of Canada or

Young Offenders Act.

To reduce the possibility of scorer bias, the scoring of the YLS/CMI and recidivism measures were done in an independent fashion, meaning the investigator scored the recidivism measures without prior consultation of the participant's risk level. It was assumed that the six-month interval between Phase I and II of the procedure allowed for a sufficient period of time for the investigator to have forgotten specific risk levels of individual participants.

Confidentiality

Confidentiality of subjects is of utmost importance in all research and particularly so in the current study as Young Offenders receive additional protection of anonymity under the Young Offenders Act. As such, consideration was given to how data from individual participants in the study were to be handled in regards to confidentiality. Because information was collected at two separate time periods, some method of ensuring the two sets of data were correctly matched while retaining confidentiality of the subjects needed to be employed. This was obtained by maintaining a master list of subjects, each of whom received a code number. Thus, when all information was collected and the YLS/CMI was completed (Phase I of the study), the individual's name was not included in the database. Rather, the participant was assigned a number for identification. The primary investigator maintained a master list of participant's names and corresponding identifying number; only the primary investigator had access to this list. Thus, when data were entered for statistical analysis, code numbers, rather than personal names, were used. The master list was be consulted when recidivism data needed to be matched with risk assessment data.

All results were presented in an aggregated manner and no identifying information was used. Thus, all participants remain confidential.

Statistics for significance testing

The following research questions were used for this study: a) “To what extent is the YLS/CMI predictive of future criminal behavior in Saskatchewan Young Offenders?”; and b) “How effective are antisocial attitudes, peer relations, behavioral history, and personality in predicting future criminal behavior in Saskatchewan Young Offenders?”. Three levels of statistical testing were employed to help answer the above questions.

The first level of statistical testing involved correlations (r) between the independent variable (YLS/CMI composite score) and the dependent variable (recidivism, yes/no). Once the primary correlation between the two variables was calculated, subsequent analyses were conducted involving correlations between the YLS/CMI composite scores and characteristics of the sample, specifically gender and ethnicity. From these analyses, relationships between the YLS/CMI and these characteristics were investigated. Further analyses at this level included correlations of subscale totals from the YLS/CMI and the dichotomous recidivism variables in order to provide insight into answering the second research question, “How effective are antisocial attitudes, peer relations, behavioral history, and personality in predicting future criminal behavior in Saskatchewan Young Offenders?” Moreover, correlations between the subscale totals from the YLS/CMI and the above identified characteristics of the sample were calculated, offering further in-depth information into the differences within the sample.

The next level of statistical testing involved prediction based on logistic regression equations. The initial statistical test employed a regression equation with the composite score of the YLS/CMI as the independent variable (X) and recidivism as the dependent variable (Y). Results from these analyses were used to investigate the first research question, “To what extent is the YLS/CMI predictive of future criminal behavior in Saskatchewan Young Offenders?” Additional statistical testing at this level included a forward logistical regression model using the subscale totals of the YLS/CMI as predictors for the dependent variables of recidivism. The results from these tests were used to investigate the second research question, “How effective are antisocial attitudes, peer relations, behavioral history, and personality in predicting future criminal behavior in Saskatchewan Young Offenders?”

The third stage of significance testing involved an ANOVA using the levels of risk provided by the YLS/CMI composite score as the independent variables and recidivism rate as the dependent variable. Here, a positive relationship between the risk levels and recidivism rates was expected. That is, as level of risk as defined by the composite score of the YLS/CMI increases, recidivism rates were also expected to increase. Results from these analyses provided practical information for use in the real world; if a positive relationship was found, the effectiveness of the tool could be demonstrated to practitioners working with Young Offenders.

All statistical analyses were completed using the Statistical Package for the Social Sciences software, Version 7.5.1.

CHAPTER 4

RESULTS

Characteristics of the sample

Demographic Characteristics

Table 4.1 provides descriptive statistics for the demographic characteristics of the sample. Consistent with the characteristics of Saskatchewan's youth justice system, 59 percent ($n = 55$) of the sample were Aboriginal youth, while 7 percent ($n = 7$) of the sample were Metis, and 34 percent ($n = 32$) were non-Aboriginal. Because of the small number of Metis subjects, the Aboriginal and Metis groups were combined into one group for analysis. Thus, the final ratio was 66 percent ($n = 62$) Aboriginals and 34 percent ($n = 32$) non-Aboriginal youth. A majority of the subjects came from Saskatoon ($n = 72$) accounting for 77 percent of the sample. The remaining 22 subjects were from North Battleford.

Again consistent with the characteristics of youth in Saskatchewan's youth justice system, the sample was overwhelmingly male (78 percent, $n = 73$) and only 22 percent ($n = 21$) of the sample were female. The youth in this sample ranged from 12 to 18 years, with a mean age of 15.86 ($SD = 1.45$). The average age for male youths in this sample was 15.79 ($SD = 1.45$) and female youth 16.10 ($SD = 1.45$). An independent *t*-test revealed no significant differences between males and females for age (Table 4.2). Aboriginal youth had a mean age of 15.77 ($SD = 1.60$) and non-Aboriginal youth had an average age of 16.03

Table 4.1: Demographic information for the sample

	Total Sample	Males	Females	Aboriginal*	Non-Aboriginal
N	94	73 (78%)	21 (22%)	62 (66%)	32 (34%)
Mean age	15.86 (1.45)**	15.79 (1.45)	16.10 (1.45)	15.77 (1.60)	16.03 (1.09)
Site					
North Battleford	22	20	2	20	2
Saskatoon	72	53	19	42	30

*Combined Group consisting of Aboriginal and Metis youth

**Standard deviations in parentheses

Table 4.2: *T*-tests comparing age between groups

	t	df	Significance (2-tailed)	Mean Difference	Standard Error Difference
Male versus Female	-.837	92	.405	-.30	.36
Aboriginal versus Non-Aboriginal	-.814	92	.418	-.26	.32

($SD = 1.09$) for this sample. Again, an independent t -test revealed no significant difference between Aboriginal and non-Aboriginal youth for this sample.

Offence Characteristics of the Youths in the Sample

For each youth in the sample, data were collected on the index offence (the original offence that allowed the youth to be eligible for the study) and offence history of the subjects. Offences were organized into one of six categories as listed in Table 4.3 and 4.4, capturing type and seriousness of the offence. The basic model for this type of organization has been used in other research with risk assessment (Funk, 1999). This organization allows for a discussion of the general offence characteristics of the sample. A list of offence categories and corresponding offences is offered in Appendix D. Table 4.3 and 4.4 present the frequencies and proportions of index and prior offences for all groups, along with the corresponding rank order within the group.

Index Offence

The youth in the sample were generally convicted of a combination of offence types. In other words, these youths did not tend to be consistently charged with one type of offence. Systems generated offences, such as failure to comply with recognizance, and Young Offender Offences, such as breach of probation conditions, were consistently rated in the top three index convictions for all groups. Conversely, Weapons Offences, for instance, carrying a concealed weapon, and Canadian Drug and Substances Act Offences, such as possession of narcotics, were the least common convictions across groups. Less serious property offences, such as theft under \$5000 and break and enter, demonstrated the most frequent convictions for males and non-Aboriginals. Offences contravening court orders under the Criminal Code and Young Offenders Act were most

Table 4.3: Index Offence Frequency of sample

	Total Sample		Males		Females		Aboriginal		Non-Aboriginal	
	#	%	#	%	#	%	#	%	#	%
Serious Person Offence	17	18(5)	10	14(6)	7	33(5)	10	16(6)	7	22(3)
Less Serious Person Offence	21	22(4)	12	16(5)	9	43(3)	13	21(5)	8	25(2)
Serious Property Offence	21	22(4)	19	26(4)	2	10(6)	17	27(4)	4	13(4)
Less Serious Property Offence	43	46(2)	35	48(1)	8	38(4)	32	52(3)	11	34(1)
Weapons Offence	6	6(6)	5	7(7)	1	5(7)	4	7(7)	2	6(5)
Other Criminal Code Offence	45	48(1)	33	45(2)	12	57(1)	34	55(2)	11	34(1)
Young Offenders Act Offence	40	43(3)	29	40(3)	11	52(2)	29	47(1)	11	34(1)
CDSA* Offence	5	5(7)	3	4(8)	2	10(6)	3	5(8)	2	6(5)
Mean index offences	4.23		4.23		5.10		5.15		2.97	
N	94		73		21		62		32	

* CDSA: Canadian Drug and Substance Act

Note: Rank order in parenthesis

common convictions for females and Aboriginals, followed by less serious person offences, such as simple assault and uttering threats, and less serious property offences, such as shoplifting, respectively.

The mean number of index offences for the entire sample was 4.23 with a range of 1 to 14 offences. The mean number of index offences for males and females was 4.23 and 5.10 respectively. An independent samples *t*-test revealed no statistically significant difference between the genders in number of index offences. There was, however, a significant difference between the index offence characteristics of Aboriginal and non-Aboriginal youths. The mean number of index offences for Aboriginal youth in this sample was 5.15 while the non-Aboriginal youths had an average of 2.97 offences. An independent *t*-test was used to compare these two groups and demonstrated that the difference between the means for these groups was statistically significant ($p \leq .01$). Results from these analyses are presented in Table 4.5.

Offence History

Data on offence history of the sample were also collected. Of the 96 youths, 39 percent ($n = 37$) of the sample had no offence history or were first-time offenders. Over one-third of the sample had previously been convicted of a violent offence: 17 percent ($n = 16$) of the sample had a serious person offence in their offence history, and 18 percent ($n = 17$) of the sample had been convicted of a less serious person offence. A large majority of the youths had a property offence with 34 percent ($n = 32$) reporting a serious property offence in their history and 46 percent ($n = 43$) of the sample with a less serious property offence as a prior conviction. Youth in the sample also commonly

Table 4.4: Offence History of sample

	Total Sample		Males		Females		Aboriginal		Non-Aboriginal	
	#	%	#	%	#	%	#	%	#	%
No Prior Convictions	37	40	30	41	7	33	21	34	16	50
Serious Person Offence	16	17(6)	9	12(6)	7	33(4)	14	23(6)	2	6(5)
Less Serious Person Offence	17	18(5)	12	16(5)	5	24(5)	14	23(5)	3	9(4)
Serious Property Offence	32	34(3)	25	34(3)	7	33(4)	24	39(3)	8	25(2)
Less Serious Property Offence	43	46(1)	32	44(1)	11	52(2)	32	52(2)	11	34(1)
Weapons Offence	2	2(7)	2	3(7)	0	0(7)	1	2(7)	1	3(6)
Other Criminal Code Offence	41	44(2)	28	38(2)	13	62(1)	33	53(1)	8	25(2)
Young Offenders Act Offence	28	30(4)	20	27(4)	8	38(3)	23	37(4)	5	16(3)
CDSA* Offence	1	1(8)	0	0(8)	1	4(6)	1	1(7)	0	0(7)
Mean number of offences	4.23		4.23		5.10		5.15		2.97	
N	94		73		21		62		32	

*Canadian Drug and Substance Act Note: Rank order in parenthesis

demonstrated systems generated offences such as non-compliance with court or probation orders with 43 percent ($n = 41$) having been convicted of other Criminal Code charges and 30 percent ($n = 28$) reporting a Young Offenders Act conviction. A small number of the youths in the sample had a Weapons offence (two percent, $n = 2$) or a Canadian Drug and Substance Act offence (one percent, $n = 1$) in their offence history.

The range of previous offences was from 0 to 31, and the mean number of prior convictions for the entire sample was 5.93. The mean number of prior convictions for males was 5.42 (range = 0 - 31) and females was 7.67 (range = 0 - 31). Comparisons of these means using an independent *t*-test revealed no difference between males and females for mean number of prior offences. Average number of prior offences for Aboriginal and non-Aboriginal youth was 6.73 (range = 0 - 31) and 4.38 (range = 0 - 31) respectively. Further examination of the means for Aboriginal and non-Aboriginal youth regarding mean number of previous offences revealed no significant difference. Results from these analyses are presented in Table 4.5.

Dispositions for Index Offence

Tables 4.6 and 4.7 illustrate the dispositions received by youths for the original offence. Judges generally sentenced the youths in this sample to a combination of dispositions with almost half of the youths (49 percent, $n = 46$) receiving more than one order of disposition. Of the 26 youths who received custody, 21 percent ($n = 20$) of the sample received open custody, while 6 percent of the sample were sentenced to secure custody. A small proportion of the youths (13 percent, $n = 12$) were released to the community after serving time in custody prior to sentencing. Probation was the most frequent disposition received by youths in this sample (80 percent, $n = 75$). Other

4.5: Independent *t*-tests for Mean number of Index and Prior Offences

Group	Mean	Standard Deviation	Standard Error of mean	t	df	Significance (2 tailed)	Mean Difference
Index Offence							
Males	4.23	3.17	.37	-1.037	91	.302	-.87
Females	5.10	3.80	.85				
Aboriginal	5.15	3.34	.42	3.126	91	.002	2.18
Non-Aboriginal	2.97	2.77	.50				
Prior Offences							
Males	5.42	7.42	.87	-1.179	92	.241	-2.24
Females	7.67	8.55	1.87				
Aboriginal	6.73	7.41	.94	1.411	92	.162	2.35
Non-Aboriginal	4.38	8.12	1.44				

Table 4.6: Disposition frequencies for index offence

	Total Sample		Males		Females		Aboriginal		Non-Aboriginal	
	#	%	#	%	#	%	#	%	#	%
Secure Custody	6	6	6	8	0	0	5	8	1	3
Open Custody	20	21	17	23	3	14	17	27	3	9
Time Served	12	13	6	8	6	29	10	16	2	6
Probation	75	80	59	81	16	76	48	77	27	84
Community Service Hours	33	35	25	34	8	38	23	37	10	31
Fine	11	12	9	12	2	10	9	15	2	6

Table 4.7: Frequencies for stand-alone dispositions and combination of dispositions for index offence

	Total Sample		Males		Females		Aboriginal		Non-Aboriginal	
	#	%	#	%	#	%	#	%	#	%
Secure custody	2	2	2	3	0	0	1	2	1	3
Open custody	4	4	2	3	2	10	3	5	1	3
Time served	4	4	2	3	2	10	3	5	1	3
Probation	30	32	24	33	6	29	17	27	13	41
Community Service Order	5	5	5	7	0	0	3	5	2	6
Fine	3	3	3	4	0	0	2	3	1	3
Combination of above	46	49	35	48	11	52	33	53	13	41

community dispositions were also noted including 35 percent ($n = 33$) of the youths receiving community service hours and 12 percent ($n = 11$) of the youths receiving a fine. When considering the most onerous disposition, that is, custody (i.e., open and secure custody) versus community dispositions (e.g., time served, probation, community service hours, and fine), 25 percent ($n = 23$) of the sample received a custody disposition and 76 percent ($n = 71$) of the sample received a community disposition.

Characteristics of the YLS/CMI

Prior to estimating any prediction models, a number of statistical tests were conducted to evaluate the properties of the YLS/CMI. Frequency distributions, histograms, and descriptive statistics were estimated for the total sample. Analysis of the intercorrelations of the subscales of the YLS/CMI as well as a reliability analysis were also conducted. The results of these analyses follow.

Descriptive statistics and characteristics of the distribution for the YLS/CMI composite score are presented in Table 4.8. For the total sample, the mean score on the YLS/CMI was 15.93 ($SD = 7.08$). Figure 4.1 illustrates the frequency distribution of the entire sample for the composite score of the YLS/CMI. As can be seen from this distribution, the sample resembles a bimodal curve with a clustering of scores around 12 and 18 noted.

In order to determine whether the data were suitable for parametric statistics, the skewness and kurtosis of the distribution were also estimated as data that are skewed may reduce the efficacy of the regression models to produce valid and unbiased results. Because all of the distributions revealed values between ± 1.00 for both skewness and kurtosis, which fall within the acceptable ranges for statistical analyses (George &

Table 4.8: Youth Level of Service/Case Management Inventory Composite Scores Distribution descriptions

Statistic	N	Mean	SD	Min	Max	Range	SEM	Kurtosis	Skewness
Group									
Total Sample	94	15.93	7.08	1	34	33	.73	-.259	.031
Males	73	15.73	7.39	1	34	33	.87	-.313	.033
Females	21	16.62	5.95	7	30	23	1.30	-.345	.243
Aboriginal	62	18.18	6.25	3	34	31	.79	.465	-.006
Non-Aboriginal	32	11.56	6.61	1	26	25	1.17	-.056	.558

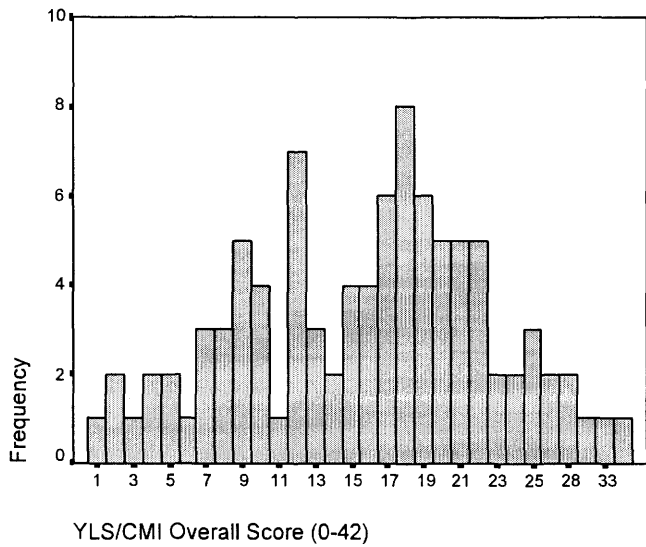


Figure 4.1: Frequency distribution of the YLS/CMI composite score for total sample

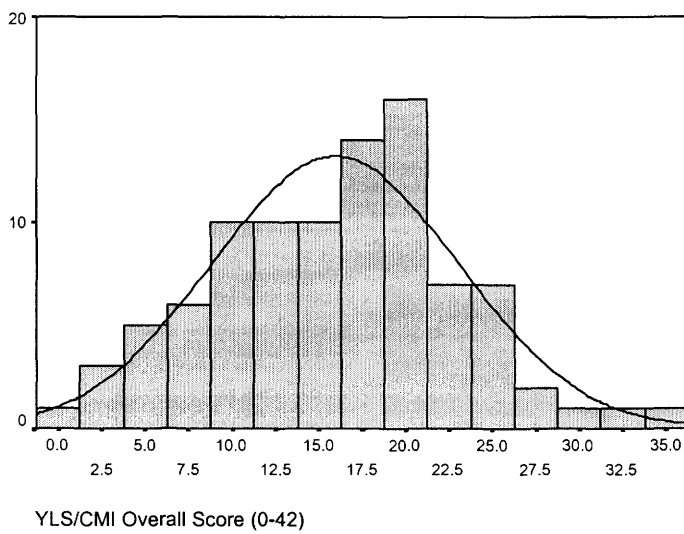
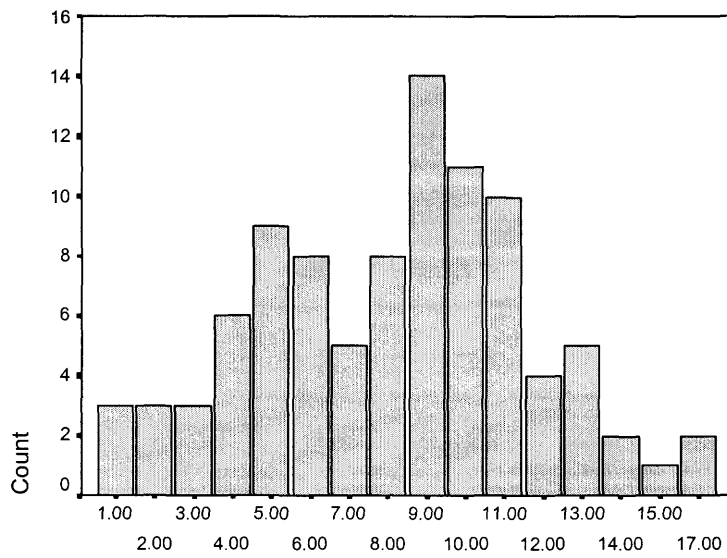


Figure 4.2: Histogram for YLS/CMI composite score for total sample



YLS/CMI Composite score distributed by 2 points

Figure 4.3: Frequency distribution for YLS/CMI composite score distributed by 2 points for total sample

Table 4.9: Youth Level of Service/Case Management Inventory Overall Ratings Frequencies for Total Sample ($N = 94$), Males ($n = 73$), Females ($n = 21$), Aboriginals ($n = 62$), and Non-Aboriginal ($n = 32$)

	Total Sample	Males	Females	Aboriginal	Non-Aboriginal
Original Risk Levels					
Low (0-8)	14 (14%)	13 (18%)	1 (5%)	5 (8%)	9 (28%)
Moderate (9-22)	67 (71%)	49 (67%)	18 (86%)	47 (76%)	20 (63%)
High (23-34)	12 (13%)	10 (14%)	2 (10%)	9 (15%)	3 (9%)
Very High (35-42)	1 (1%)	1 (1%)	0 (0%)	1 (2%)	0 (0%)
New Risk Levels					
Low (0-10)	24 (26%)	20 (27%)	4 (19%)	8 (13%)	15 (24%)
Moderate (11-17)	27 (29%)	22 (30%)	5 (24%)	23 (37%)	16 (26%)
High (18-21)	24 (26%)	16 (22%)	8 (38%)	16 (50%)	1 (3%)
Very High (22-42)	19 (20%)	15 (21%)	4 (19%)	12 (38%)	3 (9%)

Mallery, 2001), parametric statistics were considered appropriate.

Also of interest was the distribution of the total sample when subjects were categorized into one of the four risk levels using the cut-off scores provided by Andrews and Bonta (1996a). Table 4.9 provides information on the distribution of the sample for the four risk categories, low, moderate, high and very high, and revealed a large proportion of the subjects categorized in the moderate category (71 percent). This clustering of subjects in the moderate category was likely due to sampling criteria. Only youths who had adequate information on their files, meaning at the very least a recently prepared Predisposition report, were included in the sample. Not all adjudicated youth have Predisposition reports, as they have waived their right to have one prepared on their behalf. Further, these youth are typically sentenced to non-reporting probation which does not require active involvement from a Youth Worker. It is expected that these would be low risk youth who were not included in the sample and as such, may have skewed the sample distribution. In an attempt to produce a more evenly grouped distribution, new cut-off scores were created by quartering the sample. This resulted in the following cut-offs for the four risk levels: scores between 0 and 10 inclusive were categorized as low; scores between 11 and 17 inclusive were categorized as moderate; scores between 18 and 21 inclusive were categorized as high; and finally, scores between 22 and 42 inclusive were categorized as very high. The distribution of the sample after this procedure is presented in Table 4.9.

Intercorrelations of the subscales and data on reliability are presented in Table 4.10 along with means and standard deviations for each subscale. Table 10 reveals

Table 4.10: YLS/CMI Intercorrelations between the Composite Score and the Eight Subscales, means, and standard Deviations and Internal Consistency Estimates* ($N = 94$)

YLS/CMI Factor	1	2	3	4	5	6	7	8	Composite
1. Prior and current offences/dispositions	(.76)								
2. Family circumstances/parenting	.54**	(.50)							
3. Education/employment	.14	.35**	(.51)						
4. Peer relations	.41**	.51**	.43**	(.69)					
5. Substance Abuse	.33**	.26**	.05	.38**	(.82)				
6. Leisure Recreation	.06	.32**	.38**	.49**	.30**	(.52)			
7. Personality/behavior	.26**	.37**	.40**	.26**	.11	.14	(.60)		
8. Attitude/orientation	.35**	.39**	.42**	.40**	.29**	.34**	.49**	(.53)	
Composite	.63**	.71**	.57**	.75**	.59**	.54**	.60**	.69**	(.86)
Mean	2.41	2.01	2.19	2.59	2.47	1.69	1.55	.83	
Standard Deviation	1.75	1.38	1.35	1.20	1.85	1.01	1.51	1.11	

* Alphas in parentheses ** $p \leq .01$ (One-tailed)

Table 4.11: Means, Standard Deviations, and t values for each YLS/CMI subscale by Gender and Ethnicity

Subscale	Gender		t-value	Ethnicity		t-value
	Male	Female		Aboriginal	Non-Aboriginal	
Offence History	2.47 (1.83)	2.24 (1.48)	.523	2.85 (1.67)	1.56 (1.61)	3.605**
Family Circumstances	2.07 (1.41)	1.81 (1.29)	.756	2.37 (1.33)	1.31 (1.20)	3.767**
Education/Employment	2.32 (1.43)	1.76 (.94)	1.665	2.45 (1.36)	1.69 (1.20)	2.677**
Peer Relations	2.47 (1.25)	3.00 (.95)	-1.814	2.97 (.97)	1.84 (1.27)	4.763**
Substance Abuse	2.27 (1.92)	3.14 (1.42)	-1.921	2.89 (1.78)	1.66 (1.73)	3.199**
Leisure/Recreation	1.66 (1.04)	1.81 (.87)	-.608	1.89 (1.01)	1.31 (.90)	2.713**
Personality/Behaviors	1.60 (1.51)	1.38 (1.56)	.589	1.69 (1.50)	1.28 (1.53)	1.255
Attitudes	.84 (1.07)	.81 (1.29)	.094	.90 (1.16)	.69 (1.03)	.889
Overall Score	15.73 (7.39)	16.62 (5.95)	-.508	18.18 (6.25)	11.56 (6.61)	4.770**

** $p \leq .001$

significant correlations between the majority of the subscales, with the exception of the relationships between the subscales measuring use of leisure time with offence history and personality as well as for the subscale measuring substance abuse with difficulties in school environment and personality. Reliability coefficients of internal consistency were obtained for subscales and the composite score using Cronbach's coefficient alpha. Subscales alphas demonstrated adequate internal consistency with alphas ranging from .50 to .82. Internal consistency of the entire scale is estimated to be .86.

Comparisons of groups on YLS/CMI

Results of the YLS/CMI overall total scores for the four groups of interest, males, females, Aboriginal, and non-Aboriginal, are located in Table 4.11 along with descriptive statistics for the four groups mean scores of the eight subscales of the YLS/CMI. In terms of gender, male YLS/CMI scores demonstrated a mean of 15.73 ($SD = 7.39$). The YLS/CMI scores for females, by contrast, revealed a mean of 16.62 ($SD = 5.95$). Comparison of male and female overall YLS/CMI scores was investigated through the use of an independent samples *t*-test (Table 4.11). Results indicated that there is no significant difference between the genders for overall YLS/CMI scores. Further, no significant differences were found between males and females on any of the YLS/CMI subscale scores.

Overall, YLS/CMI scores for the Aboriginal youth in this sample revealed a mean of 18.18 ($SD = 6.25$). The non-Aboriginal youth, by contrast, had an overall mean YLS/CMI of 11.56 ($SD = 6.61$). An independent samples *t*-test was estimated to determine whether the overall YLS/CMI mean score differed significantly between the two groups. Results indicated that the difference between the two groups is significant at

the .001 level. Aboriginal and non-Aboriginal youth also differed significantly ($p \leq .001$ level) on six of the eight subscales, with the exception of the scales measuring personality and antisocial attitudes (Table 4.11).

Characteristics of sample on recidivism measures

Characteristics for youth in the sample who received no new charge, a new charge, no new conviction and a new conviction are discussed next.

New charge

Frequencies of charge rates for the total sample along with the subgroups are presented in Table 4.12. Of the entire sample, 53 percent were charged with a Criminal Code or Young Offender offence in the six-month follow-up. When considering gender, 55 percent of the male youth and 43 percent of the females received a new charge with an independent *t*-test demonstrating no significant difference between males and females. Regarding ethnicity, 61 percent of the Aboriginal youth and 34 percent of the non-Aboriginal youth received a new charge in the six-month follow-up period. This difference was significant at the $p \leq .01$ level ($t = 2.53$, $df = 92$). For those youth in the sample who received a custodial disposition for their index offence, 17 of the 23 youth (74 percent) were charged with a new offence. Conversely, of those youth receiving a community disposition, 32 of the 71 youth (45 percent) received a new charge in the follow-up period.

Further investigation of characteristics of these two groups revealed that youth in the sample who received a new charge had a greater number of index offences ($M = 5.06$, $SD = 3.67$) than those youth who did not receive a charge ($M = 3.64$, $SD = 2.74$); this difference was significant at the $p \leq .01$ level ($t = -2.108$, $df = 92$).

Table 4.12: Frequency of charges

	Charged		Convicted	
	Yes	No	Yes	No
Total Sample	48 (53%)	46 (47%)	29 (33%)	65 (67%)
Male	40 (55%)	33 (45%)	23 (32%)	50 (68%)
Female	9 (43%)	12 (57%)	7 (33%)	14 (67%)
Aboriginal	38 (61%)	24 (39%)	25 (40%)	37 (60%)
Non-Aboriginal	11 (34%)	21 (66%)	5 (16%)	27 (84%)
Custody Disp.	17 (74%)	6 (26%)	11 (48%)	12 (52%)
Community Disp.	32 (45%)	39 (55%)	19 (27%)	52 (73%)

No significant difference was noted between the groups for number of prior offences. A significant difference, $p \leq .01$ ($t = 3.168$, $df = 92$) in average age was revealed for youth who were charged with a new offence (15.35, $SD = 1.49$) and those who did not reoffend (16.43, $SD = 1.23$), suggesting that the younger youth are coming in contact with the police more often or have a more difficult time with compliance during the six-month follow-up. These analyses are presented in Table 4.14.

In regard to charge rates for the youth in the low, moderate, and high risk categories as determined by the YLS/CMI, the following was revealed (Figure 4.4). For youth scoring in the low risk category of the YLS/CMI, 2 (14 percent) of the 14 youths had received a new charge. For youth scoring in the moderate risk category, 37 (55 percent) of the 67 youth received a new charge in the six-month follow-up period. For youth scoring in the high risk category, 10 (77 percent) of the 13 youth received a new

charge.

Examination of the charge rates of youth using the new cut-off scores developed by categorizing the sample into quartiles was also conducted. Results are also presented in Figure 4.4 and revealed charge rates for youth scoring in the low risk category as 33 percent. For the youth scoring in the moderate risk category, the charge rate was 38 percent. Youth in the high risk category demonstrated a charge rate of 63 percent, while for youth scoring in the very high risk category, the charge rate was 84 percent.

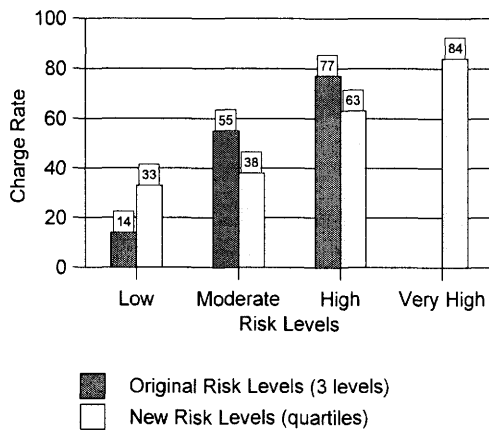


Figure 4.4: Risk Levels and Charge Rates

for Entire Sample

Table 4.13: Frequencies for Original and New Risk Categories

Risk Category	Low	Moderate	High	Very High	Total
Original Risk Levels	15	65	14	*	94
New Risk Levels	24	27	24	19	94

* High and Very High combined into High

4.14: Results from *t*-tests for age, number of index offences and number of prior offences for youth receiving charge in six-month follow-up versus youth who were not charged

	Mean	Standard Deviation	Standard Error of <i>x</i>	<i>t</i>	<i>df</i>	Significance (2 tailed)	Mean Difference
Age							
No Charge	16.33	1.26	.19	3.168	92	.01	.90
New Charge	15.43	1.49	.21				
Index Offence							
No Charge	3.64	2.74	.41	-2.108	92	.01	-1.42
New Charge	5.06	3.67	.52				
Prior Offences							
No Charge	4.51	7.04	1.05	-1.726	92	.01	-2.71
New Charge	7.22	8.11	1.16				

New conviction

Frequencies for conviction rates are also presented in Table 4.12. Of the entire sample, 33 percent of the youth were convicted with a new offence in the six-month follow-up period. In regard to gender, 32 percent of males and 33 percent of females received a new conviction in the follow-up period, revealing a non-significant difference in conviction rate. When considering ethnicity, the conviction rate of Aboriginals was revealed as 40 percent while non-Aboriginal youth revealed a conviction rate of 16 percent. This difference in conviction rate revealed significance at the $p \leq .01$ level ($t = 2.488$, $df = 92$). Youth in the sample who had received a custodial disposition for their index offence demonstrated a conviction rate higher than those youth who received a community disposition ($t = 1.900$, $df = 92$, $p \leq .05$). Conviction rates for the two groups was 48 and 27 percent respectively.

Further investigation into the differences between youth who received a new conviction and those who did not revealed the following and are presented in Table 4.15. Youth who received a new conviction had a larger number of index offence convictions than those youth in the sample who did not receive a new conviction with the difference reaching significance at the $p \leq .01$ level ($t = -2.287$, $df = 92$). Further, convicted youth demonstrated higher number of previous offences than their non-convicted counterparts ($t = -1.932$, $df = 92$, $p \leq .05$). Similar to youth who were charged versus those who did not receive a charge, youth who were convicted with a new offence were significantly younger than their non-convicted counterparts ($t = 3.356$, $df = 92$, $p \leq .001$), again suggesting that younger youth were coming in conflict with the law more often during the six-month follow-up.

The risk categories as determined by Hoge and Andrews (1996a) were also examined for conviction rates. Analogous to the results from the investigation into charge rates, it was noted that as the risk category increased, so did conviction rate (Figure 4.5). The low, moderate, and high risk categories revealed charge rates of 7, 33, and 54 percent respectively. When examining the conviction rates for youth using the new risk levels, a similar pattern of increased risk and increased conviction rate was noted with low, moderate, high, and very high categories demonstrating conviction rates of 13, 22, 46 and 53 percent respectively.

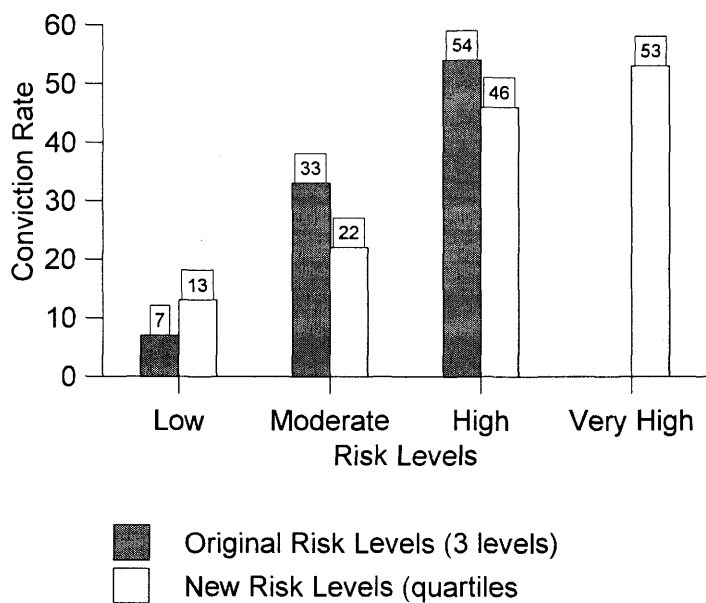


Figure 4.5: Risk Levels and Conviction Rates for Entire Sample

Table 4.15: Results from *t*-tests for age, number of index offences and number of prior offences for youth receiving a conviction in six-month follow-up versus youth who were not convicted

	Mean	Standard Deviation	Standard Error of <i>x</i>	<i>t</i>	<i>df</i>	Significance (2 tailed)	Mean Difference
Age							
No Conviction	16.19	1.31	.16	3.356	92	.001	1.02
New Conviction	15.17	1.51	.28				
Index Offence							
No Conviction	3.86	2.74	.34	-2.287	92	.01	-1.64
New Conviction	5.50	4.13	.75				
Prior Offences							
No Conviction	4.89	6.71	.84	-1.932	92	.05	-3.24
New Conviction	8.13	9.20	1.68				

Recidivists and YLS/CMI

Also of interest is the ability of the YLS/CMI to discriminate between youth in the sample who were charged and convicted with new offences and those who were not. YLS/CMI composite and subscale scores for these groups are found in Table 4.16. Independent *t*-tests revealed that mean YLS/CMI composite scores for youth who did not receive a new charge ($M = 12.78$, $SD = 6.59$) to be statistically significantly lower than youth who did receive a charge ($M = 18.82$, $SD = 6.28$) at the .001 level. Similarly, youth in the sample who received a new conviction ($M = 19.67$, $SD = 6.09$) in the six-month follow-up demonstrated a mean score on the YLS/CMI which was higher than those youth who did not receive a new conviction ($M = 14.17$, $SD = 6.86$) which was significantly different at the $p \leq .001$ level.

Subscale differences were also noted for the youth who reoffended versus those who did not. Independent *t*-tests revealed significant differences between youth who received a charge and those who did not for all of the subscales with the exception of the subscale measuring personality. Similarly, youth who were convicted in the six-month follow-up period scored higher on all subscales than those who did not receive a conviction with the exception of the subscales measuring personality and education/employment. Results from these analyses are presented in Table 4.16.

Table 4.16: Means, Standard Deviations, and t-values for each YLS/CMI subscale by New Charge and New Conviction

Subscale	No Charge	New Charge	t-value	No Conviction	New Conviction	t-value
Offence History	1.76 (1.79)	3.02 (1.49)	-3.737***	2.13 (1.88)	3.03 (1.25)	-2.405***
Family Circumstances	1.58 (1.41)	2.41 (1.24)	-3.042***	1.84 (1.48)	2.37 (1.07)	-1.731**
Education/Employment	1.82 (1.23)	2.53 (1.39)	-2.612**	2.06 (1.41)	2.47 (1.20)	-1.355
Peer Relations	2.04 (1.26)	3.08 (.91)	-4.603***	2.28 (1.24)	3.23 (.82)	-3.827***
Substance Abuse	2.04 (1.77)	2.86 (1.86)	-2.166**	2.20 (1.79)	3.03 (1.88)	-2.060*
Leisure/Recreation	1.42 (.94)	1.94 (1.01)	-2.561**	1.48 (.94)	2.13 (1.01)	-3.043***
Personality/Behaviors	1.33 (1.55)	1.76 (1.47)	-1.355	1.41 (1.52)	1.87 (1.48)	-1.381
Attitudes	.47 (.76)	1.16 (1.28)	-3.175***	.55 (.83)	1.43 (1.38)	-3.858***
Overall Score	12.78 (6.59)	18.82 (6.28)	-4.549***	14.17 (6.86)	19.67 (6.0)	-3.747***

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

The predictive efficacy of the YLS/CMI was examined through a number of statistical analyses. The results of these investigations are presented next.

Univariate Statistics

In an attempt to determine the efficacy of the YLS/CMI to correctly predict future criminal behavior, the difference between those youth in the sample who were predicted to reoffend (selection ratio) and those who were reported to have been involved in criminal activity (base rate) was examined. The chi square statistic was used for this investigation.

Based on charges, the base rate or rate of recidivism was 52 percent. The continuous variable of YLS/CMI composite score was then dichotomized, using a median split procedure resulting in youth in the sample being classified as either high or low. Youth scoring one to 16 on the YLS/CMI were classified in the low range ($n = 45$, 48 percent), and youth scoring 17 or above on the YLS/CMI were classified as high ($n = 49$, 52 percent), thus resulting in a selection ratio of 52 percent. Table 4.17 illustrates, in a cross-tabulation, 2x2 table, the results of accurate predictions versus false positives and false negatives tallied for the total sample, which demonstrated significance ($X^2 = 12.219$, $p \leq .001$). The percentage of valid predictions (sum of valid positives and valid negatives) for the entire sample was 68 percent revealing that the YLS/CMI correctly predicted 68 percent of the sample. Comparatively, the YLS/CMI incorrectly classified only 32 percent of the sample with false positives (predicting recidivism with no subsequent charge) and false negatives (predicting no recidivism resulting in a subsequent charge). This finding suggests that the YLS/CMI is accurately classifying and effective in predicting future charges for youth in this sample.

Prediction of youth who would have received a new conviction in the follow-up period based on YLS/CMI composite scores and an examination of the false positive and negative rates was also investigated. Similar to the above analysis, the sample was dichotomized. Using the conviction rate of 33 percent, youth who demonstrated a YLS/CMI composite score between one and 14 (cumulative percent of the sample = 34 percent) were classified as low, and youth scoring between 15 and 42 as a composite score were classified as high. Again, results of a cross-tabulation, 2x2 table, presenting the accurate predictions versus false positives and negatives are reported in Table 4.17, also demonstrating statistical significance ($X^2 = 8.416, p \leq .001$). The percentage of valid predictions for a new conviction was 57 percent. That is, the YLS/CMI correctly predicted for 57 percent of the sample. Comparatively, the YLS/CMI incorrectly classified 43 percent of the sample with false positives (predicting recidivism with no subsequent conviction), equaling 39 percent and false negatives (predicting no recidivism resulting in a subsequent conviction) equaling four percent.

Next, the cut-off scores which determine the YLS/CMI ratings of low, moderate, and high were investigated in order to determine their efficacy in correctly categorizing the youth in this sample using ANOVA with both new charge and new conviction as outcome measures.¹ Results are reported in Tables 4.18 and presented in Figure 4.4 and 4.5 (p. 72 and 75 respectively). Although a significant relationship ($F = 6.339, p \leq .001$) overall was reported for the risk levels and charge rate, youth in this sample demonstrated significantly different charge rates only between the low and moderate and

¹ High and Very High categories were combined as there was only one subject in the Very High category.

Table 4.17: 2x2 Cross-tabulation with Chi-square statistics

YLS/CMI Rating		Low	High	<i>n</i>	Pearson Chi-Square	Sig
New charge						
No	Count	30	15	45		
	Expected	21.5	23.5	45		
Yes	Count	15	34	49		
	Expected	23.5	25.5	49		
					12.219	.000
New Conviction						
No	Count	28	36	64		
	Expected	21.8	42.2	64		
Yes	Count	4	26	30		
	Expected	10.2	19.8	30		
					8.416	.004

low and high groups. Youth classified in the moderate and high group did not demonstrate a significant difference in charge rate. When considering new conviction as a measure of recidivism, only the low and high rating groups demonstrated a significant charge rate.

Similar analyses were conducted to determine whether the new cut-off scores produced significant differences between the four risk levels in regard to charge and conviction rates. Post hoc comparisons from an ANOVA, using Least Square Difference

Table 4.18: ANOVA: Original and New Risk Levels and Recidivism Measures

	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig</i>
YLS/CMI Risk Levels					
New charge in 6 month follow up					
Low, Moderate and High Groups	2.868	2	1.434	6.339	.003
Within Groups	20.589	91	.226		
Total	23.457	93			
New conviction in 6 month follow up					
Low, Moderate and High Groups	1.490	2	.745	3.580	.032
Within Groups	18.935	91	.208		
Total	20.426	93			
New Risk Levels					
New charge in 6 month follow up					
Low, Mod, High and Very High	3.677	3	1.226	5.576	.001
Within Groups	19.781	90	.220		
Total	23.457	93			
New conviction in 6 month follow up					
Low, Mod, High and Very High	2.439	3	.813	4.067	.009
Within Groups	17.987	90	.200		
Total	20.426	93			

(*LSD*) method to determine significant differences between the groups, indicated significant differences ($F = 5.576, p \leq .05$) in charge rates between the youth scoring in

the low risk category with those youth in the high and very high risk groups. No significant difference was noted between the low and moderate risk groups. Further, those youth in the moderate group did not differ significantly from youth in the high risk group, although a significant difference ($p \leq .05$) was revealed for the youth in the moderate and very high risk levels for charge rate. Youth in the high and very high risk levels did not differ significantly for charge rate.

When considering conviction rates, differences between the risk levels were also explored using post hoc analyses (*LSD*) from the ANOVA. Youth scoring in the low and moderate risk levels did not reveal a significant difference. Youth falling in the low risk category did differ significantly ($p \leq .05$) in their conviction rate from youth in the high and very high risk categories. Youth in the moderate risk category differed significantly for conviction rates only with youth in the very high risk level. In contrast with charge rates, youth classified in the high and very high risk levels differed significantly ($p \leq .05$) in terms of conviction rate.

Bivariate Correlations - YLS/CMI and Recidivism

To begin answering the first research question, “Is the YLS/CMI predictive of reoffending for Saskatchewan Young Offenders?”, the bivariate relationship between the YLS/CMI composite score and two measures of recidivism were first estimated. Further, the relationship between the eight subscales of the YLS/CMI and recidivism using both outcome measures was also examined. These bivariate correlations are reported in Tables 4.19 and 4.20.

New Charge

When the relationship between the composite score and new charge was

investigated, a strong statistically significant relationship was revealed ($r = .429, p \leq .01$). Further, when the relationship between subscale scores and new charge was investigated, it was demonstrated that all subscales were significantly related to a new charge, with the exception of measures of personality and behavior. Substance abuse reported the weakest statistically significant relationship with $r = .220 (p \leq .05)$ and peer relations with the strongest relationship with $r = .433 (p \leq .01)$.

Next, the relationship between the YLS/CMI composite score and receiving a new charge based on gender was investigated. The relationship between male composite scores for the YLS/CMI and new charge revealed a strong positive relationship ($r = .412, p \leq .01$). All of the subscales demonstrated statistically significant relationships with new charge, with the exception of Personality/Behavior and the subscale measuring Leisure/Recreation. For males, substance abuse revealed the weakest association, but was still statistically significant ($r = .260, p \leq .05$). Negative peer relations, by contrast, demonstrated the strongest positive association with a new charge ($r = .475, p \leq .01$). For females, the YLS/CMI composite score also demonstrated a strong positive association with a new charge in the six-month follow-up ($r = .554, p \leq .01$). Subscale scores revealed significant relationships for antisocial attitudes and orientation ($r = .437, p \leq .05$) and poor use of leisure time ($r = .533, p \leq .01$) with a new charge in six-month follow-up. No other subscales revealed significant relationships with receiving a new charge.

In addition to gender, this study examined the relationship between YLS/CMI

Table 4.19: Bivariate Correlations between Recidivism (New Charge in six-month follow-up) and the Eight Risk/Needs Factors and Composite Youth Level of Service/Case Management Inventory Composite Score for all groups

YLS/CMI Subscale	Total Sample (<i>N</i> = 94)	Males (<i>n</i> = 73)	Females (<i>n</i> = 21)	Aboriginal (<i>n</i> = 62)	Non- Aboriginal (<i>n</i> = 32)
1 Prior and current offences/dispositions	.363**	.385**	.257	.291*	.325
2 Family circumstances/parent	.302**	.281*	.361	.273*	.142
3 Education/Employment	.263*	.240*	.328	.216	.191
4 Peer relations	.433**	.475**	.416	.385**	.353*
5 Substance abuse	.220*	.260*	.188	.211	.030
6 Leisure/recreation	.258*	.204	.533*	.208	.191
7 Personality/behavior	.140	.072	.351	.148	.040
8 Attitudes/orientation	.314**	.275*	.437*	.337**	.223
9 Composite Score	.429**	.412**	.554**	.408**	.281
10 Original Risk Level (3 categories)	.365**	.374**	.403*	.287*	.374*
11 New Risk Levels (4 categories)	.380**	.347**	.562**	.379**	.151

*Significant at $p \leq .05$ level **Significant at $p \leq .01$ level

scores and recidivism for different ethnic groups. For the Aboriginal youth in this sample, results indicated that the YLS/CMI composite score is significantly associated with receiving a new charge ($r = .408, p \leq .01$). Of the eight subscales, four revealed significant relationships with new charge in the Aboriginal sample. The family circumstances subscale had the lowest statistically significant relationship ($r = .273, p \leq .05$), followed by criminal history ($r = .291, p \leq .05$). Antisocial attitudes ($r = .337, p \leq .01$) and negative peer associations ($r = .385, p \leq .01$) had the strongest positive associations.

When the relationship between YLS/CMI composite score and new charge in six-month follow-up was estimated for the non-Aboriginal youth in the sample, there was no statistically significant relationship ($r = .285, p = .12$). Further analysis with the YLS/CMI subscales revealed that negative peer relations ($r = .353, p \leq .05$) was the only subscale which demonstrated a positive relationship with a new charge.

New Conviction

When recidivism was defined as a new conviction within the six-month follow-up period, there was a statistically significant relationship between the YLS/CMI composite score and recidivism ($r = .364, p \leq .01$) for the total sample. Subscale relationships differed slightly when recidivism was defined as new conviction contrasted against the finding reported earlier. For instance, only five of the eight subscales had a positive association with new conviction. The family circumstances, education/employment, and personality/behavior subscales did not reveal statistically significant relationships. Substance abuse revealed the weakest statistically significant relationship ($r = .210, p \leq$

Table 4.20: Bivariate Correlations between Recidivism (New Conviction in six-month follow-up) and the Eight Risk/Needs Factors and Youth Level of Service/Case Management Inventory Composite Score for all groups

YLS/CMI Subscale	Total Sample (<i>N</i> = 94)	Males (<i>n</i> = 73)	Females (<i>n</i> = 21)	Aboriginal (<i>n</i> = 62)	Non-Aboriginal (<i>n</i> = 32)
1 Prior and current offences/dispositions	.243*	.297*	.023	.152	.228
2 Family circumstances/parent	.178	.157	.268	.117	.032
3 Education/Employment	.140	.140	.183	.139	-.104
4 Peer relations	.371**	.411**	.218	.334**	.260
5 Substance abuse	.210*	.227	.145	.127	.188
6 Leisure/recreation	.302**	.253*	.514*	.322*	.043
7 Personality/behavior	.142	.082	.353	.147	.034
8 Attitudes/orientation	.373**	.300**	.589**	.414**	.218
9 Composite Score	.364**	.343**	.469*	.332*	.201
10 Original Risk Level (3 categories)	.301**	.278**	.449*	.302**	.157
11 New Risk Level (4 categories)	.337**	.319**	.403*	.304**	.133

*Significant at $p \leq .05$ level **Significant at $p \leq .01$ level

.05) and antisocial attitudes and orientation revealed the strongest statistically significant relationship ($r = .373, p \leq .01$).

Parallel to the earlier analyses, the relationships between the YLS/CMI composite score and new conviction in the six-month follow-up period for males and females in this sample were also estimated. The relationship between male composite scores for the YLS/CMI and new conviction revealed a strong positive association ($r = .343, p \leq .01$). Consistent with the findings in the entire sample, subscales measuring family circumstances, education/employment and personality/behavior did not reveal significant relationships with a new conviction, nor was substance abuse significantly related to a new conviction. For males, poor use of leisure time displayed the weakest statistically significant relationship ($r = .253, p \leq .05$) and negative peer relations revealed the strongest relationship with a new conviction ($r = .411, p \leq .01$).

For the females adolescents in the sample, the YLS/CMI composite score also demonstrated a significant relationship with a new conviction in the six-month follow-up ($r = .469, p \leq .05$). Examination of the subscale scores revealed strong significant positive associations between antisocial attitudes ($r = .589, p \leq .01$) and poor use of leisure time ($r = .514, p \leq .05$) with new conviction.

Consistent with the results which found a statistically significant relationship between YLS/CMI and new charges with Aboriginal youths, there was a statistically significant relationship between YLS/CMI and a new conviction ($r = .332, p \leq .05$) for Aboriginal youth in this sample. Examination of the connection between the YLS/CMI subscales and new conviction revealed significant relationships for a new conviction with subscales measuring negative peer relations ($r = .334, p \leq .01$) and poor use of leisure

time ($r = .322, p \leq .05$). A strong positive association between antisocial attitudes and orientation ($r = .414, p \leq .01$) and receiving a new conviction in the six-month follow-up period was found for Aboriginal youth in this sample. When the relationship between YLS/CMI composite and subscale scores with new conviction was investigated for non-Aboriginals, no significant relationships were revealed. Further, YLS/CMI subscales and new conviction revealed no significant relationships for non-Aboriginals. This may be due to the low base rate for convictions for non-Aboriginal youth (16 percent).

Multivariate Analyses

Having described the characteristics of the sample, the YLS/CMI and the bivariate relationships between YLS/CMI and recidivism, this section extends these analyses. To investigate the predictive ability of the YLS/CMI in regard to recidivism, both as a function of new charge and new conviction, linear logistic regression was employed due to the dichotomous nature of the recidivism data. Next, forward logistic regression was performed to identify which of the subscales were most predictive of recidivism. Results are reported in Tables 4.2 through 4.28.

Results of logistic regression with composite score as the predictor variable revealed that the YLS/CMI was positively related to the predicted variables of new charge ($B = .147, p \leq .0001$; Table 4.21) and new conviction ($B = .128, p \leq .001$; Table 4.23). $R^2 = .243$ for the composite score and new charge suggesting that the YLS/CMI composite score explained 24 percent of the variance of new charge. For YLS/CMI composite score and new conviction, R^2 revealed a value of .185 suggesting approximately 19 percent of the variance for new conviction can be accounted for by the composite score.

To determine whether demographics such as ethnicity, age, and gender were impacting on the ability of the YLS/CMI's ability to predict recidivism, these analyses were extended while controlling for these variables. The beta coefficient for YLS/CMI composite score for new charge was .142, $p \leq .0007$ (Table 4.22) and for new conviction was .130, $p \leq .0037$ (Table 4.24), suggesting that even while controlling for ethnicity, age and gender of the sample, the YLS/CMI was able to predict recidivism.

Next, the predicative ability of the subscales and recidivism was investigated using a forward logistical regression method of entering variables into the model. Two steps were needed to enter all variables that significantly improved prediction of new charge (Table 4.25). In Step 1 of the model, negative peers ($B = .714, p \leq .001$) was entered, followed by criminal history ($B = .308, p \leq .05$) in Step 2. The model revealed a $R^2 = .297$ suggesting that almost 30 percent of the variance for new charge was explained by the subscales measuring negative peers and criminal history. No other subscales were statistically significant in increasing the probability of predicting a new charge. The model was further investigated by controlling for age, gender, and ethnicity of the sample resulting in no change in the logistic regression equation (Table 4.26). That is, a two-step model still emerged with measures of negative peers and criminal history entered respectively.

When considering the eight subscales' ability to predict new conviction, a two-step model also emerged (Table 4.27). Antisocial attitudes was entered in Step One of the model, revealing a statistically significant positive effect on new conviction ($B = .517, p \leq .01$), followed by the subscale measuring negative peers in Step Two ($B = .651, p \leq .05$). This two-step model demonstrated a $R^2 = .267$, suggesting 27 percent of the

variance for new conviction was accounted for by scales measuring antisocial attitudes and negative peers. Again, the model was examined while controlling for age, gender and ethnicity characteristics of the sample, which also revealed a two-step model although this time with attitudes ($B = .573, p \leq .05$) entered in Step One and substance use ($B = .359, p \leq .05$) in Step Two (Table 4.28).

Table 4.21: Logistic Regression: YLS/CMI with New Charge

Variable	<i>B</i>	<i>SE</i>	Wald	<i>df</i>	Sig	R
YLS/CMI	.1470	.0386	14.5368	1	.0001	.3104
Constant	-2.2386	.6497	11.8728	1	.0006	

Table 4.22: Logistic Regression controlling for Age, Ethnicity, and Gender: YLS/CMI with New Charge

Variable	<i>B</i>	<i>SE</i>	Wald	<i>df</i>	Sig	R
Age	-.5412	.1919	7.9551	1	.0048	-.2290
Ethnicity	-.4200	.5704	.5422	1	.4615	.0000
Gender	-.6943	.6012	1.3340	1	.2481	.0000
YLS/CMI	.1426	.04	11.4274	1	.0007	.2881
Constant	7.8431	3.3448	5.4983	1	.0190	

Table 4.23: Logistic Regression: YLS/CMI with New Conviction

Variable	<i>B</i>	<i>SE</i>	Wald	<i>df</i>	Sig	R
YLS/CMI	.1281	.0391	10.7014	1	.0011	.2719
Constant	-2.9273	.7351	15.8562	1	.000	

Table 4.24: Logistic Regression Controlling for Age, Ethnicity, and Gender: YLS/CMI with New Conviction

Variable	<i>B</i>	<i>SE</i>	Wald	<i>df</i>	Sig	R
Age	-.5709	.1889	9.1312	1	.0025	-.2642
Ethnicity	-.4562	.6482	.4953	1	.4816	.0000
Gender	.1220	.6207	.0386	1	.8442	.0000
YLS/CMI	.1306	.0449	8.4396	1	.0037	.2511
Constant	6.3970	3.0283	4.4622	1	.0347	

Table 4.25: Forward Logistic Regression: YLS/CMI Subscales with New Charge

Variable	<i>B</i>	<i>SE</i>	Wald	<i>df</i>	Sig	R
Criminal History	.3075	.1474	4.3546	1	.0369	.1345
Negative Peers	.7142	.2363	9.1371	1	.0025	.2342
Constant	-2.5242	.6912	13.3380	1	.0003	

Table 4.26: Forward Logistic Regression controlling for Age, Ethnicity, and Gender: YLS/CMI subscales with New Charge

Variable	<i>B</i>	<i>SE</i>	Wald	<i>df</i>	Sig	R
Age	.6574	.2153	9.3264	1	.0023	-.2540
Ethnicity	-.0763	.6204	.0151	1	.9022	.0000
Gender	-.7684	.6339	1.4696	1	.2254	.0000
Criminal History	.4096	.1777	5.3170	1	.0211	.1709
Negative Peers	.7621	.2802	7.3964	1	.0065	.2180
Constant	8.6287	3.5301	5.9748	1	.0145	

Table 4.27: Forward Logistic Regression with YLS/CMI Subscales with New Conviction

Variable	<i>B</i>	<i>SE</i>	Wald	<i>df</i>	Sig	R
Negative Peers	.6508	.2662	5.9770	1	.0145	.1838
Antisocial Attitudes	.5171	.2404	4.6285	1	.0314	.1494
Constant	-3.0582	.7941	14.8329	1	.0001	

Table 4.28: Forward Logistic Regression with Subscales controlling for Age, Ethnicity, and Gender with New Conviction

Variable	<i>B</i>	<i>SE</i>	Wald	<i>df</i>	Sig	R
Age	-.6920	.2283	9.1837	1	.0024	-.2652
Ethnicity	-.8458	.6360	1.7682	1	.1836	.0000
Gender	-.1430	.6748	.0449	1	.8321	.0000
Substance Use	.3588	.1845	3.7804	1	.0519	.1320
Antisocial Attitude	.5726	.2434	5.5327	1	.0187	.1860
Constant	9.8726	3.4283	8.2927	1	.0040	

CHAPTER 5

DISCUSSION

The predictive efficacy of the YLS/CMI was investigated with a sample of Saskatchewan Young Offenders. Results confirmed the efficacy of the YLS/CMI composite score to discriminate between youth in the sample who did not receive a charge or conviction with those who were charged and/or convicted. Youth who received a new charge scored significantly higher on seven of the eight YLS/CMI subscales than their non-charged counterparts, with the exception of the subscale measuring antisocial personality traits. Youth who received a new conviction also revealed significantly higher scores on the majority of the subscales when compared to non-convicted youth. Furthermore, the YLS/CMI was able to distinguish between those youth who received community dispositions versus those who received custody dispositions for their initial offence, with the former group revealing significantly lower composite scores than the latter. This finding provided concurrent validity for the YLS/CMI with youth court decision-making: youth who are considered to be at high risk to reoffend and in need of incarceration or intensive rehabilitation by the courts are also detected by the YLS/CMI as being high-risk, high-need youth.

The practical application of YLS/CMI received confirmation through the investigation of false positive and negative rates of prediction for youth who would receive a new charge or new conviction within six months of the index offence. In regard to new charge, the instrument was able to correctly categorize 68 percent of the sample,

and conversely demonstrated a minimum amount of false positives and false negatives (16 percent respectively). When examining conviction as a measure of recidivism, the YLS/CMI accurately predicted for 57 percent of the sample. False positive rates, however, were high with the YLS/CMI predicting a new conviction for 43 percent of the sample when in fact no conviction occurred. The corresponding false negative rate for conviction was very low, with the YLS/CMI predicting no new conviction for four percent of the youth when there was in fact a conviction. This provided empirical confirmation of the tool's practical application as resources would be correctly allocated for the large majority of the youth in this sample, particularly in the case of charges. Regarding conviction, the decreased accuracy of the YLS/CMI to correctly predict for the sample may be an artifact of the short follow-up period as the youth who were classified as false positives may in fact have received a conviction if they were followed for a longer period of time, which, in turn, would increase the accuracy of the tool. An investigation using a longer follow-up period would provide additional valuable information in this area.

Risk Categories

Hoge and Andrews (1996b) provided cutoff scores for the YLS/CMI in order to classify young offenders as low, moderate, high, or very high risk to reoffend based on their composite scores. The authors cautioned that because the cutoff scores were preliminary, further research to evidence their efficacy was needed. Results from this study revealed that, based on the original cut-off scores for the four risk levels as provided by Hoge and Andrews (1996a), the sample demonstrated a disproportionate amount of youth in the moderate risk level. This finding may have been due to the

methodology of the study as there was a pool of young offenders who did not have adequate information on their files to be included in the sample. Generally, these youth were typically first-time offenders convicted without Community Youth Worker involvement in that the youth had waived their rights for a Predisposition Report and were generally sentenced to community dispositions such as non-reporting probation which would not require active involvement from youth workers. They were also likely to be the low-risk youth in regard to criminogenic needs. Had these youth been included in the sample, it is possible that there would have been a more even dispersal between the low and moderate risk levels for the sample.

Despite the large amount of youth in the moderate category based on original cut-off scores for the risk levels, the relationship between the ratings and recidivism was demonstrated as predicted. That is, the differences between the risk levels and charge and conviction rates reached significance. An attempt to improve the distribution of youth in the risk levels by quartiling the sample also demonstrated a relationship with recidivism and improved the discriminative efficacy of the risk levels. Significant differences for charge and conviction rates were more evident with the new risk levels. Further, the new risk levels demonstrated a stronger relationship with both charge and convictions than the original risk levels. Results from this study indicate that, although the risk levels provided an adequate description in regard to risk level, there is a need for further investigation into cut-off scores for the risk level cut-offs if they are to be used with Saskatchewan Young Offenders.

Predictive Validity of YLS/CMI focusing on Ethnicity and Gender

One of the primary purposes of the study was to determine the efficacy of the

YLS/CMI, which was validated on a young offender sample in Ontario, to predict recidivism in a sample of Young Offenders in Saskatchewan. Saskatchewan's Young Offender population differs demographically from Ontario as there is a disproportionate representation of Aboriginal youth as compared to national and Ontario Young Offender demographics (LaPrairie, 2001). Literature in the area of prediction of reoffending behavior, or risk assessment, recommends studies of validation when instruments are applied to populations outside of the original normative sample (Jung & Rawana, 1999; Wormith & Goldstone, 1984). Due to fluctuations in crime rates, it is also suggested that validation studies be conducted on a regular basis in order to test an instrument's robustness.

Predictive Validity of YLS/CMI with attention to Ethnicity

Given the demographics of Saskatchewan's Young Offender population, that is, disproportionate involvement of Aboriginal youth and advocacy to create risk assessment instruments specifically for Aboriginal offenders (Hann & Harman, 1992), the utility of the YLS/CMI to predict reoffending behavior for Aboriginal youth was investigated. Aboriginal youth in this study rated significantly higher on the YLS/CMI than non-Aboriginal youth, suggesting that the former group demonstrate more criminogenic needs than the latter. Further, Aboriginal youth scored significantly higher than non-Aboriginal youth on six of the eight YLS/CMI subscales with the exception of the subscale measuring antisocial attitudes and personality. These findings are consistent with the literature investigating the differences between Aboriginal and non-Aboriginal offenders. Jung and Rawana's (1999) examination of the YLS/CMI with a group of northern Ontario Young Offenders, which had a large proportion of Aboriginal youth, found that

Aboriginal youth scored significantly higher than non-Aboriginal youth on the composite score and on four of the eight subscale scores. Further, Bonta et al. (1997) found that in a sample of adult offenders, Aboriginal adults scored significantly higher than non-Aboriginal adults. LaPrairie (2001) reported that Aboriginal adult offenders demonstrated higher needs than non-Aboriginal adult offenders nationally.

Although Aboriginal youth rated higher on the YLS/CMI specifically, and Aboriginal offenders have been noted to rate higher on risk assessment instruments in general, the determination of whether the instrument predicts reoffending behavior for Aboriginal youth is of both practical and theoretical interest. Results from this investigation supported the efficacy of the YLS/CMI in predicting recidivism for Aboriginal youth. An examination of the relationship between the subscales of the YLS/CMI and a new charge for Aboriginal youth revealed significant associations for criminal history, difficulties with family circumstances, negative peer relations, and antisocial attitudes and orientation with new charge. New convictions were significantly associated with negative peer relations and anti-social attitudes. When considering the relationship between the YLS/CMI composite score and recidivism in a six-month period, statistically significant relationships were revealed for Aboriginal youth. Further, when investigating the predictive validity of the YLS/CMI composite score while controlling for age, ethnicity and gender, the predictive ability of the YLS/CMI composite score remained statistically significant for both new charge and conviction in the follow-up period for the total sample. These results confirm Jung and Rawana's (1999) statement that the YLS/CMI demonstrated predictive efficacy with Aboriginal populations and provides support for Andrews and Bonta's (1998) contention that

criminal behavior is learnt in an universal way regardless of ethnicity.

Predictive Validity of YLS/CMI with attention to Gender

Another consideration regarding prediction of recidivism relates to the efficacy of risk assessment instruments to predict reoffending for female young offenders. Some researchers in the criminal justice field contend that the course to female delinquency differs from that of males and as such, the correlates of recidivism differ (Funk, 1999; Chesney-Lind, 1997). Therefore, it is suggested that risk assessment instruments based on theory developed by studying male criminal behavior will not provide reliable and valid results for females. Conversely, Canadian research that has investigated gender differences and the predictive ability of risk assessment instruments suggest that these instruments predict equally well for both males and females (Jung & Rawana, 1999; Simourd & Andrews, 1994).

Overall, results from the current study provide support for the use of the YLS/CMI in predicting recidivism with female young offenders. Data from the current study revealed no significant difference between males and females in the composite or subscale YLS/CMI scores. The YLS/CMI composite score demonstrated a strong, statistically significant positive relationship with both measures of recidivism for female young offenders. Although a significant relationship between a majority of the subscales and recidivism was noted for males, the same results were not reported for females. Poor use of leisure time and antisocial attitudes were strongly related to both receiving a new charge or conviction for female young offenders. Failure of the remaining subscales to reach significance may be a result of the small number of females in the study ($n = 21$). Additional research with female offenders should be conducted to investigate the role of

the remaining subscales in predicting recidivism.

The results of this study suggest that the YLS/CMI is a risk assessment tool that is valid across different populations. The predictive ability of the YLS/CMI in a sample of Saskatchewan Young Offenders is consistent with outcomes in other validation studies (Andrews & Hoge, 1996a; Jung & Rawana, 1999).

The Big Four and Recidivism

The YLS/CMI is classified as a third generation risk assessment tool as it was developed based on a theory of criminal behavior and includes both static and dynamic factors. According to risk assessment theory, dynamic factors, also known as criminogenic needs, are areas that should be targeted for treatment in order to reduce the probability of recidivism. The social learning / cognitive behavioral theory as described by Andrews and Bonta (1998) have identified four primary factors that are strongly and consistently related to recidivism which when targeted for intervention (with the exception of the static factor of criminal history) reduce an individual's risk to reoffend. The four factors identified by Andrews and Bonta (1998) are criminal history, antisocial attitudes, antisocial peers, and antisocial personality. A second objective of the study was to investigate these four factors to determine how they related to recidivism with Saskatchewan Young Offenders. This study found that criminal history, antisocial attitudes, and antisocial peers had strong positive relationships with both new charges and new convictions for the total sample. Conversely, the subscale measuring personality and behavior was not statistically significant with future offences for any of the demographic groups. There was, however, some variations noted between the groups with gender and ethnicity influencing the outcomes. The relationship between these constructs and

recidivism will be discussed individually.

Criminal History

Criminal history, including prior and current offences as well as dispositions received, demonstrated a strong positive relationship with new charges for all groups with the exception of females. The relationship between previous criminal behavior and recidivism for female young offenders has generally been inconclusive in the literature. Information about the index and offence history was not included in the original normative study of the YLS/CMI as the data for this subscale were not available (Hoge & Andrews, 1996a). Funk (1999) investigated age at first offence, placement in detention, and prior offences for female and male juvenile delinquents in order to determine whether these characteristics predicted future recidivism. For males, all three variables significantly predicted recidivism whereas only placement in detention was statistically associated with female recidivism. Simourd and Andrew's (1994) meta-analysis examining correlates of reoffending behavior for males and females did not include criminal or dispositional history as a predictor of future criminal behavior. Based on the non-significant relationship between criminal history and female young offenders revealed in this study, and the lack of information in the literature, further investigation into the offending history of female offenders may provide further insight into the role criminal history plays in the prediction of future criminal behavior with this subgroup.

Antisocial Attitudes

The subscale measuring antisocial attitudes and orientation demonstrated strong positive relationships for both new charges and new convictions for all groups with the exception of non-Aboriginal youth in this sample. The subscale measuring antisocial

attitudes is an indicator of the young person's identification with criminal attitudes and values, rationalizations of criminal behavior and response to authority. The PIC-R approach to criminal behavior suggests that these cognitions, attitudes and values allow an individual to maintain criminal behavior by neutralizing costs of this type of behavior.

The finding that antisocial attitudes were not significantly associated with short-term recidivism for the non-Aboriginal youth in this sample is of interest. Because youth were not directly interviewed and data were collected based on file information provided by Community Youth Workers, the data for this subscale are subjective. Objective measures of attitude may measure the construct in a more valid manner which may in turn improve the predictive ability of this subscale. The relationship between antisocial attitudes and recidivism for non-Aboriginal offenders may also differ depending on the follow-up period. The survival rate, that is, remaining charge or conviction free, for non-Aboriginal offenders may be longer than that of Aboriginal offenders. An investigation with a longer follow-up period may reveal a significant relationship between antisocial attitudes and non-Aboriginal youth. The relationship between antisocial attitudes and recidivism in a sample of Saskatchewan Young Offenders in Saskatchewan deserves further investigation as interventions for offending often include treatments that target cognitions favorable to criminal behavior in an attempt to reduce recidivism.

Peer Relations

Peer relations are also considered an important predictor of recidivism. The individuals one chooses to spend time with reflect one's interests as well as influencing engagement in activities. This is particularly true for adolescents as their peer group becomes more important in their lives than family or other adults. The YLS/CMI

subscale of peer relations measures the absence and/or presence of both negative and positive peer relations. Higher scores on this subscale indicate few positive and more negative peer relationships. When examining the relationship between this subscale and recidivism, negative peer relations demonstrated strong statistical positive association with all groups. Further, negative peer relations was the strongest predictor of a new charge. These results are consistent with the literature which suggest that a negative peer group puts one at higher risk for further criminal behavior (Andrews & Bonta, 1998).

Antisocial Personality/Behavior

The subscale measuring personality and behavior did not have a statistically significant relationship with the groups examined in this study. This subscale measures behaviors that are thought to indicate antisocial tendencies, such as poor frustration tolerance, inadequate guilt feelings, tantrums, short attention span, inflated self-esteem, and physically and/or verbally aggressive behavior. Information on these types of behavior was rarely included in the files, and as a result, information for this subscale was primarily solicited from Youth Workers. Although Youth Workers are often very familiar with their clients, they often observe them in controlled settings for short periods of time, leaving most Youth Workers reticent to comment conclusively on their client's behaviors as indicated in the YLS/CMI. Again, because information was not collected from the youth themselves, or from other sources who observe the youth in different settings, parents or teachers for example, this finding may be the result of restricted information. Further investigation into this finding would be helpful to determine the role personality and behavior have in predicting recidivism for Saskatchewan Young Offenders as these data could help to develop interventions that could reduce recidivism

rates for Saskatchewan youth. These findings also highlight the importance of ensuring multiple sources of information when doing any type of assessment.

Logistic Regression and The Big Four

The previous discussion is of interest because of the practical utility it offers. The relationships between the constructs measured by the YLS/CMI and recidivism offer insight into areas for treatment and intervention in a response to criminal behavior in adolescents. Of theoretical interest is the predictive efficacy of the constructs in order to provide further evidence for theory and to inform advancements in the area of risk assessment. Predictive statistics, or the probability that a variable will increase the prediction of recidivism, were used to determine support for theory.

When the YLS/CMI subscales were tested for their predictive ability with new charge, criminal history and negative peer group were revealed as the strongest predictors. Criminal history and negative peer group were also demonstrated to be the strongest predictors when the model was controlled for age, gender and ethnicity. Conversely, when considering the subscales predictive ability for new conviction, antisocial attitudes and negative peer group were the strongest predictors. When the model was controlled for age, gender and ethnicity, the strongest predictors of a new conviction were antisocial attitudes and substance abuse. Thus, criminal history, negative peer group and antisocial attitudes appear to be consistent predictors of recidivism for young offenders in Saskatchewan. With the exception of personality, this is consistent with the Big Four identified by Andrews and Bonta (1998).

Limitations

Limitations of the this study are an important issue as they speak to the

generalizability and validity of the findings as well as identifying future areas for research. An important limitation of the study address the confines of the methodology specifically in regard to data collection. First, information used to score the YLS/CMI came directly from the youth's file, along with interviews with the Community Youth Worker responsible for the case. Although a wealth of information is contained in these files, the importance of interviewing the youth and the vast amount of information that is obtained from interview is recognized. Not having that information is considered a limitation of the data collected. Secondly, youth who had insufficient information on their files, that is, no predisposition reports, were not included in the sample. As a result, the existing sample compliment may reflect a restricted range in that low-risk offenders may be under-represented. Lastly, the relatively short follow-up period employed in the current study impacts on the results. Survival rates of the subgroups within the sample may differ and as such, the six-month follow-up period may not have been long enough to capture offending behavior of subgroups with longer survival rates. Also, when using convictions as a recidivism measure, the six-month follow-up may be too restrictive as it may not have provided adequate time for charges to process through the Youth Justice Court system. Future investigations taking into account these methodological shortcomings are warranted to further examine the characteristics of Saskatchewan Young Offenders as well as the efficacy of risk assessments tools to correctly classifying and predict reoffending behavior for this population.

Note regarding Correlation Size

When examining the relationships between the composite and subscale scores with the outcome measures of recidivism, it is important to note the size of the

correlations presented in this study in the context of previous research. With the purpose of illuminating researchers and practitioners in regard to small and large correlations when investigating the strength of assessment evidence, Meyer, Finn, Eyde, Kay, Moreland, Dies, Eisman, Kubiszyn, and Reed (2001) conducted a literature review on research investigating test validity in both the psychological and medical fields for the American Psychological Association. The authors cite Cohen's rule of thumb when characterizing correlations with $r = .10$ classified as small, $r = .30$ as moderate, and $r = .50$ as large. Although the authors concur that these guidelines are appropriate in cases of reliability or monomethod validity (when information for predictor and criterion variables are collected from the same source) coefficients, it is suggested that when investigating the relationship between independently measured constructs, the guidelines for correlation strength should be more modest in nature. Thus, the authors offered the following guidelines: researchers should be 'satisfied' when attaining correlation coefficients of .10 - .19; 'pleased' when they realize coefficients of .20 - .39; and 'rejoice' when correlation coefficients of .40 are reached. Based on these guidelines, the relationships between the YLS/CMI composite and subscale scores and the measures of recidivism are considered to be highly significant.

Relevance of Findings

Despite the limitations mentioned previously, the findings from this study are considered to be particularly relevant for Saskatchewan at this point in time. The Department of Corrections and Public Safety, Youth Services Division, the agency responsible for Young Offenders in Saskatchewan, introduced a risk assessment tool closely modeled after the Level of Service Inventory, Ontario Revision, to be

implemented in April, 2003. Significant changes in case management and service delivery will also be practiced with risk assessment aiding in decisions around level and intensity of services and supervision, resource allocation, and development of targeted interventions focusing on criminogenic needs, to name a few. Although implementation of a risk assessment instrument will occur, information on the efficacy of predicting reoffending for Saskatchewan Young Offenders using risk assessment is scarce. Given the fact that both the instrument investigated in this research and the instrument chosen for implementation in Saskatchewan evolved from the Level of Service Inventory, and both of the tools are based on a social learning and cognitive behavioral theory, it is reasonable to expect that the findings from the current study can start to provide evidence for the efficacy of risk assessment tools in predicting reoffending behavior in Saskatchewan Young Offenders as well as begin to inform policy development for the Youth Services Division.

Future Research

Future research examining the YLS/CMI might explore the role of personality since the Personality/Behavior subscale was unrelated to outcome. In addition, research investigating risk assessment and Young Offenders could consider further examination of the subgroups within the offender population such as ethnic and gender groups. Although the composite scores for all of the groups investigated in this study demonstrated statistical relationships with recidivism, the subscale relationships with recidivism demonstrated different patterns for each group and therefore should be investigated further.

The YLS/CMI might also be used to examine the etiology of different types of

delinquent behavior. Other researchers, such as Loeber and Stouthamer-Loeber (1998), contend that different types of delinquent behavior follow different etiological courses. For example, overt delinquency, or aggressive or violent criminal behavior, has been found to follow a different path of behaviors than more covert types of delinquency, such as burglary and theft. Using a large sample size, an investigation of the items of the YLS/CMI could be conducted to determine whether young offenders demonstrating offences involving aggression and violence differ from those offenders who are involved in property type offences. Results of such a study might provide information regarding the etiology of different types of criminal behavior. This, in turn, would help to refine the prediction of future criminal behavior and offer information on interventions for specialized offender groups.

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APPENDIX A

THE PRINCIPLES OF PERSONAL, INTERPERSONAL, AND COMMUNITY- REINFORCEMENT PERSPECTIVE

1. Occurrences of deviant and nondeviant behavior are under antecedent and consequent control.
2. Inter- and intraindividual variations in the probability of occurrence of a given class of behavior (deviant and nondeviant) are due to variations in the signalled rewards and costs for that class of behavior.
3. Antecedents and consequences are of two major types: additive events (stimuli are introduced, extended or augmented) and subtractive events (stimuli are withdrawn, postponed or diminished).
4. The controlling properties of antecedents and consequences are acquired through the interaction of the person with the environment. The principles governing the acquisition, maintenance and modification of the controlling properties of stimulus conditions include those of genetic and constitutional disposition and capability; biophysical functioning; cognitive functioning; human development; behavioral repertoire; state conditions; and respondent and operant conditioning, including observational learning, rule learning, symbolic control and role enactment.
5. Antecedents and consequences arise from four major sources: 1) the actor (personally mediated events); 2) other persons (interpersonally mediated events); 3) the act itself (non- mediated or automatic and habitual events); and 4) other aspects of the situation of

action.

6. Variations in the probability of occurrence of a given class of behavior are a positive function of the signalled density of the rewards for that class of behavior and a negative function off the signalled density of the costs for that class of behavior.

7. The magnitude of the effect of any one signalled reward for any class of behaviors depends upon the signalled density of other rewards for that class of behaviors.

Generally, the magnitude of the effect of any one reward is greatest at some intermediate level of density, and the magnitude of the effect of any one reward is diminished at the lowest and highest levels of density. Similarly, the magnitude of the effect of any one cost for any class of behaviors is greatest at some intermediate level of density of costs.

8. The magnitude of the effect of the signalled density of the costs for any class of behaviors depends upon the signalled density of the rewards for that class of behaviors.

Generally, the effect of density of costs is greatest at some intermediate level of density of rewards and diminished at the lower and higher levels of density of rewards.

9. Variations in the signalled rewards and costs for one class of behavior (deviant or nondeviant) may produce variations in the probability of occurrence in another class of behavior. The magnitude of the effect is a function of interconnecting contingencies and schedules for deviant and nondeviant behavior. The rewards for nondeviant behavior approach their maximum impact on the chances of deviant behavior under the following conditions:

a) when and where relatively noncostly and nondeviant behaviors produce a relatively high density of rewards, including rewards similar to those produced by deviant behavior;

b) when and where the costs for deviant behavior include a reduction,

postponement, omission or interruption in the delivery of those rewards produced by nondeviant behavior; and

c) when and where nondeviant behavior is incompatible with deviant behavior.

10. Historical, geographical and political-economic factors influence individual behavior primarily by way of contingencies that they produce within settings and communities.

11. Setting and community factors include physical, environmental and cultural variables, as well as the structure of social systems; these influence individual behavior through the reward- cost contingencies they maintain within the settings.

12. Two basic dimensions for the analysis of the effects of systems on the deviant and nondeviant behaviors of its members are the normative and the control dimensions. The normative dimension includes behavioral prescriptions and proscriptions and their distribution according to one's position within the system. The control dimension includes the visibility of normative and deviant behavior to persons who control resources (including potential rewards and costs); the quantity, variety, quality and magnitude of potential rewards and costs; the immediacy, frequency and regularity with which rewards and costs are delivered; and the maintenance of interconnecting contingencies for deviant and nondeviant behavior.

13. Variations in the probability of occurrence of any given behavior within each of the deviant and nondeviant classes of behavior may be understood or produced by the application of the preceding principles to that specific behavior.

14. The predictability of behavior and its amenability to influence increase with individualized assessment of the signalled reward/cost contingencies.

15. The human and social value of any perspective on human conduct is in some part a function of predictive efficiency and the ability to influence events. For the most part, its

value is a function of ethical and humane applications.

Reprinted from: Andrews, D. A., & Bonta, J. (1998). The psychology of criminal conduct. p. 151-152.. Cincinnati, OH: Anderson Publishing Co.

APPENDIX B

YOUTH LEVEL OF SERVICE/CASE MANAGEMENT INVENTORY

THE YOUTH LEVEL OF SERVICE/CASE MANAGEMENT INVENTORY
ROBERT D. HOGE & D. A. ANDREWS, CARLETON UNIVERSITY
 [Alternate Title: Ministry Risk/Need Assessment Form]

Name _____ **Date of Birth** _____

Part I - Assessment of Risk and Needs

Prior and Current Offenses/Dispositions		Comments (include mitigating and aggravating factors)
a. Three or more prior convictions	<input type="checkbox"/>	_____
b. Two or more failures to comply	<input type="checkbox"/>	_____
c. Prior probation	<input type="checkbox"/>	_____
d. Prior detention	<input type="checkbox"/>	_____
e. Three or more current convictions	<input type="checkbox"/>	_____
Total	_____	
Risk Level:		Source(s) of information
Low (0)	<input type="checkbox"/>	_____
Moderate (1-2)	<input type="checkbox"/>	_____
High (3-5)	<input type="checkbox"/>	_____

Family Circumstances/Parenting		Comments
a. Inadequate supervision	<input type="checkbox"/>	_____
b. Difficulty in controlling behavior	<input type="checkbox"/>	_____
c. Inappropriate discipline	<input type="checkbox"/>	_____
d. Inconsistent parenting	<input type="checkbox"/>	_____
e. Poor relations/father-child	<input type="checkbox"/>	_____
f. Poor relations/mother-child	<input type="checkbox"/>	_____
Total	_____	
Strength	<input type="checkbox"/>	
Risk Level:		Source(s) of information
Low (0-2)	<input type="checkbox"/>	_____
Moderate (3-4)	<input type="checkbox"/>	_____
High (5-6)	<input type="checkbox"/>	_____

Education/Employment		Comments
a. Disruptive classroom behavior	<input type="checkbox"/>	_____
b. Disruptive behavior on school property	<input type="checkbox"/>	_____
c. Low achievement	<input type="checkbox"/>	_____
d. Problems with peers	<input type="checkbox"/>	_____
e. Problems with teachers	<input type="checkbox"/>	_____
f. Truancy	<input type="checkbox"/>	_____
g. Unemployed/not seeking employment	<input type="checkbox"/>	_____
Total	_____	
Strength	<input type="checkbox"/>	
Risk Level:		Source(s) of information
Low (0)	<input type="checkbox"/>	_____
Moderate (1-3)	<input type="checkbox"/>	_____
High (4-7)	<input type="checkbox"/>	_____

THE YOUTH LEVEL OF SERVICE/CASE MANAGEMENT INVENTORY
ROBERT D. HOGE & D. A. ANDREWS, CARLETON UNIVERSITY
[ALTERNATE TITLE: MINISTRY RISK/NEED FORM]

Part I - Assessment of Risk and Needs (Continued)

Peer Relations **Comments**

a. Some delinquent acquaintances

b. Some delinquent friends

c. No or few positive acquaintances

d. Nor or few positive friends

Total _____

Strength

Risk Level:

Low (0)

Moderate (2-3)

High (4)

 Source(s) of information

Substance Abuse **Comments**

a. Occasional drug use

b. Chronic drug use

c. Chronic alcohol use

d. Substance abuse interferes with life

e. Substance use linked to offense(s)

Total _____

Strength

Risk Level:

Low (0)

Moderate (1-2)

High (3-5)

 Source(s) of information

Leisure/Recreation **Comments**

a. Limited organized activities

b. Could make better use of time

c. No personal interests

Total _____

Strength

Risk Level:

Low (0)

Moderate (1)

High (2-3)

 Source(s) of information

THE YOUTH LEVEL OF SERVICE/CASE MANAGEMENT INVENTORY
ROBERT D. HOGE & D. A. ANDREWS, CARLETON UNIVERSITY
[ALTERNATE TITLE: MINISTRY RISK/NEED FORM]

Part I - Assessment of Risk and Needs (Continued)

7. Personality/Behavior

- a. Inflated self-esteem
- b. Physically aggressive
- c. Tantrums
- d. Short attention span
- e. Poor frustration tolerance
- f. Inadequate guilt feelings
- g. Verbally aggressive, impudent

Total _____

Strength

Risk Level:

- Low (0)
- Moderate (1-4)
- High (5-7)

Source(s) of information

8. Attitudes/Orientation

- a. Antisocial/procriminal attitudes
- b. Not seeking help
- c. Actively rejecting help
- d. Defies Authority
- e. Callous, little concern for others

Total _____

Strength

Risk Level:

- Low (0)
- Moderate (1-3)
- High (4-5)

Source(s) of information

Part II - Summary of Risk/Need Factors (from pages 1 to 3)

	Prior and Current Offenses	Family	Education	Peers	Substance Abuse	Leisure and Recreation	Personality and Behavior	Attitudes and Orientation	Overall Total of Scores
Scores									
Low									
Moderate									
High									

Overall Total

- Low (0-8) High (23-34)
- Moderate (9-22) Very High (35-42)

THE YOUTH LEVEL OF SERVICE/CASE MANAGEMENT INVENTORY
ROBERT D. HOGE & D. A. ANDREWS, CARLETON UNIVERSITY
[ALTERNATE TITLE: MINISTRY RISK/NEED FORM]

Part III - Assessment of Other Needs/Special Considerations

1. Family/Parents

- | | | |
|---|---|--|
| <input type="checkbox"/> Chronic History of Offenses | <input type="checkbox"/> Financial/Acomodation Problems | <input type="checkbox"/> Abusive Mother |
| <input type="checkbox"/> Emotional Distress/Psychiatric | <input type="checkbox"/> Uncooperative Parents | <input type="checkbox"/> Significant Family Trauma |
| <input type="checkbox"/> Drug-Alcohol Abuse | <input type="checkbox"/> Cultural/Ethnic Issues | (Specify) _____ |
| <input type="checkbox"/> Marital Conflict | <input type="checkbox"/> Abusive Father | <input type="checkbox"/> Other _____ |

Comments

2. Youth

- | | | |
|---|--|--|
| <input type="checkbox"/> Health Problems | <input type="checkbox"/> Peers Outside Age Range | <input type="checkbox"/> Third Party Threat |
| <input type="checkbox"/> Physical Disability | <input type="checkbox"/> Depressed | <input type="checkbox"/> History of Sexual/Physical Assault |
| <input type="checkbox"/> Low Intelligence/Developmental Delay | <input type="checkbox"/> Low Self Esteem | <input type="checkbox"/> History of Assault on Authority Figures |
| <input type="checkbox"/> Learning Disability | <input type="checkbox"/> Inappropriate Sexual Activity | <input type="checkbox"/> History of Weapon Use |
| <input type="checkbox"/> Underachievement | <input type="checkbox"/> Racist/Sexist Attitudes | <input type="checkbox"/> History of Fire Setting |
| <input type="checkbox"/> Problem Solving Skills | <input type="checkbox"/> Poor Social Skills | <input type="checkbox"/> History of Escapes |
| <input type="checkbox"/> Victim of Physical/Sexual Abuse | <input type="checkbox"/> Engages in Denial | <input type="checkbox"/> Protection Issues |
| <input type="checkbox"/> Victim of Neglect | <input type="checkbox"/> Suicide Attempts | <input type="checkbox"/> Adverse Living Conditions |
| <input type="checkbox"/> Shy/Withdrawn | <input type="checkbox"/> Diagnosis of Psychosis | <input type="checkbox"/> Other _____ |

Comments (Note any special responsivity considerations including the need for culturally specific services)

Part IV - Your Assessment of Juvenile's General Risk/Need Level

- Low Reasons: _____
- Moderate _____
- High _____
- Very High _____
- _____
- _____
- _____

THE YOUTH LEVEL OF SERVICE/CASE MANAGEMENT INVENTORY
ROBERT D. HOGE & D. A. ANDREWS, CARLETON UNIVERSITY
[ALTERNATE TITLE: MINISTRY RISK/NEED FORM]

Part V - Contact Level		Comments (Note placement considerations and court expectations, if applicable)
Administrative/Paper	<input type="checkbox"/>	
Minimum Supervision	<input type="checkbox"/>	
Medium Supervision	<input type="checkbox"/>	
Maximum Supervision	<input type="checkbox"/>	

Part VI - Case Management Plan	
Goal One	Means of Achievement
Goal Two	Means of Achievement
Goal Three	Means of Achievement
Goal Four	Means of Achievement

APPENDIX C

PREDISPOSITION FORMAT

**PROVINCE OF SASKATCHEWAN
Department of Social Services
Pre-Disposition Report**

Name of Youth:

Birthdate:

Address (including postal code):

Phone number:

**Person(s) with whom the youth lives:
(phone number if it is different from youth's)**

**Current offence(s) with which youth is charged:
(descriptive statement, relevant statute and section)**

Youth Court location (city, town):

Name of Youth Court Judge:

Name of Crown Attorney:

Name of Youth Worker:
· District Office [city]
· Phone Number

Date Pre-Sentence Report ordered:

Date Pre-Sentence Report presented:

Disposition:

FAMILY BACKGROUND AND SIGNIFICANT RELATIONSHIPS

The intent of this section is to provide a social history of the young person and his family and provide an understanding of how the family functions, the youth functions within the family and how the youth and family function in the community.

The examination of background is helpful in understanding the young person's attitudes and the reasons these attitudes have been adopted. In addition to family interaction, it should include discipline used in the home, family activities and values held by the parents. The report should highlight all major issues as they relate to the youth's offending behaviour.

The nature of housing and the economic and social climate of the neighbourhood or community may have an impact on the social and leisure habits of the young person.

To portray a picture of the family, briefly provide the names, ages, occupations, and address of the immediate family. Detailed information on other family members might be included if it is particularly relevant to the assessment.

Any efforts made by the family to deal with issues pertaining to themselves and the youth are particularly relevant. Success and failures with other programs and agencies will assist in arriving at plans and outcomes.

Key family circumstances to be considered in an assessment of general risk to re-offend are:

- Circumstances of poverty - is the family living in poverty, having serious financial problems?
- Child and Family Services agency involvement - child abuse, child neglect, connection and relationship with parents and caregivers, chaotic family, weak socialization?
- Placements - history of Child and Family Services placements, history of living with different caregivers?
- History of living independent from caregivers, absconding from family home, foster care, open or secure custody?

- Criminal and psychiatric history of parents?
- Substance abuse within the Family - father, mother, siblings?
- Family Violence - parental partner abuse, sibling abuse, witness to violence within the family?
- Living arrangements - appropriateness of arrangements, living at home, is youth dissatisfied with arrangements, has s/he had frequent changes, does s/he live in a high crime neighbourhood?
- Parental Supervision - the amount and quality of parental or caregiver supervision, control over the offender?

PERSONAL ATTRIBUTES OF THE YOUTH

a) Personality

In this section, it is intended that the youth, his strengths, weaknesses and personal resources be described. The description considers the youth's developmental level, general behaviour and elements of character (sensitivity, shyness, social skills, ability to express affection, leadership ability). The subject's view of self (self-concept and esteem), authority and others should also be considered.

Where statements are based on worker impressions this should be identified, as should other sources from which subjective information has been obtained. Descriptions of behaviour are often the most effective illustrations. Statements about suspected criminal behaviour for which the youth has not been sentenced are to be avoided.

b) Health

This section provides information on the youth's physical and emotional health. Relevant information from medical and psychiatric sources should be included, as well as any progress in dealing with issues. In situations in which an assessment has been ordered pursuant to 13(1) YOA, reference may be made, if applicable, to the issues and questions the report will be addressing. If questions exist which indicate the need for medical, psychological or psychiatric examination, they should be raised. Persistent violence, patterns of violent behaviour and chronic offending should be examined from this perspective.

The youth's use of drugs and alcohol is addressed here. Specifically, the impact of substances on behaviour, his/her relationships with others, family functioning and the relationship to offending or previous offending behaviour.

Key factors to consider in assessing general risk to re-offend and when evaluating the risk of aggression to others are:

Aggressive Behaviour

- History of aggressive behaviour - towards family members, strangers, acquaintances, friends, animals or pets?
- Use of Weapons - any fascination with or use of weapons to threaten or harm others?
- No contact conditions - any violation of "no contact" conditions on recognizance, bail, probation orders, or other restraining orders?
- Empathy - awareness of the impact on feelings of others of any aggressive behaviours, including threats, any remorse or concern related to aggressive behaviour?
- Attitude towards violence - beliefs about acceptability of violence, especially strong beliefs which support violence?
- Awareness of warning signs - can identify triggers for violence in self, skills and strategies to control aggressive behaviour?

Psychological Factors

- History of psychological problems - diagnosed problems, history and current treatment?
- Intellectual disorders - learning disorders, ability to learn from experience, willingness to try new things, FAE/FAS suspected, high level of impulsiveness?
- Suicide ideation - suicidal thoughts, attempts, threats, self destructive behaviours, response to treatment and support?

Substance Abuse

- Use or abuse of alcohol, drugs and solvents (impact on daily life)?
- Crimes committed to obtain intoxicants and while under the influence of intoxicants?

c) **Spirituality/Culture**

The young person's background of involvement with organized religion, religious and spiritual leaders and teachers and elders can have a significant impact on attitudes and beliefs. A past or existing connection may be a source of support, personal connection and strength, which may mitigate to reduce risk related to other factors.

Cultural and spiritual support can be a key factor in the general assessment of risk to re-offend. The extent to which the young person subscribes to cultural beliefs, is connected to elders or others, and participates in cultural and spiritual activities should be considered.

d) Peer Relationships and Leisure Activities

The intent of this section is to consider peer relationships and leisure activities and their contribution to a healthy lifestyle and/or likelihood of offending behaviour. The youth's use of leisure time, and the attitudes and values of those with whom he associates may provide important insights about offending and the likelihood of further offending.

Key factors concerning peer relations/leisure activities to be considered in a general assessment of risk to re-offend are:

- Friends - isolation, age appropriateness, criminal acquaintances/allegiance to pro-criminal acquaintances, pro-social acquaintances, leader/follower/blamespeers, potential to learn pro-criminal attitudes, potential for victimization?
- Pro-social personal interests, use of leisure time?
- interaction with others (i.e. positive peer group involvement, or social isolation in criminal activities);
- Sexuality, sexual experiences, promiscuity, use of birth control, appropriateness of sexual relationships; and
- any other issues and strengths, such as the youth's skills in resolving conflicts with peers; etc.

EDUCATION, EMPLOYMENT AND FINANCES

a) Education and Training

This section provides factual information about the young person's education and training and her/his goals and aspirations.

Education experience is a key factor to be considered when assessing general risk to re-offend. The following points are relevant to the assessment:

- outstanding points concerning school attendance and performance record, for instance, scholastic achievement, potential, learning difficulties, deportment/attitude, participation, social development, suspensions/expulsions, behaviour in relation to peers, school officials, discipline and supervision;

- findings of formal assessments should be included where appropriate and verifiable; and
- plans for further education and training and any concrete steps taken towards achieving them.

b) Employment

The aim of this part of the report is the collection of information on the young person's employment situation and history.

Employment history/plans is a key factor to be considered when assessing general risk to re-offend. The following points are included as relevant:

- present employment and employment history, including type and length of employment, and attitude toward work.
- plans the subject may have to obtain employment as well as potential for future employment;
- any impact the offence and various sentencing alternatives may have on the young person's employability;
- connect present/possible future employment to paying restitution/fines, if appropriate, and whether present employment would interfere with subject's ability to complete a Community Service Order.

c) Finances

The young person's financial situation is described when it is appropriate. If restitution or fine is a possible disposition, include how these orders would effect the young person. If applicable, money management skills and assets and debts are included.

PREVIOUS INVOLVEMENT WITH THE CRIMINAL JUSTICE SYSTEM

a) Offence History

This section provides a concise history of the young person's involvement in the criminal justice system, providing information about the history of alternative measures, previous court convictions and resulting sentences.

Factors related to criminal history which are key to the assessment of general risk to re-offend are:

- Number, seriousness, type and circumstances of current convictions?
- Number, seriousness, type and circumstances of previous convictions?
- Convictions while serving other dispositions or failure to comply with dispositions?
- Escalation/deescalation in the seriousness or rate of criminal behaviour?

The Young Offenders Act sets out in subsection 45(1) when records are "deemed" to exist. A record of offenses, which no longer exist by virtue of the legislation, is not to be included. Neither should mention be made of outstanding charges, unless they directly affect the appropriateness of the recommendation. Withdrawn charges and charges for which the young person has been found not guilty are excluded.

b) Response to Services

The purpose of this section is to record an examination of the young persons involvement in the youth justice system. Of particular relevance in a general assessment of the youth's risk to re-offend is future planning.

Considered is the young person's response to court orders, the conditions of those orders, and the progress s/he has made with respect to developing skills and involving her/himself in treatment, as well as the appropriateness of the orders to support maturation and rehabilitation.

An examination will consider:

- the youth's willingness to engage in future plans for behaviour correction and treatment, and their appropriateness must be considered. An examination of past response to service may provide insights in this area.
- is offending behaviour continuing unchecked, or is the offence a setback in the learning/healing/treatment process to which the young offender is or has been committed;
- which court orders, conditions or involvements have been successful, and which are ineffective or inappropriate for the youth's circumstances, and therefore made continued offending more likely.

CIRCUMSTANCES SURROUNDING THE OFFENCE

a) Key Contributing Factors

The purpose of this subsection is to provide information about key factors contributing to the offence. The language used should not appear to excuse the offending behaviour. The writer will consider:

- significant or relevant events involving the young person before, during and after the offence;
- the motivation for committing the offence;
- a summary of key information already revealed to the Court during proceedings may be included, for example, "as revealed during Court proceedings, the offence was carefully planned by the subject several weeks in advance".

Police facts are not repeated. However, if the subject's version of the offence differs from police reports, this information is to be summarized and included.

b) Impact on the Victim and Community

This section is intended to describe the impact of the offence on the victim and community. It provides a description of the physical and emotional harm the victim(s) has endured and any loss or damage to property. It may include comments by members of the victim's community as appropriate, however, general guesses about how the community feels about certain offenses are not useful.

When applicable the report should contain:

- description of and monetary value of goods stolen/damaged;
- other losses/injuries sustained by the victim and other implications of the offence for victim; and
- victim's general attitude to circumstances and offender.

All victims are to be identified and where possible contacted, including private individuals, small businesses, community organizations, large companies, government organizations and insurance companies. If the victim is not contacted, reasons should be given unless they are self-evident (victimless crime). It is appropriate to note the attempts made to contact the victim, when those attempts have been unsuccessful.

c) **Offender's Attitude**

This subsection provides the court with information about how the offender views the offence, the victim, and the judicial process. It contains an assessment supported by the behaviour and statements of the offender and others connected with her/him. The appraisal may also consider whether the young person:

- takes responsibility for the offence;
- is ashamed or embarrassed by the offence;
- is willing to make amends or restitution to the victim and has taken steps on his own initiative;
- has insight into issues connected with offending; and
- any steps taken to address issues related to his offending behaviour.

The young person's attitude toward crime is a key factor in the assessment of general risk to re-offend. Attitudes supportive of criminal and antisocial behaviour, towards the victims of crime, and towards continuing crime should be examined.

Information which is opinion rather than factual should be referenced.

ASSESSMENT

Assessment is making sense of the information collected. It summarizes the most prominent findings of the report. It identifies factors which contribute to offending behaviour, the risk to re-offend and how this risk can be reduced/managed. It must evaluate the personal and family strengths and resources, and identify the young person's skill deficiencies, as well as his educational, employment, health and treatment needs.

The purpose of the assessment is to identify what needs to happen or change to reduce the risk of re-offence, and provides the basis for a case plan. In addition to reducing and managing risk, the plan must identify supervision requirements to ensure community safety and ways to hold the youth accountable to the victim and community.

Additionally, the assessment should clearly identify general risk to re-offend, and secondly, the risk that the young person will do harm to others. This assessment of risk is an essential element in balancing community safety, with other sentencing principles, primarily accountability, and rehabilitation (treatment). To be complete this section must contain a statement summarizing each of the two types of risk.

If the information collected is incomplete, or insufficient to clearly state risk, the youth worker should outline this in the report, along with any other reasons risk cannot be determined or accurately assessed. Should additional assessments be required to reach conclusions, for example, drug and alcohol assessment, sex offender risk assessment, psychological or medical assessment, the youth worker will indicate that in the report. Should the court have the authority to require the additional assessment, for example, psychological assessment, the request may form part of the recommendations of the report.

If plans, flowing from the assessment, are to become blueprints for change, they must be owned by the youth, his family and others responsible to achieve them. Tools, such as genograms, ecomaps, sequences of behaviour and family hierarchy analysis, assist in gathering information, and making sense of the information gathered through risk/need and strength assessments and other methods.

Professional discretion is an important element in the analysis of offender risks and programming needs. Through its use the worker can improve upon the assessment by ensuring the unique circumstances of the young person and ethical issues are considered and understood.

DISPOSITIONAL ALTERNATIVES

The Community Services Policy and Procedures Manual contains a section on the philosophy for pre-disposition report preparation and dispositional alternatives. The intent and procedures contained in those sections will guide the writer in the selection of appropriate alternatives.

Section 20 of the Young Offenders Act provides a range of alternatives the youth court can impose. The youth worker selects the most appropriate alternatives which match the needs and circumstances of the youth, her/his family, the risk to re-offend, the victim and the community. Alternatives must balance:

- the needs of the victim and community for reparation of the harm done;
- other suitable accountability options;
- community safety through the management of risk;
- the availability of services and programs, firstly within the community, and their appropriateness for managing and intervening with issues leading to offending, and the history of their effectiveness with the youth;
- the attitudes of the offender and his willingness to accept responsibility; and

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- the youth's and family's willingness to commit to required plans/outcomes and be involved in programs and resources which will assist them.

Where it is relevant, a description of the impact of the various sentencing alternatives may have on the young person's health, education, employment health and family relationships and functioning should be included.

When the youth court makes a custody sentence, the judge must state, in writing, the reasons why any other disposition(s) would not have been adequate. When custody is a possible alternative the youth worker will describe the efficacy of community programs to meet the sentencing requirements of the case and, where appropriate, provide information about the following areas to the court:

- a description of the plans to address child protection, health and other social measures requirements;
- for offenses which do not involve serious personal injury, alternatives for how the young person can be held accountable to the victim and community, and if this cannot be accomplished without jeopardising community safety, the factors leading to this conclusion;
- available alternatives to meet sentencing requirements within the community and if all options have been exhausted, a statement outlining the rationale.

The Young Offenders Act requires the youth court to consider specified criteria when determining the level of custody. Much of the information the court needs is contained in the earlier sections of the pre-disposition report. The prosecutor or defence counsel may also provide facts. If custody is a likelihood the report will need to contain information about:

- the accessibility of school, employment and support services, especially in consideration of an open custody facility or community home;
- the safety of other persons in custody;
- the match of programs to the young person's needs and behaviour; and
- the potential for escape in the event of open custody.

This information should be provided only to the extent required to determine the level (open or secure) of custody, not the actual facility. Where the information is provided earlier in the report, it need only be referenced.

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Selecting from alternatives requires that the writer have knowledge of, and/or investigate the programs and services available. It also means making judgements about the ability and appropriateness of programs and services to provide the needed treatment, supervision and support. For each alternative the possible ramifications are briefly described. The explanations will make connections between the sentence and the information provided earlier in the report.

RECOMMENDATIONS:

Of the sentencing alternatives described, the most suitable is recommended to the court. The choice is based on the principles of sentencing, and not on the views of other professionals, or guesses about what the judge, prosecutor, or defence counsel will want to hear.

SOURCES OF INFORMATION:

List the sources of information by name and relationship to the young person. If there are extreme circumstances which preclude listing the name of a source, the source should be named verbally to the judge in the presence of the prosecutor and defence council.

APPENDIX D

OFFENCE CATEGORIES

Serious Person-related Offences:

- Aggravated Assault
- Assault causing bodily harm
- Assault with weapon
- Dangerous driving causing bodily harm
- Operate motor vehicle and cause bodily harm
- Robbery
- Robbery with Violence
- Robbery with Weapon
- Sexual Interference

Less Serious Person-related Offence

- Assault
- Assault Peace Officer
- Harass and unlawfully communicate
- Utter Threats
- Utter Death Threats

Serious Property Offence

- Armed Robbery
- Arson
- Possession of Stolen automobile
- Possession over \$5000
- Theft over \$5000

Less Serious Property Offence

- Attempted Break and Enter
- Break and Enter
- Forcible Entry
- Willful Damage
- Fraud
- Mischief
- Passenger in Stolen Vehicle
- Possession of Stolen Goods under \$5000
- Take vehicle without consent
- Theft Under \$5000
- Trespass

Other Criminal Code Offences

- Breach Undertaking / Failure to Comply
- Cause disturbance
- Contempt

- Communication for Prostitution
- Cruelty to animals
- Dangerous Driving
- Escape Lawful Custody
- Failure to pay fine
- Fail to Attend Court
- High speed chase
- Obstruction of Justice
- Operate motor vehicle in dangerous manner
- Operate motor vehicle while impaired
- Prowl at Night
- Resist Arrest
- Tools for Break and Enter
- Unlawfully at large
- Young Offenders Offence
 - Breach of Probation
- Weapons Related Offences
 - Carry concealed weapon
 - Possession of Imitated Weapon
 - Possession of Weapon
- Canadian Drug and Substances Act Offence
 - Possession of Substance
 - Trafficking