

PSYCHOLOGICAL ASSESSMENT FOR ADULT SENTENCING OF JUVENILE  
OFFENDERS: AN EVALUATION OF THE RSTI AND THE SAVRY

by

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Thesis submitted in partial fulfillment of  
the requirements for the degree of

Master of Arts

In the  
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## Abstract

Two measures relevant to the assessment of juvenile offenders for transfer to adult court, the Risk-Sophistication-Treatment Inventory (RSTI) and the Structured Assessment of Violence Risk in Youth (SAVRY), were evaluated in the present study. Seventy-four adolescents considered for transfer were scored on these tools using file information, and clinicians' transfer reports were coded for judgments of risk, maturity, and treatment amenability. The RSTI Risk, Criminal Sophistication, and Treatment Amenability scales and the SAVRY Total and Protective scales predicted an adult sentence. Further, with the exception of the RSTI Risk and SAVRY Total, these scales provided incremental validity in the prediction of adult sentences beyond other legal criteria such as offence severity. However, the RSTI Sophistication-Maturity scale did not predict an adult sentence. Results provide support for the use of the RSTI and the SAVRY, underscore the potential importance of psychological characteristics to adult sentencing decisions, and reflect challenges inherent in psycho-legal assessments of maturity.

**Keywords:** juvenile offenders; transfer to adult court; adult sentencing; risk factors; maturity

*To my family*

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## Psychological Assessment for Adult Sentencing of Juvenile Offenders:

### An Evaluation of the RSTI and the SAVRY

Transfer to adult court has been employed throughout the history of the juvenile justice system to address the most serious crimes committed by young offenders (Grisso, 1998). Although traditionally this process has been employed only in rare cases, concerns about escalating juvenile violence during the 1990s prompted most U.S. states to alter their transfer laws to facilitate waiver of youths to adult court (Snyder et al., 1996). These changes included lowering the age at which youth could be transferred as well as making a greater number of offenses eligible for transfer. In addition, statutory exclusion laws were established that permit adolescents to be transferred automatically if they have met particular offence and minimum age criteria (Mulford, Reppucci, Mulvey, Woolard, & Portwood, 2004), and prosecutorial direct file procedures were created that allow prosecuting attorneys to file charges against youths in either juvenile or adult court (Leistico & Salekin, 2003). Thus, it is now easier, faster, and less expensive than ever before to waive juveniles to adult court (Dawson, 2000).

The proliferation of these methods, in addition to a growth in punitive attitudes toward young offenders (Jan, Ball, & Walsh, 2008), coincided with an increase in the number of youth waived to adult court in the U.S. from 7200 youths in 1985 to 13200 in 1994 (OJJDP, 2001). By 2002 the number of transferred youth per year had declined, but nevertheless amounted to 7100 (OJJDP, 2006). Although transfer laws continue to receive a fair degree of public support (Brannen et al., 2006), they have also drawn substantial criticism. In particular, there is a sizeable body of research evidence indicating that transferred juveniles are more likely to recidivate than youth who are retained in

juvenile court even after a number of risk-related variables (e.g., number of past offences) are controlled for (Bishop et al., 1996; Fagan, 1996; Fagan et al., 2003; Lanza-Kaduce et al., 2005; Winner et al., 1997). This research suggests that the transfer process itself may have iatrogenic effects (e.g., Redding, 2008).

In Canada, transfer law has evolved in a manner similar to that of the U.S. The Young Offenders Act of 1984 took a retributive stance on youth crime, mandating that transfer decisions be based on a central goal of community protection (Penney & Moretti, 2005). Subsequently, the number of juveniles waived to adult court reached an all-time high of 124 cases in 1994 (Stevenson, Tufts, Hendrick, & Kowalski, 1998). Similar to the United States, this number declined after 1994 (Stevenson et al., 1998).

In 2003, Canada implemented the Youth Criminal Justice Act (YCJA; 2003). With the introduction of the YCJA, Canada followed the lead of the U.S. in implementing several changes that facilitate and simplify the adult sentencing process. Specifically, as in the U.S., the YCJA lowered the minimum age for adult sentences (to 14 years old) and broadened the offenses eligible for adult sentencing (by adding repeat violent offences). Further, under this law, youth who committed a “presumptive offence” (i.e., first-degree murder, second-degree murder, manslaughter, attempted murder, aggravated sexual assault, or a serious violent offence) were automatically mandated to receive an adult sentence. However, the Supreme Court of Canada recently reversed this latter change in a ruling that Crown counsel must always convince the court as to why an adult sentence is more appropriate than a youth sentence (*R. v. D.B.*, 2008).

A key difference between the YCJA legislation in Canada and U.S. law is the YCJA’s elimination of the transfer process. Whereas U.S. law further encouraged adult

sentencing by increasing the mechanisms of transfer to adult court, the YCJA included provisions for Canadian *youth* courts to give both juvenile and adult sentences. This process accomplishes the goal of imposing adult sentences on transferable youth, but increases the efficiency of the process by eliminating the need for a lengthy transfer proceeding. Another key element of the YCJA is the principle of holding youth “accountable” (s. 72 [1]) for their crimes, which some have interpreted as a punitive change that could encourage the use of adult sentencing (Penney & Moretti, 2005). Recent calls to revise the YCJA have also proposed that sentencing principles of “deterrence and denunciation” be implemented into the Act (“Federal-Provincial-Territorial Attorneys”, 2008), which could also increase the use of adult sentencing given the castigatory nature of these tenets.

Amidst these numerous changes, however, it is unclear as to how frequently adult sanctions are used in Canada. The newest available statistics indicate that a total of 91 cases were transferred to adult court from 1998 to 1999 (Statistics Canada, 2000), but no figures have been published since that time (Bala, Carrington, & Roberts, 2009). This is because reporting of adult sentences is not currently mandatory, which has precluded most provinces from tracking them thus far (Statistics Canada, personal communication, July 30, 2009). All told, this lack of information makes it difficult to precisely determine how often transfer to adult court was used in the years leading up to the implementation of the YCJA as well as how the YCJA has subsequently affected the use of adult sentencing.

The criteria used to decide whether a youth will be sentenced as an adult or transferred to adult court are comparable in both Canada and the U.S. In both countries,

courts faced with the decision of whether to transfer a youth to adult court or to sentence a youth as an adult must consider legal criteria such as the seriousness of the offence, the youth's age, and the youth's criminal history (*Kent v. U.S.*, 1968; YCJA, 2003; YOA, 1984).

The use of factors that pertain more to the psychological functioning of the juvenile have been used in case law and legislation as criteria for determining whether a youth should be transferred or sentenced in the adult system. In particular, U.S. case law (*Kent v. U.S.*, 1966) specifies that the transfer decision should be informed by the criteria of maturity, amenability to treatment, and community protection (i.e., risk for violence; Ewing, 1990). Previous Canadian legislation under the Canadian YOA (1984) included the principles of maturity, societal protection, and rehabilitation of the youth. Canada's current legislation, the YCJA, differs from U.S. law and the YOA in its statement that the ultimate test for the use of an adult sentence is whether it is best able to hold a youth "accountable" (s. 72 [1]) for their offence. The criterion of maturity is still stated in adult sentencing legislation (s. 72[1]), rehabilitation is emphasized in case law regarding adult sentencing (*R. v. Pratt*, 2007), and societal protection (i.e., risk) is cited in the general Declaration of Principle (s. 3 [1]). Thus, within the overarching principle of "accountability", it appears that these same factors - related to maturity, rehabilitation, and societal protection - remain important to adult sentencing decisions under the YCJA.

Given that the factors such as risk (in legislation this relates to societal protection), maturity, and treatment amenability are psychological in nature, courts often ask clinicians to evaluate these factors in youths being considered for transfer to adult court (e.g., Grisso, Tomkins, & Casey, 1986). Surprisingly, in spite of the stated

importance of these components in the law, there has historically been little guidance as to how clinicians should actually assess them. To address this issue, Salekin and colleagues asked clinicians and juvenile court judges to identify characteristics pertinent to risk, maturity, and treatment amenability (Salekin, Rogers, & Ustad, 2001; Salekin et al., 2002). Participants' responses revealed aspects of each construct that were consistently rated as essential (e.g., a history of violence, autonomy, and motivation to change), and thereby illuminated possible areas of focus for clinical evaluations.

In addition, Salekin et al. (2002) sought to clarify the importance of these constructs to actual transfer decisions by asking a national sample of juvenile court judges to evaluate vignettes of youth being considered for transfer. Findings indicated that transfer decisions in the U.S. were associated with high risk, "moderately low" maturity, and low treatment amenability. Similar results were found when forensic mental health clinicians were asked to recall and evaluate a previous transfer case (Salekin et al., 2001). In contrast, a more recent survey of U.S. juvenile court judges (Brannen et al., 2006) indicated that transfer decisions were associated with high risk and high maturity but were not significantly affected by treatment amenability. This research suggests that although all three constructs appear to be associated with the outcome of transfer to adult court in the U.S., there may be some variability in terms of how much weight is placed on maturity and treatment amenability. In addition, given the lack of research conducted in other countries such as Canada, it is unclear as to how these constructs are weighed in jurisdictions other than the U.S.

Beyond the need for research in other countries, there is also a need for further knowledge on assessment approaches. Until recently, there have been few empirically



supported psychological instruments to help clinicians assess risk, maturity, and treatment amenability (Kruh & Brodsky, 1997). In response to this need, Salekin (2004) developed the Risk-Sophistication-Treatment Inventory (RSTI) based on judicial and clinical surveys (Salekin et al., 2001; 2002). The RSTI consists of scales for risk, sophistication-maturity, and treatment amenability as well as a criminal sophistication subscale to assess whether youths use their maturity in pro- or anti-social ways. This instrument has potential utility for clinicians given that it is the only available tool capable of assessing all three constructs comprehensively.

Despite its evident promise, the RSTI currently lacks a supporting body of psychometric evidence from independent researchers. In one study (Leistico & Salekin, 2003), the RSTI correlated as expected with related clinical variables, demonstrated good to excellent interrater reliability, and was predictive of transfer to adult court, but further research needs to be done in order to examine the psychometric properties of the instrument.

The Structured Assessment of Violence Risk in Youth (SAVRY; Borum, Bartel, & Forth, 2003) is another instrument of interest to clinicians providing opinions on cases to determine transfer to adult court. The SAVRY was specifically designed to assess risk for future violence, and has a growing body of evidence supporting its utility in the prediction of violent recidivism (e.g., Dolan & Rennie, 2008; Welsh et al., 2008). The SAVRY speaks to risk and has items that may be relevant to treatment amenability. However, no research has yet been conducted on the possible application of the SAVRY to adult sentencing and transfer evaluations.

Thus, the practice of assessing juveniles for transfer and adult sentencing is characterized by several research needs. First, although measures such as the RSTI and SAVRY exist to help clinicians measure constructs that are relevant to legal criteria for transfer and adult sentencing, these tools require more empirical study in the context of adult sentencing/transfer decisions. Secondly, despite the long-standing practice of sentencing juveniles as adults, the psychological characteristics of adolescents who receive adult versus juvenile sentences remain poorly understood. This raises the question of whether youth who are transferred or given adult sentences differ meaningfully from other youth on risk, maturity, and treatment amenability. Thirdly, although clinicians commonly assess youth considered for transfer/adult sentencing, it remains unclear as to what extent they focus on risk, sophistication-maturity, and treatment amenability in their assessments as well as the degree to which their judgments correspond to sentencing decisions and psychological tools. Finally, although Canadian transfer law has evolved in a manner similar to that of the U.S. and emphasizes similar legal and psychological criteria for transfer and adult sentencing, no studies concerning this issue have yet been conducted in Canada. Thus, there is a need for Canadian research in order to better illuminate procedures regarding transfer and adult sentencing in Canada as well as to determine whether they are consistent with methods in the U.S. (e.g., Leistico & Salekin, 2003).

The purpose of the present study was to provide much needed data on Canadian youth being considered for adult sentencing or transfer to adult court. Using the RSTI and SAVRY, we examine the relationship between risk, maturity, and treatment amenability, and likelihood of adult sentencing. Given the results of surveys on risk, maturity, and

treatment amenability (e.g., Salekin et al., 2001; Brannen et al., 2006), it was anticipated that youth who were transferred to adult court or who received adult sentences would be rated as more dangerous, more mature, and less amenable to treatment on the RSTI and SAVRY as well as in clinicians' transfer reports. Secondly, we examined the inter-rater reliability, convergent validity, and predictive validity of the SAVRY and the RSTI. Based on preliminary evidence (e.g., Dolan & Rennie, 2008; Leistico & Salekin, 2003), we expected that the RSTI and SAVRY would demonstrate good psychometric properties (i.e., interrater reliability, convergent validity, and predictive validity in the context of transfer and adult sentencing decisions).

## Method

### *Participants*

The sample included 74 youths who had committed murders and who were consequently assessed by Youth Forensic Psychiatric Services in British Columbia, Canada, for adult sentencing or transfer to adult court. Sixty-four (86%) participants were evaluated between 1988 and 2002 under Section 16 of the YOA (1984) for transfer to adult court. Ten (14%) participants were evaluated for adult sentencing under section 71 of the YCJA (2003).

Most youths in the sample were male (85.1%,  $n = 63$ ), although some females were also included (14.9%,  $n = 11$ ). The mean age of participants at assessment was 16.74 years old ( $SD = 1.4$ ), with 57 (77%) between 14 to 17 years old, 12 (16.2%) age 18 years old, 3 (4.1%) age 19 years old, and 2 (2.8%) between 20 and 23 years old.

Although some participants were 18 or older at the time of their evaluation, all had

committed their index offences between the ages of 12 and 17 and fell under the purview of the YOA or YCJA.

With regard to race, most youths were Caucasian (39.2%,  $n = 29$ ), followed by Aboriginal (35.1%,  $n = 26$ ), mixed Caucasian/Aboriginal ancestry (12.2%,  $n = 9$ ), Asian (6.8%,  $n = 5$ ), and Hispanic (1.4%,  $n = 1$ ). Four youths (5.4%) were of unknown race. Their mean completed grade level was 8.53 ( $SD = 1.28$ ). Participants' mean age of onset for behavioral problems was 10.93 ( $SD = 3.96$ ) and their mean age at first arrest was 14.62 ( $SD = 1.51$ ). On average, participants had 2.63 violent conduct disorder symptoms ( $SD = 1.45$ ;  $Range = 0-5$ ) and 3.93 non-violent conduct disorder symptoms ( $SD = 2.14$ ;  $Range = 1-8$ ). More than half of participants had previously been charged with a violent offence (57%,  $n = 43$ ) and most had been previously charged with a nonviolent offence (72%,  $n = 54$ ). On average, youth had been convicted of 3.97 ( $SD = 6.73$ ) offences prior to the index offence. This corresponded to a mean of 1.15 ( $SD = 1.49$ ) violent offences and a mean of 2.82 ( $SD = 5.91$ ) non-violent offences.

The index offence for all youth was either murder or manslaughter. Specifically, 18 (24.3%) had been charged with first-degree murder, 45 (60.8%) had been charged with second-degree murder, and 11 (14.9%) had been charged with manslaughter. Twenty-two (29.7%) of these participants were sentenced as youths, and 40 (54.1%) were sentenced as adults. The remaining 12 (16.2%) participants did not have either a juvenile or an adult sentence recorded for their offence, indicating that they were not convicted (e.g., they were found not guilty or the charges were dismissed).

### *Procedure*

Archival file data were used to retrospectively code the RSTI, SAVRY, and clinicians' transfer/adult sentencing assessment reports. On average, files were approximately 600 pages in length and included psychiatric and psychological evaluations, social history, police reports and statements, offence type, predisposition reports, interview notes, and nursing documentation. Both the RSTI and the SAVRY have been reliably scored using file information in previous research (Catchpole & Gretton, 2003; Leistico & Salekin, 2003).

The first author coded all files. In order to determine interrater reliability, a research assistant also coded 15 randomly sampled files independently. This research assistant was a Master's level graduate student who had previously completed coursework and practica in clinical forensic psychology. Additional training for the present study included assigned readings, didactic sessions, and coding and discussion of two practice cases that were derived from the sample.

Subsequent to the completion of file coding, data on whether the youth was sentenced as a juvenile or as an adult was obtained from the BC Corrections Network (CORNET). Coding of the RSTI and SAVRY was conducted blind to coding of clinicians' transfer/adult sentencing assessment reports, and all coding was conducted blind to sentencing outcome. Ethics approval for this research was obtained from the Simon Fraser University Ethics Review Board, Youth Forensic Psychiatric Services, and British Columbia Youth Justice.

## *Measures*

*Background characteristics form.* Participants' age, ethnicity, and level of education were recorded. In addition, given that the severity and chronicity of behavioral problems have been shown in previous research to be related to risk and treatment amenability (Leistico & Salekin, 2003), such problems were also noted. Specifically, we coded age at first offence and first arrest, number of prior violent and nonviolent offences, and symptoms of conduct disorder (APA, 2000) that were either violent (e.g., initiates physical fights) or nonviolent (e.g., has broken into someone else's house, building, or car).

*Risk-Sophistication-Treatment Inventory (RSTI).* The RSTI (Salekin, 2004) is a 45-item measure to assess criteria relevant to adult sentencing or transfer to adult court. It assesses factors related to Risk for Dangerousness (e.g., unprovoked violent behavior), Sophistication-Maturity (e.g., autonomy), and Treatment Amenability (e.g., insight into cause of problems). Each of the Risk, Sophistication-Maturity, and Treatment Amenability scales includes 15 items, which are scored as low, moderate, or high. In addition, the Sophistication-Maturity scale includes a Criminal Sophistication subscale whereby if a Sophistication-Maturity item is scored as moderate or high, that item is then rated dichotomously according to whether the youth uses the characteristic for criminal or prosocial means. Little psychometric research has been conducted on the RSTI, but Salekin (2004) reported acceptable internal consistency and Leistico and Salekin (2003) reported good to excellent interrater reliability. In addition, Leistico and Salekin (2003) found that each scale of the RSTI correlated as expected with related clinical variables and that the measure was predictive of transfer to adult court.

*Structured Assessment of Violence Risk in Youth (SAVRY).* The SAVRY (Borum et al., 2003) is a 30-item measure to assess violence risk in adolescents. It includes 10 Historical Risk items (e.g., early initiation of violence), 8 Social/Contextual Risk items (e.g., peer delinquency), 8 Individual Risk items (e.g., low empathy/remorse), and 6 Protective items (e.g., strong attachments and bonds). Each risk factor is scored as low, moderate, or high, and each protective factor is scored as absent or present. After taking into account all risk and protective factors as well as any other relevant information, the evaluator makes an overall Summary Risk Rating (i.e., a structured professional judgment) of low, moderate, or high violence risk. In addition, consistent with procedures employed in other research (e.g., Dolan & Rennie, 2008), we calculated a Risk Total score for this study by converting ratings of low, moderate, and high to values of 0, 1, and 2, respectively, and by summing the values. Likewise, a Protective Total score was computed by converting ratings of absent or present to 0 and 1, respectively, and by summing the values. The SAVRY has been shown to have excellent interrater reliability and to have incremental validity over other risk assessment instruments in predicting violent recidivism (e.g., Dolan & Rennie, 2008; Welsh et al., 2008).

*Coding of clinicians' transfer/adult sentencing evaluations.* Files were examined to determine whether they included a clinician's transfer/adult sentencing assessment report. Seventy-one (95.9%) files included a psychiatrist's report, 59 (79.7%) included a psychologist's report, and 59 (79.7%) included both a psychiatrist's and a psychologist's report. Every file included at least one report (i.e., either a psychiatrist's or a psychologist's report). For files in which only one clinician's report was included, this was usually because the contributions of one clinician were integrated into the report of

the second clinician (e.g., the psychologist administered and interpreted psychological testing, but the psychiatrist wrote the final transfer/adult sentencing assessment report).

All reports were requested under Section 16 of the YOA (1984) or Section 71 of the YCJA (2003) in order to assist the court in determining whether the youth should be transferred to adult court (YOA) or sentenced as an adult (YCJA). Psychiatrists typically wrote their reports on the basis of interviews with the youth and a review of collateral information, while psychologists typically wrote their reports on the basis of interviews, collateral information, and psychological testing. There was no standard battery of psychological tests used. Rather, such testing generally included measures to assess cognitive functioning (e.g., Wechsler Intelligence Scale for Children – Third Edition; Wechsler, 1991) and personality (e.g., Minnesota Multiphasic Personality Inventory – Adolescent; University of Minnesota Press, 1992), but otherwise varied by clinician, youth, and the youth's previous history of psychological assessment. However, the SAVRY and the RSTI were not used in any of the evaluations.

The end of each report typically included a section in which issues specifically related to transfer were discussed. This section was examined to determine whether the clinician had made a judgment about the youth's risk, maturity, or treatment amenability. When the clinician had in fact made a judgment about any of these criteria, the judgment was coded as low (i.e., low risk, low maturity, low treatment amenability), moderate (i.e., moderate risk, moderate maturity, moderate treatment amenability), or high (i.e., high risk, high maturity, high treatment amenability).

To examine whether the first author and research assistant were able to reliably code clinicians' judgments, ICCs for ratings of clinical judgments were examined. For



ratings of psychiatrists' judgments, ICCs were .85 for risk, .67 for maturity, and .73 for treatment amenability. For ratings of psychologists' judgments, coefficients were .77 for risk, .60 for maturity, and .80 for treatment amenability. These ICCs are considered "good" to "excellent" (Cicchetti & Sparrow, 1981), indicating that clinicians' judgments of these three criteria were coded reliably.

*BC Corrections Network Records (CORNET).* The CORNET system provides information on the sentence an individual receives for a particular charge and specifies whether the individual is sentenced as a juvenile or as an adult. CORNET was used to locate each participant's murder charge and to rate whether it had resulted in a youth sentence, an adult sentence, or no sentence.

## Results

### *RSTI and SAVRY*

*Missing data.* Prior to conducting analyses, missing data were examined. With regard to the SAVRY, in 31 cases the "Community Disorganization" item could not be rated due to insufficient file information about the youth's community. With regard to the RSTI Sophistication-Maturity scale, in 7 cases the "Self-Reflection" item could not be rated because files did not provide information about the youth's appraisal of their own actions. Finally, in the case of the RSTI Treatment Amenability scale, in 8 cases the "Expects Change" item could not be rated due to a lack of information about the youth's attitudes towards potential treatment. Because the number of these cases approximated or exceeded 10% of the total number of participants, these three items were excluded from further analyses. Deleting these items had only a minimal effect on the psychometric properties (i.e., coefficient alpha and intraclass correlation coefficients) of the SAVRY

and the RSTI. For instance, coefficient alpha for the SAVRY remained at .80 both with and without the inclusion of the “Community Disorganization” item, and the intraclass correlation coefficient for the RSTI Treatment Amenability scale was .70 with inclusion of the “Expects Change” item and .72 without.

*Internal consistency.* Cronbach’s alpha (1951) was calculated in order to examine scale homogeneity. For the RSTI, this analysis produced coefficient alphas of .77 for Risk, .69 for Sophistication-Maturity, and .87 for Treatment Amenability. For the SAVRY, analyses produced coefficients of .83 for Total scores and .74 for Protective scores. These values indicate acceptable internal consistency and, in the case of the RSTI, are consistent with findings in the normative sample (Salekin, 2004).

*Interrater reliability.* To examine interrater reliability, intraclass correlation coefficients (ICCs) were calculated for the RSTI and SAVRY using a two-way random effects model with consistency agreement (McGraw & Wong, 1996). For the RSTI, this analysis produced coefficients of .68 for Risk, .60 for Sophistication-Maturity, .72 for Treatment Amenability, and .47 for Criminal Sophistication. These ICCs are considered “good” to “excellent” according to the classification system used by Cicchetti and Sparrow (1981) with the exception of the Criminal Sophistication ICC, which is considered “fair”. For the SAVRY, analyses produced ICCs of .90 for SAVRY Total, .65 for SAVRY Protective scores, and .35 for SAVRY Summary Risk. These ICCs are considered “good” to “excellent” with the exception of the SAVRY Summary Risk, which is considered “fair” to “poor”. The reduced reliability of the Summary Risk rating in comparison to the other scales appeared to be due to one coder having scored all but one youth in the interrater reliability sample ( $n = 15$ ) as “high” risk, whereas the second

coder's ratings of these youths varied between "moderate" and "high". Because of the relatively poor reliability of the SAVRY Summary Risk rating, it was excluded from further analyses.

*Correspondence between measures.* To evaluate correspondence between the RSTI and the SAVRY, bivariate correlation analyses were conducted on scale and total scores. The results of these analyses are presented in Table 1. As expected, particularly strong correlations were observed between SAVRY Risk scores and the RSTI scales of Risk and Treatment Amenability. Correlations between SAVRY scores and the RSTI Sophistication-Maturity scale were somewhat weaker in magnitude, suggesting that the Sophistication scale may be tapping different constructs. In addition, the Criminal Sophistication subscale was positively related to risk and negatively related to treatment amenability and protective factors, indicating that this scale may be tapping a construct similar to risk for violence.

*Relationship with offence history and problem behaviors.* The relationships between RSTI scores, SAVRY scores, and the severity and chronicity of problem behaviors were examined (see Table 2). As anticipated, Risk scales of the RSTI and the SAVRY tended to be associated with a younger age at first offense and first arrest, a greater number of violent and nonviolent offenses, and a greater number of violent and nonviolent conduct disorder symptoms. Conversely, the Treatment Amenability scale of the RSTI and the Protective scale of the SAVRY were associated with an older age at first offense and first arrest as well as with a lesser number of conduct disorder symptoms. The Sophistication-Maturity scale of the RSTI was also related to an older age at first offense and with a lesser number of conduct disorder symptoms, indicating that

**Table 1***Correlation Matrix for RSTI and SAVRY Scores*

	Risk	S-M	ATX	C-S	SAV-H	SAV-S	SAV-I	SAV-T	SAV-P
Risk	-	-.19	-.79**	.50**	.55**	.51**	.81**	.78**	-.70**
S-M		-	.26*	.52**	-.28**	-.55*	-.24	-.35**	.27*
ATX			-	-.42**	-.46**	-.55**	-	-.72**	.86**
C-S				-	.26*	.19	.46**	.40**	-.42**
SAV-H					-	.58**	.48**	.85**	-.42**
SAV-S						-	.48**	.77**	-.64**
SAV-I							-	.84**	-.68**
SAV-T								-	-.69**
SAV-P									-

*Note.* S-M = Sophistication-Maturity, ATX = Treatment Amenability, C-S = Criminal Sophistication, SAV-H = SAVRY Historical, SAV-S = SAVRY Social/Contextual, SAV-I = SAVRY Individual/Clinical, SAV-T = SAVRY Total, SAV-P = SAVRY Protective, \* =  $p < .05$ , \*\* =  $p < .01$ .

**Table 2*****Correlation Matrix for RSTI and SAVRY Scores, Problem Behaviors, and Offence History***

	Risk	Sophistication- Maturity	Treatment Amenability	Criminal Sophistication	SAVRY- H	SAVRY- S	SAVRY- I	SAVRY- Total	SAVRY- Protective
Age at First Offense	-.40**	.26*	.41**	-.10	-.48**	-.35**	-.32**	-.47**	.23*
Age at First Arrest	-.43**	.17	.38**	-.25	-.52**	-.30**	-.46**	-.55**	.25*
Number of nonviolent offenses	.43**	-.21	-.37**	.17	.45**	.32**	.39**	.48**	-.06
Number of violent offenses	.36**	.01	-.12	.17	.40**	.22	.23	.36**	-.19
Nonviolent Conduct Disorder symptoms	.66**	-.27*	-.58**	.28*	.56**	.40**	.62**	.66**	-.26*
Violent Conduct Disorder symptoms	.53**	-.25*	-.30*	.20	.59**	.42**	.43**	.60**	-.40**

*Note.* SAVRY-H = SAVRY Historical, SAVRY-S = SAVRY Social/Contextual, SAVRY-I = SAVRY Individual/Clinical, \* =  $p < .05$ , \*\* =  $p < .01$ .

this scale may have been tapping maturity that is primarily used in prosocial rather than antisocial (i.e., criminally sophisticated) ways.

Several items on the RSTI and the SAVRY overlap with the offences and problem behaviors examined (for example, number of past violent offences and age at first violent act). Because of this, three items from the RSTI Risk Scale, one item from the RSTI Treatment Amenability Scale, and three items from the SAVRY were removed and relevant correlations were re-analyzed using these modified scales. Removed items from the Risk scale included violent history, high frequency of past criminal acts, and early onset of violence. The item from Treatment Amenability was limited police/court/probation involvement. The SAVRY items were a history of violence, history of non-violent offending, and early initiation of violence. After removal of these items, all correlations remained statistically significant.

*Prediction of adult sentences.* To evaluate differences in risk, maturity, treatment amenability, and protective factors between youths who received a juvenile and an adult sentence, a multivariate analysis of variance (MANOVA) was conducted. RSTI Risk, Sophistication-Maturity, Criminal Sophistication, Treatment Amenability, SAVRY Total, and SAVRY Protective scores were entered as dependent variables, while the sentence given (no sentence, youth sentence, or adult sentence) was the independent variable. The omnibus  $F$  was significant,  $F(1, 71) = 2.52, p < .01$ . As expected, youths who received an adult sentence had higher ratings of RSTI Risk, SAVRY Total, and RSTI Criminal Sophistication and lower ratings of RSTI Treatment Amenability and SAVRY Protective Factors than youths who received a juvenile sentence or who were not sentenced (see

Table 3). However, RSTI Sophistication-Maturity scores did not significantly differ between participants who received an adult versus a juvenile sentence or no sentence.

To further examine how well the Risk, Sophistication-Maturity, Criminal Sophistication, Treatment Amenability, SAVRY Total, and SAVRY Protective scores predicted an adult sentence, a receiver operator characteristic (ROC) analysis was performed for each scale. Results were interpreted by evaluating the total area under the curve (AUC). Because ROC analyses may only be conducted with a dichotomous outcome, participants who were not sentenced ( $n = 12$ ) were excluded and results were analyzed on the basis of participants who received either a juvenile or an adult sentence for their index offence.

The AUCs of the five scales are illustrated in Table 4 and Figure 1. RSTI Risk, Treatment Amenability, and Criminal Sophistication scores and SAVRY Total, Protective, and Summary Risk scores significantly predicted an adult sentence. In contrast, RSTI Sophistication-Maturity scores were not significant and yielded a prediction accuracy estimate that was approximately at chance level.

*Incremental validity of the RSTI and SAVRY.* Given that the RSTI Risk, Criminal Sophistication, and Treatment Amenability and SAVRY Total and Protective scores significantly predicted an adult sentence, a series of hierarchical logistic regression analyses were carried out in order to examine their incremental validity. In an initial set of analyses, we tested whether the RSTI and the SAVRY added incremental validity beyond one another by controlling for the scores of one measure in Block 1 and adding the scores of the second measure in Block 2. Given that logistic regression analyses may only be conducted with a dichotomous outcome, participants who were not sentenced ( $n$

**Table 3*****RSTI and SAVRY Mean Scores, MANOVA Results, and Effect Sizes for No Sentence, Youth, and Adult Sentences***

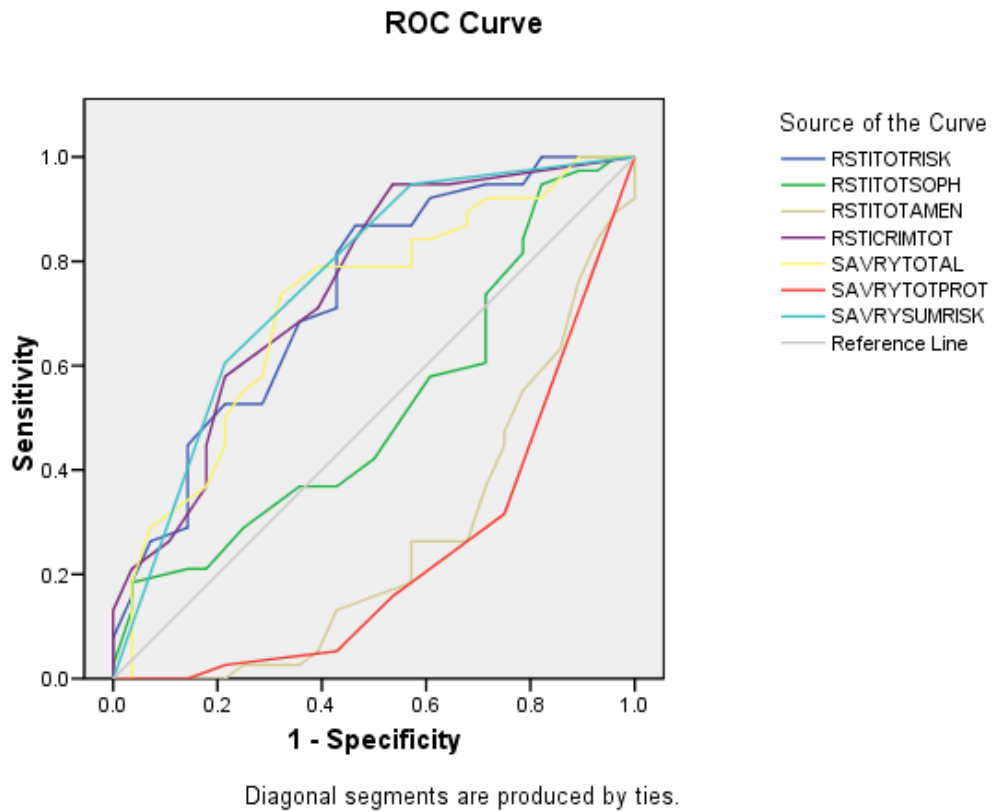
Scales	Sentenced as Adult <i>n</i> = 40	Sentenced as Youth <i>n</i> = 22	Not Sentenced <i>n</i> = 12	F-value	<i>p</i>	Partial Eta <sup>2</sup>
Risk	21.15 (SD = 4.74) <sup>1,2</sup>	16.72 (SD = 4.56)	15.92 (SD = 7.01)	5.67	.01	.25
Sophistication-Maturity	10.89 (SD = 5.01)	9.50 (SD = 4.49)	10.82 (SD = 5.15)	2.78	.08	.14
Treatment Amenability	7.35 (SD = 5.04) <sup>1</sup>	14.26 (SD = 7.07)	12.92 (SD = 7.97)	5.46	.01	.24
Criminal Sophistication	5.45 (SD = 3.19) <sup>1</sup>	2.24 (SD = 2.41)	3.42 (SD = 3.20)	7.40	< .01	.19
SAVRY-Total	25.70 (SD = 7.04) <sup>1</sup>	19.16 (SD = 6.79)	21.67 (SD = 10.85)	7.49	< .01	.30
SAVRY-Protective	.53 (SD = .96) <sup>1,2</sup>	1.86 (SD = 1.61)	2.08 (SD = 1.88)	8.75	< .01	.33

*Note.* <sup>1</sup> = significantly different than Sentenced as Youth, <sup>2</sup> = significantly different than Not Sentenced.



**Table 4***AUC Results for RSTI and SAVRY Scores*

Measures	AUC	Standard Error	<i>p</i>	95% Confidence Interval	
				Lower Bound	Upper Bound
RSTI Scales					
Risk	.73	.06	.00	.61	.86
Sophistication-Maturity	.52	.07	.81	.37	.66
Treatment Amenability	.76	.06	.00	.64	.87
Criminal Sophistication	.75	.06	.00	.64	.86
SAVRY Total	.71	.07	.00	.59	.84
SAVRY Protective Factors	.78	.06	.00	.67	.89



*Figure 1.* Receiver Operator Characteristic Analysis of RSTI Risk, Sophistication-Maturity, Treatment Amenability, and Criminal Sophistication and SAVRY Total, Protective, and Summary Risk Scores

= 12) were excluded and results were analyzed on the basis of participants who received either a juvenile or an adult sentence for their index offence. These analyses revealed that the RSTI and the SAVRY did not add any explained variance beyond one another in the prediction of an adult sentence ( $R^2$ change < .02,  $ps$  > .05).

*Incremental validity of measures over legal criteria.* In a second set of analyses, we tested whether these measures added incremental validity beyond other legal criteria for transfer. Such criteria specified by both U.S. and Canadian courts consist of a variety of factors, including the youth's age, the severity of the offense, previous criminal history, availability of treatment resources, and representations made by the youth to the court (*Kent v. U.S.*, 1966; YOA, 1984; YCJA, 2003). Among these factors, those that could be coded in the present study were the youth's age, offense type (i.e., manslaughter, second-degree murder, first degree murder) and previous criminal history (i.e., number of prior convictions). Hence, we controlled for these factors by entering them in Block 1, followed by each scale in Block 2.

After controlling for age, severity of offense, and number of prior convictions, Treatment Amenability, Criminal Sophistication, and SAVRY Protective scores were significant (see Table 5). RSTI Risk scores approached significance ( $p = .06$ ), as did SAVRY Total scores ( $p = .09$ ). These results indicate that all scales but the RSTI Risk and SAVRY Total explained variance beyond that of other criteria for transfer in the decision to sentence a youth as an adult.

#### *Psychological and Psychiatric Transfer/Adult Sentencing Assessments*

*Discussion of transfer criteria.* At the end of each report, most clinicians addressed criteria related to transfer or adult sentencing (e.g., risk, maturity, and

**Table 5*****Logistic Regression Results for Testing Incremental Validity Beyond Youth Age, Offense Severity, and Criminal History***

Measures	R <sup>2</sup> change	-2 Log Likelihood	B	Wald	<i>p</i>
RSTI Scales					
Risk	.08	66.15	.14	3.66	.06
Treatment Amenability	.12	54.51	-.16	5.43	.02
Criminal Sophistication	.15	61.91	.37	6.37	.01
SAVRY Total	.06	57.73	.09	2.87	.09
SAVRY Protective Factors	.11	64.42	-.62	5.03	.03

treatment amenability). Of the 71 psychiatric reports, 65 (91.5%) addressed risk, 66 (92.9%) addressed maturity, 66 (92.9%) addressed treatment amenability, and 5 (7%) did not address any criteria. Of the 59 psychological reports, 51 (86.4%) addressed risk, 55 (93.2%) addressed maturity, 53 (89.8%) addressed treatment amenability, and 3 (5%) did not address any criteria. Although most clinicians discussed these transfer issues, very few clinicians made explicit statements regarding whether a youth should be transferred to adult court or sentenced as an adult.<sup>1</sup> Stated differently, although clinicians commented on the penultimate legal issue of transfer criteria, in most cases they did not comment on the ultimate legal decision regarding the transfer/adult sentencing outcome.

*Correspondence between judgments.* In order to evaluate relationships among clinicians' judgments of transfer criteria, Spearman bivariate correlation coefficients were examined (see Table 6). Psychiatrists' and psychologists' judgments of risk were negatively related to their judgments of treatment amenability, but neither characteristic was significantly associated with maturity. In other words, clinicians who rated a youth as high risk also tended to rate that youth as less amenable to treatment, but neither of these ratings were associated with judgments of maturity.

*Relationship of judgments to RSTI and SAVRY scores.* As anticipated, the RSTI Risk and Criminal Sophistication scales and SAVRY Total scores were positively correlated with psychiatrists' and psychologists' judgments of risk and were negatively correlated with their judgments of treatment amenability (see Table 7). In addition, the RSTI Treatment Amenability and SAVRY Protective scales were positively associated

**Table 6***Correlation Matrix for Clinical Judgments*

	Psychology- Risk	Psychology -Maturity	Psychology- Treatment Amenability	Psychiatry- Risk	Psychiatry- Maturity	Psychiatry- Treatment Amenability
Psychology- Risk	-	.05	-.34*	.75**	.09	-.60**
Psychology- Maturity		-	-.21	.12	.61**	-.08
Psychology- Treatment Amenability			-	-.23	-.14	.72**
Psychiatry- Risk				-	.18	-.51**
Psychiatry- Maturity					-	-.09
Psychiatry- Treatment Amenability						-

*Note.* \* =  $p < .05$ , \*\* =  $p < .01$ .

**Table 7*****Correlation Matrix for RSTI and SAVRY Scores and Clinical Judgments***

	Risk	S-M	ATX	C-S	SAV-H	SAV-S	SAV-I	SAV-T	SAV-P
Psychology-Risk	.63**	-.18	.57**	-.56**	.41**	.16	.72**	.57**	-.47**
Psychology-Maturity	.25	.30*	.26	-.16	.23	-.07	.08	.12	-.55**
Psychology-Treatment Amenability	-.42**	-.08	-.44**	.47**	-.08	-.24	-.41**	-.42*	.48**
Psychiatry-Risk	.61**	-.05	.42**	-.54**	.40**	.22	.57**	.51**	.36**
Psychiatry-Maturity	.12	.26	.11	-.01	.10	-.01	.01	.10	.66**
Psychiatry-Treatment Amenability	-.65**	.21	-.47**	.67**	-.37**	-.49**	-.56**	-.59**	.60**

*Note.* S-M = Sophistication-Maturity, ATX = Treatment Amenability, C-S = Criminal Sophistication, SAV-H = SAVRY Historical, SAV-S = SAVRY Social/Contextual, SAV-I = SAVRY Individual/Clinical, SAV-T = SAVRY Total, SAV-P = SAVRY Protective, \* =  $p < .05$ , \*\* =  $p < .01$ .

with psychiatrists' and psychologists' judgments of treatment amenability and were negatively associated with their judgments of risk. These correlations are large in magnitude, suggesting that psychologists' and psychiatrists' conceptualizations of risk and treatment amenability are quite congruent with these constructs as measured by the instruments. In contrast, correlations involving the RSTI Sophistication-Maturity scale were notably weaker and the scale was related only to psychologists' judgments of maturity. This finding suggests that there may be a larger degree of variability among notions of maturity than among notions of risk and treatment amenability.

*Correspondence with sentencing decisions.* To evaluate the relationship between clinicians' judgments and sentencing decisions (youth vs. adult vs. no sentence), Spearman bivariate correlation analyses were conducted. Youth sentenced as adults tended to be judged by psychologists as higher risk ( $\rho = .37, p < .01$ ). Similarly, psychiatrists tended to rate such youth as higher risk ( $\rho = .33, p < .01$ ) and less amenable to treatment ( $\rho = -.33, p < .01$ ). Psychologists' and psychiatrists' judgments of maturity, however, were not significantly related to sentencing decisions.

*Incremental validity of RSTI and SAVRY beyond clinical judgments.* Given that adult sentencing decisions were predicted both by clinical judgments (i.e., psychologists' judgments of risk and psychiatrists' judgments of risk and treatment amenability) and by the RSTI and SAVRY (i.e., RSTI Risk and Treatment Amenability and SAVRY Total and Protective scores), we carried out a series of hierarchical logistic regression analyses to determine whether the RSTI and SAVRY explained any additional variance beyond clinical judgments in the adult sentencing decision. For psychologists, analyses revealed that after controlling for judgments of risk, significant additional explained variance was



provided by RSTI Risk ( $R^2$ change = .12, -2LL = 39.41, B = .19, Wald = 4.54,  $p = .03$ ) and SAVRY Total ( $R^2$ change = .16, -2LL = 37.65, B = .19, Wald = 5.45,  $p = .02$ ). For psychiatrists, RSTI Risk and SAVRY Total were nonsignificant after controlling for judgments of risk ( $R^2$ change < .02,  $ps > .05$ ). However, after controlling for judgments of treatment amenability, significant additional explained variance was provided by RSTI Treatment Amenability ( $R^2$ change = .14, -2LL = 54.59, B = -.15, Wald = 5.49,  $p = .02$ ) and SAVRY Protective ( $R^2$ change = .12, -2LL = 37.65, B = -.60, Wald = 4.71,  $p = .03$ ). These results indicate that the RSTI and SAVRY provided incremental validity beyond psychologists' judgments of risk and psychiatrists' judgments of treatment amenability.

#### *Results when YCJA Sample Excluded*

The enactment of the YCJA in 2003 represented a significant shift in procedures of transfer to adult court, notably eliminating the process of transfer in favor of allowing youth court to give both juvenile and adult sentences. In addition, the overarching principle of "accountability" was introduced and the principle of community protection was moved from transfer legislation (where it had appeared in the YOA) to general sentencing principles, suggesting potential changes in the agendas underlying adult sentencing decisions. Thus, in order to examine whether the inclusion of youths evaluated under the YCJA had affected results, these participants ( $n = 10$ ) were excluded and analyses were re-run. These analyses revealed that mean differences in SAVRY Total scores between participants sentenced as juveniles versus those sentenced as adults became nonsignificant, but that this scale still remained a significant predictor of an adult sentence based on its AUC value (.70,  $p < .01$ ). All other previously reported relationships remained significant.

## Discussion

Legal changes in the United States and Canada have increasingly made it easier, faster, and less expensive than ever before to transfer juveniles to adult court and to sentence them as adults. Despite this trend, there has been little research regarding the characteristics of juveniles considered for such sanctions or on assessment tools for forensic clinicians who evaluate them. The present study was intended to provide much needed data on the characteristics of youths being considered for adult sentencing or transfer to adult court as well data on the reliability and validity of the RSTI and the SAVRY in this population.

### *Primary Findings*

Investigation of these psychometric properties indicated that both the RSTI and the SAVRY were internally consistent and corresponded as expected with clinical judgments as well as with the chronicity and severity of criminal history and problem behaviors. The latter suggests evidence for the convergent validity of the instruments and is consistent with findings obtained by Leistico and Salekin (2003).

Most importantly, however, the Risk, Criminal Sophistication, Treatment Amenability, SAVRY Total, and SAVRY Protective scales demonstrated good predictive validity for an adult sentence. Incremental validity analyses also revealed that all of these scales but the RSTI Risk and SAVRY Total explained significant variance in the adult sentencing decision beyond other legal factors such as offense severity. These findings indicate that the constructs of risk, criminal sophistication, treatment amenability, and protective factors are important considerations in the context of transfer/adult sentencing evaluations. Further, given that this is the first study in Canada to examine youth

considered for adult sentencing or transfer to adult court, the consistency of these results with U.S. research (e.g., Leistico & Salekin, 2003) suggests that the constructs may be similarly important in both countries.

Overall, these results provide support for the relationship between the RSTI, the SAVRY, and adult sentencing. However, when the subscales were analyzed, the validity of the RSTI Maturity scales remained unclear. While the Criminal Sophistication subscale predicted an adult sentence, the Sophistication-Maturity scale did not. This finding stands in contrast to the study by Leistico and Salekin (2003), in which it was found that youth transferred to adult court had higher Sophistication-Maturity scores and that the scale was predictive of transfer.

There are several possible explanations for this discrepancy. First, given that Criminal Sophistication scores predicted an adult sentence whereas Sophistication-Maturity scores did not, it may not have been maturity per se that was important to the adult sentencing decision but rather whether the youth used that maturity in pro-social or antisocial ways. Our correlational findings support this interpretation in that Sophistication-Maturity scores tended to be associated with more pro-social characteristics (e.g., older age at first offense) whereas Criminal Sophistication scores tended to be associated with antisocial characteristics (e.g., greater number of conduct disorder symptoms). If this were the case, it would suggest that the courts are distinguishing between these two types of maturity and tend to reserve adult sentences for youths who are criminally sophisticated rather than simply mature. A second possible explanation is that the file information used may not have been conducive to rating maturity, and accompanying face-to-face contact with youth would have been necessary

in order to allow for valid scoring of the scale. Finally, there may simply be a degree of variability with regard to the role that maturity plays in sentencing decisions. In vignette-based surveys of U.S. juvenile court judges, for example, transfer to adult court was associated with higher ratings of maturity in one study (Brannen et al., 2006) but with “moderately low” ratings in another study (Salekin et al., 2002). These findings suggest that contrary to the notion that greater maturity may make youths more appropriate for adult sanctions (e.g., Salekin, 2001), there may be greater inconsistency with which this construct is weighed.

Although all youths in this sample had committed very serious crimes (namely, manslaughter or murder), not all were transferred to adult court or sentenced as adults. Rather, only about half of youths were sentenced as adults (54.1%), while nearly a third were sentenced as youths (29.7%) and the remainder were not sentenced (16.2%). This finding is somewhat striking and may reflect unique policies in Canada to refrain from the use of adult sentences in a considerable number of cases. As described, it appears that relatively few Canadian youth are transferred; the most recent available statistics indicate that 91 youth (representing 0.1% of cases) were transferred from 1998-1999 (Statistics Canada, 2000). The U.S., in contrast, transferred 7100 youths (representing 1% of cases) in 2002 (OJJDP, 2006).

Thus, rather than using adult sentences in the vast majority of cases where youth are eligible for them, it seems that the Canadian courts are attempting to reserve these sanctions for those youths who may be the most dangerous and least treatable. To do so, they appear to make finely-grained distinctions based on considerations of risk, criminal sophistication, treatment amenability, and protective factors. Specifically, youth

sentenced as adults scored higher than youths on RSTI and SAVRY scales measuring risk and criminal sophistication, and lower on scales measuring treatment amenability and protective factors, than youth sentenced as juveniles. Clinicians similarly tended to rate youth sentenced as adults as higher risk and lower in treatment amenability than youth sentenced as juveniles.

### *Policy and Clinical Implications*

Based on these results, Canadian courts currently appear to be transferring a fairly small, select pool of youth. The Canadian government, however, is currently considering possible changes to the YCJA that may increase the use of adult sentences. Among these changes are adding “deterrence and denunciation” to YCJA sentencing principles and implementing a “Tackling Violent Crime Act” that aims to “toughen sentencing principles” and “protect society from dangerous offenders” (“Federal-Provincial-Territorial Attorneys”, 2008). In determining whether to implement these changes, it will be important for policymakers to carefully consider whether increasing the use of adult sentences is truly in the best interests of communities, offenders, and victims. Several large-scale studies in the U.S., for instance, have indicated that transferred youth are more likely to recidivate than youth who remain in the juvenile system (Bishop et al., 1996; Fagan et al., 2003; Lanza-Kaduce et al., 2005) even after controlling for risk-related variables (e.g., offence history). Thus, continuing to reserve transfer for rare cases appears wise and consistent with research findings, and policymakers should be wary of changes that may make the use of adult sentences more common.

In addition, there appears to be a need for courts to provide greater clarification in legal standards regarding adult sentencing. The YCJA standards for the use of this

sanction focus on the overarching criterion of “accountability” (s. 72[1]), but case law reflects that this idea has not yet been clearly articulated. In *R. v. M. (J.)* (2004), for instance, accountability was considered a function of whether the sentence “reflects the seriousness of the offence... (and) provide(s) some reasonable assurance of the accused’s rehabilitation”, whereas in *R. v. K. (C.)* (2006), accountability was defined as “a function of age, maturity, and dependency”. This lack of consistency indicates a need for further elaboration regarding this criterion and the part it should play in adult sentencing decisions.

Similarly, there is also a need to clarify how maturity should be weighed in making transfer/adult sentencing decisions. Results from the present study suggest that it is especially unclear as to what the legal definition of maturity is, and, importantly, whether courts are distinguishing between pro-social and antisocial maturity when making sentencing decisions. The law itself provides little further guidance in this regard, with Canadian and U.S. federal legislation defining the construct only as “maturity” (YCJA, 2003, s. 71[1]) and “psychological maturity” (Heilbrun et al., 1997), respectively. Moreover, the term maturity may carry very different meanings and may depend on the legal context (e.g., maturity in the context of competence evaluations may mean something different than maturity in the context of transfer evaluations). Further legal explanation with regard to the definition of this construct and how it should be weighed would help to ensure that maturity is considered in a consistent manner in the context of transfer/adult sentencing decisions.

In addition to clarification in the law, research and clinical efforts should focus on the refinement and development of methods of assessing maturity. Fundamentally, there

is a need for clarification at the theoretical level regarding the nature of this construct. Cauffman and Steinberg (2000), for example, have argued that maturity of judgment consists of the characteristics of responsibility, perspective, and temperance, whereas Sophistication-Maturity items on the RSTI are classified into the factors of Emotional Maturity, Cognitive Maturity, and Autonomy (Salekin, 2004). Greater theoretical consistency is of critical importance not only to inform assessment methods, but also because maturity is often central to notions of reduced culpability among young offenders (Cauffman & Steinberg, 2000).

Similarly to these theoretical disagreements, research has also indicated that there is vast inconsistency with regard to the methods used to evaluate this construct (e.g., Ryba, Cooper, & Zapf, 2003). In the present study, the Sophistication-Maturity and Criminal Sophistication scales were found to be among the lowest in reliability (although ICCs were still classified as “fair” to “good”), suggesting that existing assessment methods may pose challenges for evaluating maturity in a consistent manner. While it is also possible that the file sources used in this study were not conducive to rating maturity and thus contributed to our lack of agreement, it also seems likely that the complexity of the construct and the characteristics of the rating scales made it difficult to come to congruent opinions. Hence, continued efforts to refine assessment methods for maturity are necessary in order to facilitate reliable practice among clinicians. Given that the Criminal Sophistication subscale evidenced predictive and incremental validity in the present study despite its low reliability, this scale could serve as a useful focus for such efforts.

Finally, clinicians have an important responsibility to ensure that they are using sound assessment methods when performing transfer/adult sentencing evaluations. Based on study results, courts appear to be placing considerable weight on psychological criteria that clinicians may assess (namely, risk, criminal sophistication, treatment amenability, and protective factors). Further, given that clinicians' judgments were strongly correlated with sentencing outcomes, it appears that these assessments may be given great weight by the courts. Until recently there were very few well-validated tools available for transfer assessments despite the influence they may carry (Kruh & Brodsky, 1997). Results from the present study suggest that constructs such as risk, criminal sophistication, and treatment amenability, as defined by the RSTI and the SAVRY, are predictive of transfer decisions made by the courts. Furthermore, our findings indicate that the RSTI and SAVRY may provide incremental validity in this prediction beyond clinicians' judgments of these criteria. These results lend support to the potential utility of these instruments for evaluations of transfer to adult court.

#### *Limitations and Future Research*

The findings of the present study should be considered in light of its limitations. First, file information was used to rate the RSTI and the SAVRY. Although these instruments have been reliably scored using file information in previous research (Catchpole & Gretton, 2003; Leistico & Salekin, 2003), the constructs of risk, maturity, and treatment amenability are undeniably complex and their ratings should ideally be informed by personal contact with the youth. In addition, several RSTI and SAVRY items could not be rated and the Criminal Sophistication subscale of the RSTI was found to achieve only "fair" interrater reliability. These difficulties may reflect the inadequacy



of file information for scoring some items, and highlight the importance of combining file review and interview modalities in future research.

Secondly, the sample was small and was comprised of youth who had committed murders. Although adult sentencing and transfer evaluations occur almost without exception when a youth commits a murder (YCJA, 2003), there are additional offences for which youth could be considered for adult sentencing (e.g., a serious violent offence). Thus, this sample was selective in the sense that it did not include youth who had committed other such offences. However, given that this study is the first to investigate youth considered for transfer and adult sentencing in Canada, examining youth who are evaluated after committing murders is an important first step towards researching this group more comprehensively in future studies. Such research efforts should strive to recruit larger samples of youth who come from diverse geographical areas and who have been charged with a variety of different offences eligible for transfer/adult sentencing.

Finally, it should be noted that the results of this study may not be generalizable to all jurisdictions. In particular, despite previously noted similarities between transfer/adult sentencing principles in Canada and the U.S. (*Kent v. U.S.*, 1966; YOA, 1984; YCJA, 2003), U.S. law also allows for procedures such as prosecutorial direct file (Leistico & Salekin, 2003) that may result in transfer to adult court regardless of such principles and similarities. Also, within Canada itself, the majority of youth in this sample were evaluated under the YOA rather than the current YCJA. On one hand, the criteria of risk, maturity, and treatment amenability have been largely maintained in YCJA legislation and case law (*R. v. Pratt*, 2007), and the results of this study were virtually identical with and without the inclusion of a small YCJA sample. On the other

hand, the potential effects of the elimination of the transfer process and the implementation of the “accountability” sentencing principle indicate a need for further investigation of how adult sentencing procedures may have changed from the YOA to the YCJA.

### *Conclusions*

Even though the present study highlights the importance of some psychological constructs related to transfer and adult sentencing and suggests further directions for improvement and better understanding of these processes, larger questions remain. As noted, the public has tended to support the use of adult sanctions with adolescents based on desires to “get tough” on juvenile crime (e.g., Jan et al., 2008), but scholars have suggested that these sanctions may never be justifiable given the reduced and changeable developmental status of youth (e.g., Penney & Moretti, 2005). A similar conflict seems to be embodied in the YCJA, which has eliminated the transfer process in an apparent effort to be fairer to youths, but which at the same time may soon espouse punitive sentencing principles of “deterrence and denunciation” (“Federal-Provincial-Territorial Attorneys”, 2008) despite a continued lack of information regarding how this law has affected rates of youth sentenced as adults. Thus, the murky underlying agenda of Canadian young offender legislation and the continued discord between public and academic concerns in both Canada and the U.S. will present ongoing challenges to policy and practice regarding transfer and adult sentencing.

Moreover, while the overall goal of transfer and adult sentencing is ostensibly the reduction of juvenile crime, research thus far shows that these sanctions are associated with an increased likelihood of recidivism (e.g., Lanza-Kaduce et al., 2005). These

findings should call into question whether adult sentencing and transfer to adult court, regardless of the psychological and legal mechanisms that may guide them, are truly effective in reducing juvenile crime and in achieving community protection. If these sanctions continue to be used in the future, practice in research, clinical, and legal arenas should work in concert to ensure that the youths subject to them are treated consistently and fairly.

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## Figure Captions

*Figure 1.* Receiver Operator Characteristic Analysis of RSTI Risk, Sophistication-Maturity, Treatment Amenability, and Criminal Sophistication and SAVRY Total, Protective, and Summary Risk Scores