

**POLICE INTERROGATION AND CRIMINAL ADJUDICATION OF
CHILD AND ADOLESCENT DEFENDANTS: LEGAL ABILITIES,
DECISIONS, AND STANDARDS**

by

Jodi L. Viljoen

B.A., University of Alberta, 1996

M.A., Simon Fraser University, 2001

**Dissertation Submitted in Partial Fulfilment
of the Requirements for the Degree of**

Doctor of Philosophy

in the Department
of
Psychology

© Jodi Viljoen 2004

SIMON FRASER UNIVERSITY

April 2004

All rights reserved.

This work may not be reproduced in whole or part, by photocopy or
other means, without permission of the author.

APPROVAL

Name: Jodi L. Viljoen
Degree: Doctor of Philosophy (Department of Psychology)
Title of Dissertation: *Police Interrogation and Criminal Adjudication of Child and Adolescent Defendants: Legal Abilities, Decisions, and Standards*

Examining Committee:

Chair: Dr. Grace Iarocci
Assistant Professor

Dr. Ronald Roesch
Senior Supervisor
Professor

Dr. Deborah Connolly
Assistant Professor

Dr. James Hemphill
Adjunct Professor

Dr. Raymond Corrado
Internal Examiner
Professor

Dr. Edward Seidman
External Examiner
Professor
Department of Psychology
New York University

Date Approved: _____

April 19, 2004

SIMON FRASER UNIVERSITY



Partial Copyright Licence

The author, whose copyright is declared on the title page of this work, has granted to Simon Fraser University the right to lend this thesis, project or extended essay to users of the Simon Fraser University Library, and to make partial or single copies only for such users or in response to a request from the library of any other university, or other educational institution, on its own behalf or for one of its users.

The author has further agreed that permission for multiple copying of this work for scholarly purposes may be granted by either the author or the Dean of Graduate Studies.

It is understood that copying or publication of this work for financial gain shall not be allowed without the author's written permission.

The original Partial Copyright Licence attesting to these terms, and signed by this author, may be found in the original bound copy of this work, retained in the Simon Fraser University Archive.

Bennett Library
Simon Fraser University
Burnaby, BC, Canada

ABSTRACT

Courts have increasingly required that children and adolescents involved in legal proceedings must be competent to waive interrogation rights and stand trial. This study examined predictors of youth's legal capacities and decisions, rates of impairments under various legal standards, and the psychometric properties of competency measures. Participants included 152 defendants aged 11 to 17, who were assessed with Instruments for Assessing Understanding and Appreciation of Miranda Rights (Grisso's Miranda Scales), the Fitness Interview Test—Revised Edition (FIT), the Woodcock-Johnson III Cognitive Assessment Battery, and the Brief Psychiatric Rating Scale for Children. The interrater reliability of the FIT and Grisso's Miranda Scales was good, with ICCs for scales falling in the .80s and .90s. Consistent with the design of the FIT and current legal standards, confirmatory factor analysis supported a three-factor model, which included understanding and reasoning, appreciation, and the ability to communicate with counsel. Performance on measures of interrogative and adjudicative abilities increased with age. These age-related differences were partially mediated or explained by cognitive development. Of the specific cognitive abilities examined (general intellectual ability, verbal ability, reasoning, long-term retrieval, attention, and executive functioning), verbal ability was a particularly strong predictor of legal abilities. Also, defendants obtained lower scores on competency measures if they showed evidence of attention deficits or hyperactivity, came from below average socioeconomic classes, and/or had spent limited time with their attorneys. Defendants did not consistently show patterns of agreement across abilities, suggesting that variations in legal standards will have a substantial impact on how many adolescents could be considered impaired. In terms of legal decision-making, adolescents aged 15 and younger were more likely than

older adolescents to confess and waive their right to counsel, and less likely to report that they would appeal their cases or discuss disagreements with their attorneys. In addition, while adolescents aged 15 to 17 were more likely to confess, plead guilty, and accept a plea bargain if they perceived that there was strong evidence against them, younger defendants' legal decisions were not predicted by strength of evidence. The clinical and policy implications of these results are discussed.

ACKNOWLEDGEMENTS

There are many people who have contributed to this process, without whom this would not have been possible. First and foremost, I would like to thank my supervisor, Dr. Ronald Roesch, for his mentorship and guidance, for believing in me from the beginning (even when I did not), and for being a constant calming force (in the face of occasional calamity). Without him, my career path would have taken a different turn, possibly away from psychology and definitely away from any academic aspirations. I wish to thank Dr. Patricia Zapf for being for me a model and source of inspiration, Jessie Klaver for her methodological insights, Dr. Gina Vincent for her statistical expertise, and Dr. Thomas Grisso for his helpful comments as well as the contributions he has made to the field of adolescent competency, which led to my interest in this area. I am indebted to the staff at Remann Hall, who graciously facilitated my data collection and patiently answered my many questions, the study participants, who willingly gave their time and shared their experiences, and my committee members, Dr. Deborah Connolly and Dr. James Hemphill, who helped me identify the missing pieces in this study. I would also like to thank to my parents for their constant love and for instilling in me a love of learning and a tolerance for setbacks, and my friends (especially Kerry, Steph, and Justin) for forgiving my absences and being able to pack a lot of fun into small spaces. And last, but not at all least, I offer the deepest gratitude to my husband, Adam, for accompanying me through all this craziness (which I'm sure is not over yet), for never making me feel guilty (or geeky) for my love of studying, and for revising his life dreams and goals so that I could meet mine.

TABLE OF CONTENTS

Approval	ii
Abstract	iii
Acknowledgements	v
Table of Contents	vi
List of Tables	x
List of Figures	xii
CHAPTER 1: INTRODUCTION	1
References	3
CHAPTER 2: COMPETENCY ASSESSMENT	4
Abstract	4
Introduction	4
Legal Standard of Competence	6
The Fitness Interview Test, Revised Edition (FIT)	8
Research Needs	9
Interrater Reliability	9
Structural Validity	9
Purpose of This Study	10
Method	11
Participants	11
Materials and Procedures	12
Data Analysis	14
Results	15
Item and Section Distributions	15
Interrater Reliability	15
Factor Structure	16
FIT's Three-Factor Structure	16
A Priori Tests of Other Competence Models	16
Adjusted Discrete Abilities Model	17
Discussion	18
Interrater Reliability	18
Factor Structure	19
Limitations and Research Recommendations	21
Implications	22
References	25
CHAPTER 3: LEGAL ABILITIES	32
Abstract	32
Introduction	32
Cognitive Development	34

Legal Learning Opportunities	36
Psychological Symptoms	37
Purpose of this Study	38
Method	39
Participants	39
Procedure	40
Predictors	42
Demographic Variables	42
Cognitive Abilities	43
Psychological Symptoms	43
Legal Learning Opportunities	44
Competency Measures	45
Instruments for Assessing Understanding and Appreciation of Miranda Rights	45
Fitness Interview Test	46
Data Analysis	47
Overview of Analyses	47
Moderator Analyses	47
Mediator Analysis	48
Results	49
Cognitive Development	49
Are There Developmental Differences in Cognitive Abilities?	49
Does Development in General Intellectual Ability Explain the Relationship Between Age and Legal Abilities?	49
Does Age Affect the Relationship Between GIA and Legal Abilities?	50
Which Specific Cognitive Abilities Are Most Predictive of Legal Abilities?	51
Legal Learning Opportunities	51
Do Prior Arrests Explain the Relationship Between Age and Legal Abilities?	51
Does GIA Affect the Relationship Between Arrests and Legal Abilities?	52
Does Contact with Attorneys Predict Legal Abilities?	52
Psychological Symptoms	53
Do Psychological Symptoms Predict Legal Abilities?	53
Demographic Variables	54
Do Gender, Ethnicity, or SES Predict Legal Abilities?	54
Combined Model	54
Which Predictors Emerge as the Strongest?	54
Discussion	55
Cognitive Development	55
Legal Learning Opportunities	57
Psychological Symptoms	59
Demographic Variables	60
Limitations and Research Recommendations	61
Implications	62

References.....	64
CHAPTER 4: LEGAL STANDARDS	80
Abstract.....	80
Introduction	80
Interrogative Competence.....	81
Adjudicative Competence	83
Purpose	84
Method.....	85
Participants.....	85
Procedure.....	86
Measures.....	88
Instruments for Assessing Understanding and Appreciation of Miranda Rights.....	88
Fitness Interview Test, Revised Edition	89
Data Analysis.....	90
Overview of Analyses.....	90
Cut-Off Scores.....	91
Configural Frequency Analysis	91
Results.....	93
Interrogative Competence.....	93
Rates of Impairment Under Various Standards.....	93
Understanding of Interrogation Warnings.....	93
Understanding and Appreciation	93
Patterns of Agreement Across Abilities.....	94
Understanding	94
Appreciation.....	94
Understanding and Appreciation.....	95
Adjudicative Competence	95
Rates of Impairment Under Various Standards.....	95
Adult Norms.....	95
Adolescent Norms	96
Basic Understanding and Communication	96
Patterns of Agreement Across Abilities.....	97
Interrogative and Adjudicative Competence.....	97
Patterns of Agreement Across Abilities.....	97
Discussion.....	98
Interrogative Competence.....	99
Adjudicative Competence	101
Interrogative and Adjudicative Competence.....	105
Limitations and Caveats.....	106
Conclusions	107
References.....	108

CHAPTER 5: LEGAL DECISIONS	119
Abstract	119
Introduction	120
Police Questioning	120
Adjudication	122
Method	123
Participants	123
Procedure	124
Measures	126
Demographic, Criminological, and Situational Variables	126
Woodcock-Johnson III Cognitive Assessment Battery	127
Brief Psychiatric Rating Scale for Children	128
Instruments for Assessing Understanding and Appreciation of Miranda Rights	129
Fitness Interview Test, Revised Edition	130
Legal Decisions	131
Data Analysis	132
Results	133
Police Questioning	133
Statements to the Police	133
Advice and Statements to the Police	134
Requests for Counsel	135
False Confessions	135
Pleas	136
Guilty Pleas	136
Advice and Pleas	136
Plea Bargains	137
Communication with Attorneys	138
Disclosures to Attorneys	138
Disagreements with Attorneys	139
Appeals	141
Discussion	141
Primary Findings	141
Limitations and Future Research	146
Implications	147
References	151
 CHAPTER 6: CONCLUSIONS	 164
Competency Assessment	164
Legal Abilities	165
Legal Standards	166
Legal Decisions	166
Final Conclusions	167
References	169
Appendix A: Ethics Approval	170

LIST OF TABLES

CHAPTER 2: ASSESSMENT

Table 1: FIT Item Distributions and Reliability	29
Table 2: FIT Section Scores and Reliability	30
Table 3: Confirmatory Factor Analyses	31

CHAPTER 3: LEGAL ABILITIES

Table 1: Sample Characteristics	71
Table 2: Mean (SD) Age Differences in Cognitive Abilities	72
Table 3: Mean (SD) Age Differences in Legal Abilities	73
Table 4: Effect Sizes (Cohen's d) for Age Differences in Legal Abilities	74
Table 5: Regression Equations for Cognitive Clusters	75
Table 6: Regression Equations for Psychopathology Variables	76
Table 7: Combined Regression Models	77

CHAPTER 4: STANDARDS

Table 1: Rates of Impairment	113
Table 2: Profile Analysis of Understanding Measures on Grisso's Miranda Scales	114
Table 3: Profile Analysis of Appreciation Measures on Grisso's Miranda Scales	115
Table 4: Profile Analysis of Understanding and Appreciation Measures on Grisso's Miranda Scales	116
Table 5: Profile Analysis of FIT	117
Table 6: Profile Analysis of FIT and Grisso's Miranda Scales	118

CHAPTER 5: LEGAL DECISIONS

Table 1: Statements to the Police	157
Table 2: Requests for Counsel	158
Table 3: Guilty Pleas	159
Table 4: Plea Bargains	160
Table 5: Disclosures to Attorneys	161
Table 6: Disagreements with Attorney	162

Table 7: Appeals 163

LIST OF FIGURES

Figure 1: Mediation Influence of GIA (W scores) on the Association Between Age and Legal Abilities.....	78
--	----

CHAPTER 1: INTRODUCTION

Over the past couple of decades, courts in Canada and the United States have increasingly required that adolescents accused of crimes must be competent to waive interrogation rights and stand trial (Abramovitch, Peterson-Badali, & Rohan, 1995; Grisso, 1998; Grisso, Miller, & Sales, 1987; *In re Gault*, 1967; Redding & Frost, 2001). These changes have led to a number of unanswered questions.

First, how should competency be assessed in youth? While notable advances have been made in tools for assessing competency in adults over the past several decades (Grisso, 2003), research has not yet examined whether such instruments have adequate psychometric properties in child and adolescent samples.

Second, what factors predict youths' interrogative and adjudicative abilities? While a growing body of research has found that youth aged 14 and under may have deficits in legal abilities (e.g., Grisso, 1980; Grisso et al., 2003), the correlates and possible mediators of these deficits are, as of yet, unclear.

Third, what are the implications of various legal standards for juvenile competency? Currently, there appears to be considerable variability and ambiguity in legal standards for juvenile competency (Grisso, 1997, 1998; Grisso et al., 1987; Redding & Frost, 2002). However, the standards that are applied may dramatically affect the number of young defendants who could be considered impaired or incompetent.

Finally, are there developmental differences in legal decision-making? While legal standards of competency focus on legal abilities, such as understanding and appreciation, researchers have increasingly recognized that there may also be important

developmental differences in legal judgments (Grisso et al., 2003; Scott, Reppucci, & Woolard, 1995; Steinberg & Cauffman, 1996).

These issues were empirically investigated in the present dissertation. Each question was addressed in a separate chapter. Readers should note that the same sample, procedure, and instruments were used across chapters.¹

¹ This dissertation is written to be "article-style," meaning that each chapter is written as an independent article. Although the methods section is the same across chapters, it is re-explained in each chapter so that each chapter can function as an independent article. The separate articles are unified by a single introduction and conclusion.

References

- Abramovitch, R., Peterson-Badali, M., & Rohan, M. (1995). Young people's understanding and assertion of their rights to silence and legal counsel. *Canadian Journal of Criminology*, 37, 1-18.
- Grisso, T. (1980). Juveniles' capacities to waive Miranda rights: An empirical analysis. *California Law Review*, 68, 1134-1166.
- Grisso, T. (1997). The competence of adolescents as trial defendants. *Psychology, Public Policy, and Law*, 3, 3-32.
- Grisso, T. (1998). *Instruments for assessing understanding and appreciation of Miranda rights*. Sarasota, FL: Professional Resource Press/Professional Resource Exchange.
- Grisso, T. (2003). *Evaluating competencies: Forensic assessments and instruments* (2nd ed.). New York: Kluwer Academic/Plenum Press.
- Grisso, T., Miller, M. O., & Sales, B. (1987). Competency to stand trial in juvenile court. *International Journal of Law and Psychiatry*, 10, 1-20.
- Grisso, T., Steinberg, L., Woolard, J., Cauffman, E., Scott, E., Graham, S., Lexcen, F., Reppucci, N. D., & Schwartz, R. (2003). Juveniles' competence to stand trial: A comparison of adolescents' and adults' capacities as trial defendants. *Law and Human Behavior*, 27, 333-363.
- In re Gault, 387 U. S. 1 (1967).
- Redding, R., & Frost, L. (2001). Adjudicative competence in the modern juvenile court. *Virginia Journal of Social Policy and the Law*, 9, 353-410.
- Scott, E. W., Reppucci, N. D., & Woolard, J. L. (1995). Evaluating adolescent decision making in legal contexts. *Law and Human Behavior*, 19, 221-244.
- Steinberg, L., & Cauffman, E. (1996). Maturity of judgment in adolescence: Psychosocial factors in adolescent decision making. *Law and Human Behavior*, 20, 249-272.

CHAPTER 2: COMPETENCY ASSESSMENT ²

Abstract

As a result of changing legal standards, forensic clinicians have a greater likelihood of being faced with the task of assessing adjudicative competence (competence to stand trial) in youth. This study examined the reliability and factor structure of the Fitness Interview Test, Revised Edition (FIT) in 152 male and female defendants aged 11 to 17. The interrater reliability of items on the FIT was generally good, with most intraclass correlation coefficients (ICCs) falling between .60 and .75. For sections on the FIT, the ICCs of numerical summary scores were higher than those of structured clinical ratings, and ranged from .82 to .91. Consistent with the design of the FIT and current legal standards, confirmatory factor analysis supported a three-factor model, which included understanding and reasoning about legal proceedings, appreciation of the charges and possible consequences of proceedings, and the ability to communicate with counsel. These factors were united by a dominant superordinate factor. Recommendations are made regarding the clinical use of the FIT in the assessment of adolescent competency.

Introduction

Assessments of adjudicative competence, or competence to stand trial, are the most common forms of forensic pretrial evaluations, occurring at an estimated rate of 60,000 evaluations per year (Bonnie & Grisso, 2000). Historically, such evaluations were

² Dr. Gina Vincent provided feedback on this chapter, which was used in making revisions. She was aware that the chapter would be included in this dissertation, and provided written consent for this.

restricted to adult defendants because, given the rehabilitative ideals of the early juvenile justice system, the provision of competency in juvenile court proceedings was deemed unnecessary and irrelevant (Bonnie & Grisso, 2000; Grisso, Miller, & Sales, 1987).

Over the past few decades, the consequences of juvenile adjudicative proceedings have become more severe and transfers to adult court more common (McGuire, 1997; Snyder & Sickmund, 1999). As such, courts have increasingly required that juvenile defendants be competent to understand and participate in legal proceedings against them (Grisso, 1997; Redding & Frost, 2001). Today, therefore, forensic clinicians have a greater likelihood of being faced with the task of assessing juvenile defendants' adjudicative competency (see Redding & Frost, 2001).

There is considerable need for reliable and valid adjudicative competence assessment tools appropriate for juvenile defendants. Youth aged 15 and younger appear to be at heightened risk for impairments in the relevant legal abilities, relative to adults (Grisso et al., 2003). However, competence may be difficult to evaluate in children and adolescents because the relevant legal standards are vague, the psychological literature is limited, and developmental factors are likely to complicate assessments (Bonnie & Grisso, 2000; Redding & Frost, 2001).

Due to an absence of assessment instruments designed specifically for youth, many juvenile court clinicians report routine use of adult instruments, or modified versions of adult instruments, in their juvenile evaluations (Quinlan & Grisso, 2004). Research, however, has yet to examine whether such instruments are appropriate for adolescents. To begin to address this gap, this study examined the applicability of a validated adult assessment tool for evaluating adjudicative competence, the Fitness Interview Test, Revised Edition (FIT; Roesch, Zapf, Eaves, & Webster, 1998), to juvenile

defendants. Specifically, we evaluated the FIT's interrater reliability, factor structure, and internal consistency among a sample of defendants aged 11 to 17. Prior to discussing the FIT, legal standards and models of adjudicative competence are reviewed.

Legal Standard of Competence

The *Dusky* standard of competence requires that defendants must have "factual understanding" of legal proceedings, "rational understanding" (or appreciation), and the "ability to communicate with counsel" (*Dusky v. the United States*, 1960). This legal standard is applied throughout the United States for adult and juvenile defendants adjudicated within the adult criminal justice system (Melton, Petrila, Poythress, & Slobogin, 1997; Redding & Frost, 2001), and is very similar to standards applied in Canada (Roesch et al., 1998).³ Although many courts remain undecided as to which standards should be adopted for youth adjudicated within the juvenile justice system, those that have ruled on this issue have also typically applied the *Dusky* standard (Redding & Frost, 2001).

While there is general agreement that *Dusky* is the primary legal standard, there is variation in its interpretation, which has led to several competing conceptual models of adjudicative competence (Rogers, Jackson, Sewell, Tillbrook, & Martin, 2003; Zapf, Skeem, & Golding, 2004). First, the *Dusky* standard can be interpreted quite literally to mean that competency comprises three discrete abilities, namely factual understanding, rational understanding, and communication with counsel. This model, which is referred

³ The *Criminal Code of Canada* (1985) states that adult defendants must have an "understanding of the nature and object of legal proceedings" (or factual understanding), "understanding of the possible consequences of legal proceedings" (rational understanding or appreciation), and the "ability to communicate with counsel." This standard has been applied to adolescents in Canada as well (e.g., R. V. D. (W.A.L.-1), 2002; R. v. W.(C.), 2001).

to by Rogers and colleagues (2003) as the *discrete abilities model*, is consistent with the design of the FIT, the instrument of focus in the present study.

As an alternative conceptualization, referred to as the *domains model* (Rogers et al., 2003), Melton et al. (1997) proposed that competency can be thought of as two distinct abilities, namely “rational and factual understanding” and the “capacity to communicate with counsel.” Rogers and colleagues proposed a second two-factor model, the *cognitive complexity model*, in which the relevant legal abilities are divided into basic “factual understanding,” and the more cognitively complex “rational abilities” (rational understanding and the ability to communicate with counsel). Finally, Bonnie (1992), in his influential theoretical model of competency, proposed that competency consisted of “competency to assist counsel” (foundational competency), and “decisional competence” (the ability to reason and make specific legal decisions).

Several factor analytic studies have examined the fit of these models of competence in adult samples. Using confirmatory factor analysis, Rogers et al. (2003) compared the *discrete abilities*, *domains*, and *cognitive complexity* models of competence, and determined that only the three-factor *discrete abilities model* adequately explained the factor structure of the Evaluation of Competency to Stand Trial™-Revised (Rogers, Tillbrook, & Sewell, 2004). Zapf, Skeem, and Golding (2004) compared Bonnie’s model to a three-factor model which roughly corresponded to the *Dusky* standard, and found that a three-factor solution best explained the factor structure of the MacArthur Competency Assessment Tool for Criminal Adjudication (MacCAT-CA; Hoge, Bonnie, Poythress, & Monahan, 1999; Poythress et al., 1999) (see also Rogers, Grandjean, Tillbrook, Vitacco, & Sewell, 2001). Other studies, however, using various instruments and exploratory factor analytic techniques, have not found support for a

three-factor structure (e.g., Bagby, Nicholson, Rogers, & Nussbaum, 1992; Rogers, Ustad, Sewell, & Reinhart, 1996; Ustad, Rogers, Sewell, & Guarnaccia 1996). Also, to date, no published studies have investigated the factor structure of competency assessment instruments with adolescent samples.

The Fitness Interview Test, Revised Edition (FIT)

The FIT is a semi-structured clinical interview that takes approximately 30 to 45 minutes to administer and comprises three scales that are consistent with the three-factor *discrete abilities model* of competence just described. Items on the FIT are rated on a 3-point scale, which includes definite, possible, and no impairment. To obtain overall ratings for sections on the FIT, evaluators must make structured clinical judgments regarding level of impairment (i.e., definite, possible, or no impairment) on that factor, rather than simply summing item scores.

Research with adult samples has provided evidence as to the FIT's reliability and validity. Viljoen, Roesch, and Zapf (2002) reported that the interrater reliability for overall clinical judgments of competency on the FIT was excellent (Average ICC₁ = .88). ICCs for items ranged considerably, but generally sufficiently met the criteria for fair or good reliability. In contrast, ICCs for clinical ratings of impairment on the three sections fell in the poor range.

Zapf and Roesch (2001) found support for the FIT's concurrent validity, reporting that it was moderately correlated with the MacCAT-CA another assessment tool for adjudicative competence. The FIT also appears to have predictive validity, in that it is able to distinguish between defendants who are and are not judged to be incompetent by clinicians (Zapf & Roesch, 1997; Zapf, Roesch, & Viljoen, 2001). If the FIT is to be

used with child and adolescent defendants, however, further research is required on its psychometric properties.

Research Needs

Interrater Reliability

To date, no research has examined the interrater reliability of the FIT specifically in adolescent samples. Also, the low interrater reliability for section ratings found by Viljoen et al. (2002) is somewhat disconcerting. The reliability of sections might potentially be enhanced through summing item scores rather than relying on separate structured clinical judgments of impairment, and/or through the provision of example ratings to anchor examiners' ratings.

Structural Validity

The FIT is based on the three-factor model of competence which includes factual understanding, rational understanding or appreciation, and the ability to communicate with counsel. To date, however, this proposed structure has not been empirically investigated. Defining a test's structure is important for establishing its construct validity. According to the latent-trait theory of measurement, the first step in evaluating test performance is to determine whether a test conforms to its theoretical factor structure (Maraun & Jackson, 2001; McDonald, 1999; Thissen, Steinberg, Pyszczynski, & Greenberg, 1983).

Psychological or psycholegal constructs, such as adjudicative competency, are generally conceptualized as "latent traits," or unobservable variables, that are inferred from observable, behavioral processes (Embretson & Reise, 2000). Latent-trait methods

for investigating structural validity, such as confirmatory factor analysis (CFA), purport to link item responses directly to unobservable, latent traits by removing random error and differences in examinee ability. As such, these procedures can inform us as to the number of traits underlying a given competency test, the relative fit of various models or conceptualizations of competence, and may even provide guidance in understanding the “structure” of competence.

Purpose of This Study

In the interest of identifying tools for the assessment of adjudicative competence that will be useful for juvenile populations, this study evaluated the psychometric properties of the FIT among a sample of juvenile defendants. First, we examined interrater reliability for items, sections, and overall determinations of competence, and compared the interrater reliability of structured clinical ratings to numerical summary scores, which we hypothesized would be more reliable, after incorporating scoring examples for each item.

Second, we investigated the structural validity of the FIT with young defendants using CFA techniques to test whether the FIT adhered to its theoretical three-factor structure based on the *discrete abilities model* (understanding, appreciation, and the ability to communicate with counsel). To determine whether the *discrete abilities model* “best” fit the data, we compared the fit of this model to a simple unidimensional (one-factor) model and CFA models based on other conceptual frameworks of adjudicative competence reviewed earlier (e.g., the *domain model* and *cognitive-complexity model*).

Method

Participants

Participants included 152 pretrial defendants (73 females and 79 males), aged 11 to 17 years ($M = 14.52$, $SD = 1.68$), held in a detention facility in the state of Washington. The majority of defendants remanded to this facility were 15 and older. To ensure that younger defendants were adequately represented, we stratified our sample by age (11 to 13, 14 to 15, and 16 to 17) by extending an equal number of invitations to participate to adolescents who were randomly selected from each of these age groups. The rate of agreement for participation was 94.4%. Defendants who did not participate ($n = 9$) appeared representative of the larger sample in terms of age, gender, race, and current charge. All participants indicated that English was their first language, or the language they spoke at home or at school.

The average IQ of participants was 82.57 ($SD = 13.91$). While low, this is comparable to other samples (e.g., Grisso et al., 2003). The majority of participants (60%, $n = 92$) were non-Hispanic Caucasian, 26.3% ($n = 40$) were African-American, 7.9% ($n = 12$) were Hispanic, 3.9% ($n = 6$) were Native-American, and 1.3% ($n = 2$) were Asian. The majority of participants (66.7%, $n = 96$) were classified as being at the two lowest socioeconomic levels in the Hollingshead (1975) classification system. For 37.5% ($n = 57$) of participants the most serious charge was a violent offense against persons, for 36.8% ($n = 56$) it was a property offense, and for 25.7% ($n = 39$) it was another offense, such as a drug offense, obstruction, or failure to appear at court.

Materials and Procedures

All study procedures were approved by the appropriate review boards of Simon Fraser University and the study facility, and were consistent with current ethical procedures. Potential participants were contacted and asked if they were interested in participating in a study on legal abilities. Information about the study was presented orally to individuals who expressed interest in participating and a form was also provided so that potential participants could read the information presented. The Flesch-Kincaid reading level of this form was grade 3.6.

Participants were tested to assess if they understood and appreciated study procedures, and were able to make a stable choice about participation. To do this, the researchers administered an adapted version of the MacArthur Competence Assessment Tool for Clinical Research (MacCAT-CR; Appelbaum & Grisso, 2001).⁴ If a participant showed inadequate comprehension of a concept, this concept was re-explained to improve the understanding of study procedures and facilitate the participant's ability to provide informed consent. In addition, the institutional administrator, acting as the defendants' legal guardian, provided consent for all participating defendants.

Participants completed the FIT as one part of a larger research project that investigated cognitive abilities, psychopathology, and understanding and appreciation of interrogation rights. Confidentiality was assured except in cases of risk of harm to self or others. Identifying information was not recorded, and participants were instructed not to

⁴ The version of the MacCAT-CR used in this study included 4 items on understanding (nature of study, benefits of participation, risks of participation, confidentiality), 2 items on appreciation (no impact on court case or care, decisions to decline/withdraw will be respected), and 1 item on choice (ability to make a stable choice about decision to participate).

provide details on the current charge for which they were undergoing adjudication. The FIT comprises 16 items divided across three sections. The first section, Understanding (Factual Knowledge), examines a defendant's understanding of the arrest process, current charges, role of key participants, legal process, pleas, and court procedures. The second section, Appreciation (Understanding of the Possible Consequences of Proceedings or Rational Understanding), examines a defendant's appreciation of the possible penalties, available legal defenses, and likely outcome. The third section, Communication with Counsel (Participation), examines a defendant's ability to communicate facts, relate to lawyers, plan legal strategy, engage in the defense, challenge witnesses, testify relevantly, and manage courtroom behaviour.

Items on the FIT are clinically rated on a 3-point scale according to one's level of impairment (0 = definite impairment, 1 = possible impairment, and 2 = no impairment). Clinical judgments regarding level of impairment are made for each section and for the overall test using similar three-point scales. In rating sections and making overall judgments, evaluators are instructed to consider impairment on individual items. However, item scores are not summed to calculate section and global impairment scores (Roesch et al., 1998). Instead, these ratings constitute a separate clinical judgment. For the purpose of this study, in addition to these structured clinical judgments of impairment, item scores were summed to form numerical summary scores for each section and the overall instrument. In addition, a more detailed scoring system for the FIT was developed for this study, in which three scoring examples were provided for each item. These examples were derived from actual participant responses.

The FIT was administered by a doctoral student in clinical psychology trained in the use of study instruments. To assess interrater reliability, 26 randomly selected

protocols were re-coded by a second doctoral student in clinical psychology, with similar training as the original rater. Training on the FIT included familiarization with the test manual, viewing a training videotape, and completion of several practice protocols.

Upon completion of the study, participants were given 10 points as compensation for their time. These points could be used to pay for food and toiletry items at the facility, and was enough to buy approximately two chocolate bars or a small bottle of shampoo. This amount was thought to be sufficient to compensate participants for their time but not enough to coerce participation.

Data Analysis

We performed analyses to assess interrater reliability, factor structure, and internal consistency. Interrater reliability was assessed using intraclass correlation coefficients (ICCs) for single raters with a two-way mixed effect model (Model 2, McGraw & Wong, 1996). We tested the FIT's factor structure using fit indices derived from confirmatory factor analysis (CFA) in Mplus® (Muthén & Muthén, 2001). Since the scale of measurement for FIT items is best described as ordered-categorical, CFA fit indices were based on the weighted root mean square residual (WRMR) estimator intended for categorical data. Although many studies of similar scales have reported fit indices based on maximum-likelihood estimators, intended for continuous data, the use of these factor analytic techniques with categorical data may not be appropriate, especially if the data is skewed (van Schuur & Kiers, 1994; Maraun & Rossi, 2001). In testing models, residual variances of variables were allowed to be parameters in the model, but scale factors were not.

A number of fit indices were used to evaluate the CFA models, including the comparative fit index (CFI), the Tucker-Lewis Index (TLI), root mean square error of approximation (RMSEA), and weighted root mean square residual (WRMR). The use of multiple indices of fit is recommended given discrepancies in opinions as to which index is best (Byrne, 1994; Hu & Bentler, 1999). Consistent with suggestions of psychometricians (Byrne, 1994; Hu & Bentler, 1999; Schwarzer, 1986), we judged a model to have *adequate* fit when the CFI and TLI fell between .90 and .94 and the RMSEA fell between .05 and .09; and *good* fit when the CFI and TLI were .95 or higher, the RMSEA was less than .05, and the WRMR was less than .90 (Yu & Muthén, 2001).

Results

Item and Section Distributions

Means, standard deviations, and skew are presented in Tables 1 and 2 for FIT items, sections, and global ratings. Item means ranged from 0.84 to 1.64 with most falling between 1 and 1.5. An item or scale can be considered skewed when the skew is greater than twice the standard error. Based on this criterion, 8 of the 16 items were skewed (see Table 1), providing further justification for the use of WRMR estimator techniques.

Interrater Reliability

Interrater reliability was evaluated for item scores, section summary scores and structured clinical ratings, and total test scores and ratings. With the exception of three items with relatively low interrater reliability (i.e., Item 14: *Capacity to Communicate*

Facts, Item 15: *Capacity to Testify Relevantly*, and Item 16: *Capacity to Manage Behaviour*), item ICCs for single raters (ICC_{1s}) were generally “good” (see Cicchetti, Showalter, & Tyrer, 1985), with most falling between .60 and .75 (see Table 1). ICC_{1s} for summary scores were excellent (Cicchetti et al., 1985) and were .91, .82, and .83 for the sections measuring Understanding, Appreciation, and Communication, respectively; and .91 for the overall test score. For structured clinical ratings, agreement was somewhat lower but still acceptable, ranging from .59 to .80 (see Table 2).

Factor Structure

FIT's Three-Factor Structure

First, we tested the theoretical three-factor structure of the FIT by loading items 1 through 6, items 7 through 9, and items 10 through 16, respectively, onto three distinct factors representing the test's sections. This model had adequate fit with respect to tests of absolute fit (CFI and TLI) but inadequate fit on indices of relative fit (RMSEA and WRMR) (see Table 3). To determine whether this three-factor structure was better represented as a nested model, we conducted another CFA after constraining each first-order factor to load equally onto a dominant superordinate factor with the covariance of the dominant factor set at one. Again, this model had adequate fit with respect to tests of absolute fit but inadequate fit on indices of relative fit.

A Priori Tests of Other Competence Models

The less than optimal fit of the FIT's prescribed factor structure called for further investigations to identify a better factor structure. To rule out the possibility of a common-factor structure, we tested the fit of a simple unidimensional model by constraining all of

the FIT items to load onto one common factor. As reported in Table 3, the unidimensional model also did not achieve acceptable fit.

Next, we tested two additional models of competence. We tested the *domain model* using a two-factor structure that included understanding (items 1 through 9) and communication with counsel (items 10 through 16), and the *cognitive-complexity model* using a different two-factor structure that included factual understanding (items 1 through 6) and rational abilities (items 7 through 16). Both two-factor structures were examined with and without the inclusion of a dominant factor. None of these models achieved an acceptable fit on indices of relative fit (see Table 3).

Adjusted Discrete Abilities Model

Based on the results of Zapf, Skeem, and Golding (2004), we hypothesized that the FIT items that appeared to tap into reasoning abilities (i.e., Items 12 and 13) may be more strongly related to the latent-variable for understanding, and that items that appeared to tap into personally relevant and case-specific information (i.e., Items 1 and 2) may be more indicative of the latent-variable for appreciation. We therefore, examined an adjusted discrete abilities model, which consisted of understanding and reasoning (Items 3, 4, 5, 6, 12, and 13), appreciation of case-specific information (Items 1, 2, 7, 8, 9), and communication with counsel (Items 10, 11, 14, 15, and 16).

This *adjusted discrete abilities model* achieved adequate to good acceptable fit, when a dominant superordinate factor was added. The three factors correlated fairly highly, with .81 for Factors 1 and 2, .75 for Factors 1 and 3, and .73 for Factors 2 and 3. These factors also had adequate internal consistency according to standards provided by Cronbach (1990) and Nunnally (1978). Alpha was .85 for Factor 1

(*Understanding/Reasoning*), .78 for Factor 2 (*Appreciation*), and .80 for Factor 3 (*Communication*).

Discussion

In a recent survey of practices for evaluating juvenile competency, most psychologists reported that they considered the use of competency assessment instruments to be an essential or recommended component of these evaluations (Ryba, Cooper, & Zapf, 2003a). However, all existing competency instruments have been developed for adult defendants, and little research has investigated the psychometric properties of such instruments with adolescents. In response to this limitation in forensic assessment procedures, we examined the reliability and structural validity of the FIT for a sample of adolescent defendants.

Interrater Reliability

The FIT was developed as a structured clinical assessment instrument in that ratings of broad legal abilities constitute separate structured clinical judgments rather than actuarial decisions based on scoring algorithms. However, previous research has found that the reliability of structural clinical judgments of sections on the FIT is lower than desired (Viljoen et al., 2002). As such, this study compared the reliability of structured clinical ratings of sections to numerical summary scores.

Results indicated that numerical summary scores for sections and overall judgments of competency were more reliable than structured clinical ratings, although structured clinical ratings still had adequate reliability. Specifically, ICCs for section summary scores ranged from .82 to .93, while ICCs for structured clinical ratings ranged

from .59 to .80. The ICCs of the structured clinical ratings of sections were higher in this study than in the Viljoen et al. (2002) study, which may, in part, stem from the provision of scoring examples in the present study.

The FIT manual instructs examiners to consider clinical observations in ratings of defendants' performance (Roesch et al., 1998). In this study, however, the second rater scored the FIT based on written transcripts of examinee responses, and did not have access to test observation information. Interrater reliability was lowest for items placing higher weight on clinical observations; namely, *Ability to Communicate Facts*, *Capacity to Manage Behavior*, and *Capacity to Testify Relevantly*. For these items, examiners are advised to consider the defendant's attention, impulsivity, and thought processes (Roesch et al., 1998). It is possible that the ICCs of items and sections on the FIT would have been higher had the second rater used live observation or videotaped responses in scoring. Therefore, our findings may underestimate interrater reliability, which was generally good despite the lack of clinical observations.

Factor Structure

The FIT was developed based on a three-factor interpretation of Canadian and American legal standards for adjudicative competence, which includes understanding of the nature and object of the legal proceedings (factual understanding), appreciation (rational understanding), and the ability to communicate with counsel. Our results indicate that the factor structure of the FIT is generally consistent with this framework. Specifically, the best fit was obtained for a three-factor *adjusted discrete abilities model*, which included understanding and reasoning about legal proceedings, appreciation of case-specific information, and the ability to communicate with counsel. These factors

were united by a dominant unidimensional factor. Viewed in combination with the poor fit of one-factor and two-factor models, competence, at least as measured by the FIT, appears to consist of three related but distinct abilities.

Our failure to find a strong first-order unidimensional factor on the FIT emphasizes the need to consider specific legal abilities on this instrument, rather than solely a global summary score. This notion is consistent with legal standards, which assert that an individual need not show global impairments to be judged incompetent, but instead can be incompetent when impaired in only a single domain (Roesch et al., 1998). On the other hand, our evidence for a second-order unidimensional factor suggests that the specific factors on the FIT tap into a common construct.

In general, items in the supported model were kept on the scales developed by the test authors with a few exceptions. First, Items 12 (*Ability to Plan Legal Strategy*) and 13 (*Ability to Engage in Defence*) were moved from Factor 3 (*Communication*) to Factor 1 (*Understanding/Reasoning*). These items appear to measure reasoning and are most closely akin to Bonnie's concept (1992) of decisional competence.⁵ Zapf and colleagues (2004) similarly found that the fit of their model was improved after moving several "reasoning items" to the understanding factor of the MacCAT-CA.

In addition, Items 1 (*Understanding of the Arrest Process*) and 2 (*Understanding of the Current Charges*) were moved from Factor 1 (*Understanding/Reasoning*) to Factor

⁵ Item 12 examines a defendant's reasoning about decisions to accept plea bargains, plead guilty, and testify in court. Also, it investigates whether defendants would consult with attorneys or defer to attorneys in these decisions, and how they would manage disagreements with their lawyer. Item 13 provides defendants with several scenarios (i.e., their attorney finds a way to get their charges dropped, their attorney recommends to appeal the case, and their attorney is able to get a plea bargain), and questions defendants on whether they would accept this plan, and their reasons for this decision.

2 (appreciation). Conceptually, it makes sense that these items measure appreciation. Specifically, it may be necessary for a defendant to appreciate their arrest and charges, in order to appreciate the possible consequences of legal proceedings. Also, it is notable that the content of Items 1 and 2 pertain to case-specific information, consistent with all the items on Factor 2. Similarly, Zapf and colleagues (2004), in their factor analysis of the MacCAT-CA, found items that measured case-specific information tended to load together in adults.

Limitations and Research Recommendations

As mentioned previously, it is likely that this study would have produced more precise estimates of the FIT's interrater reliability if the second rater had access to clinical observations. Further, it is important to note that this study did not compare the validity of structured clinical ratings and numerical summary scores. Although structured clinical ratings are less reliable than numerical summary scores, they may be more valid when it comes to legal decision-making. For example, courts recognize that it is possible for an individual to be found incompetent on the basis of severe impairment on a single item alone. Therefore, the practice of summarizing item scores may compromise the validity of any instrument designed to assess adjudicative competence (Roesch et al., 1998). Future research is needed to clarify the relative merits of these differing approaches. Interestingly, in the field of violence risk assessments, recent research has suggested that structured clinical judgments may be more valid and equally as reliable as numerical summary scores (Dempster, 1998; Douglas, Ogloff, & Hart, 2003; Kropp & Hart, 2000).

With respect to factor analyses, it is important to note that the model of competence derived in this study does not necessarily reflect “the ‘truth’ about the construct that underlies competency standards” (Zapf et al., 2004, p. 9). One unavoidable problem is that factor analytic models are largely dependent on the nature of the items included in instruments, which vary considerably across instruments. Another problem is that accuracy is compromised when applying factor analytic techniques to measures comprised of dichotomous or ordered-categorical items (van Schuur & Kiers, 1994; Maraun & Rossi, 2001). In part, this is because typical maximum-likelihood procedures that are typically used are linear and dependent on normality within item score distributions. We used Mplus® because it was designed specifically to handle ordered-categorical data, and we applied weighted root mean square residual techniques. However, future research should apply item response theory and other non-parametric techniques to assess test structure and dimensionality.

Finally, we must emphasize that the results will not necessarily generalize to adult samples. To date, no studies have investigated the factor structure of the FIT in adult defendants. Future research might examine potential differences in the factor structure of the FIT and other competency assessment instruments in samples of adults and youth of various ages.

Implications

Our results indicated that the interrater reliability of the FIT is adequate and its factor structure is relatively consistent with its rationale and organization when used with juvenile defendants. These findings provide preliminary empirical support for the psychometric properties of the FIT with youth. However, several issues are important to

consider in the clinical use of the FIT with juvenile defendants. First, evaluators should determine whether the FIT is consistent with the legal standards for adolescent competency in their jurisdiction. The FIT was designed to measure legal abilities relevant to adjudicative competency in adults (Roesch et al., 1998). Although many courts have applied adult standards of adjudicative competency to adolescents, particularly when adolescents are tried in adult criminal courts, some courts have suggested that lower standards of competency be used for youth adjudicated in juvenile courts (Redding & Frost, 2001). The FIT may not be appropriate for use in jurisdictions that apply different competency standards for youth.

Second, it is important to note that competency assessment instruments such as the FIT comprise only one part of adolescent competency evaluations. Given that courts typically require that legal impairments arise as a result of psychopathology or poor cognitive abilities, evaluators should routinely assess these constructs (Grisso, 2003). It is also recommended that evaluators assess developmental maturity (see Ryba et al., 2003b for a description of various approaches to assessing maturity), as research has indicated that adolescents may have limitations in legal capacities as a result of developmental immaturity rather than solely due to psychopathology or cognitive deficits (Grisso et al., 2003; see also Scott, Reppucci, & Woolard, 1996; Steinberg & Cauffman, 1996 for a discussion of these issues). Although courts in most jurisdictions have not yet determined whether developmental immaturity constitutes an adequate basis for a possible finding of incompetence (Grisso, 1997), at least one court has ruled that it is (*In re Causey*, 1978).

There are a number of reasons why it might be valuable to use competency assessment instruments, such as the FIT, in assessing adolescent competency. In

general, it has been argued that competency assessment instruments may be more reliable than traditional clinical judgments and may help ensure that clinicians adequately address the areas relevant to legal competencies (Grisso, 2003; Nicholson, Briggs, & Robertson, 1988). Nevertheless, it is important to recognize that research has not directly compared various approaches to assessing competency in adolescents, and few studies have even compared these approaches in adults (see Schreiber, Roesch, & Golding, 1987 for an exception). Such comparisons could provide clinicians with empirical guidance and possibly bring about a resolution to ongoing debates over which approach should be favoured.

References

- Appelbaum, P. S., & Grisso, T. (2001). *Macb Arthur competency assessment tool for clinical research (MacCAT-CR)*. Sarasota, FL: Professional Resource Press.
- Bagby, R. M., Nicholson, R. A., Rogers, R., & Nussbaum, D. (1992). Domains of competency to stand trial: A factor analytic study. *Law and Human Behavior*, 16, 491-507.
- Bonnie, R. J. (1992). The competence of criminal defendants: A theoretical reformulation. *Behavioral Sciences and the Law*, 10, 291-316.
- Bonnie, R. J., & Grisso, T. (2000). Adjudicative competence and youthful offenders. In T. Grisso and R. G. Schwartz (Eds.), *Youth on trial: A developmental perspective on juvenile justice* (pp.73-103). Chicago: University of Chicago Press.
- Byrne, B. M. (1994). *Structural equation modeling with EQS and EQS/Windows*. London: Sage.
- Cicchetti, D. V., Showalter, D., & Tyrer, P. J. (1985). The effect of number of rating scale categories on levels of interrater reliability: A Monte Carlo investigation. *Applied Psychological Measurement*, 9, 31-36.
- Criminal Code*, R.S.C. 1985, c. C-46, as amended.
- Cronbach, L. J. (1990). *Essentials of psychological testing*. New York: Harper Collins.
- Dempster, R. J. (1998). *Prediction of sexually violent recidivism: A comparison of risk assessment instruments*. Unpublished master's thesis. Simon Fraser University, Burnaby, BC, Canada.
- Douglas, K. S., Ogloff, J. R. P., & Hart, S. D. (2003). *Reliability and validity of clinical decisions regarding violence risk made using the HCR-20: A test of the structured professional judgment approach to risk assessment*. Manuscript under review.
- Dusky v. the United States, 362 U.S. 402 (1960).
- Embretson, S. E. & Reise, S. P. (2000). *Item response theory for psychologists*. Kansas City: Multivariate Book Series.
- Grisso, T. (1997). The competence of adolescents as trial defendants. *Psychology, Public Policy, and Law*, 3, 3-32.
- Grisso, T. (2003). *Evaluating competencies: Forensic assessments and instruments* (2nd ed.). New York: KluwerAcademic/Plenum Press.

- Grisso, T., Miller, M. O., & Sales, B. (1987). Competency to stand trial in juvenile court. *International Journal of Law and Psychiatry*, 10, 1-20.
- Grisso, T., Steinberg, L., Woolard, J., Cauffman, E., Scott, E., Graham, S., Lexcen, F., Reppucci, N. D., & Schwartz, R. (2003). Juveniles' competence to stand trial: A comparison of adolescents' and adults' capacities as trial defendants. *Law and Human Behavior*, 27, 333-363.
- Hoge, S. K., Bonnie, R. J., Poythress, N., & Monahan, J. (1999). *The MacArthur Competence Assessment Tool—Criminal Adjudication*. Odessa, FL: Psychological Assessment Resources.
- Hollingshead, A. (1975). *Four factor index of social status*. New Haven, CT: Department of Sociology, Yale University.
- Hu, L., & Bentler, P. M. (1998). Fit indices in covariance structure modeling: Sensitivity to underparametrized model misspecification. *Psychological Methods*, 3, 424-453.
- In re Causey, 363 So. 2d 472 (La. 1978).
- Kropp, P. R., & Hart, S. D. (2000). The Spousal Assault Risk Assessment (SARA) Guide: Reliability and validity in adult male offenders. *Law and Human Behavior*, 24, 101-118.
- Maraun, M. D., & Jackson, J. S. H. (2001). *On the justification of test analytic claims*. Unpublished manuscript, Simon Fraser University.
- Maraun, M. D., & Rossi, N. T. (2001). The extra-factor phenomenon revisited: Unidimensional unfolding as quadratic factor analysis. *Applied Psychological Measurement*, 25, 77-87.
- McDonald, R. P. (1999). *Test theory: A unified treatment*. Mahwah, NJ: Erlbaum.
- McGraw, K. O., & Wong, S. P. (1996). Forming inferences about some intraclass correlation coefficients. *Psychological Methods*, 1, 30-46.
- McGuire, M. (1997). C. 19, An act to amend the Young Offenders Act and the Criminal Code: "Getting tougher?" *Canadian Journal of Criminology*, 39, 185-214.
- Melton, G. B., Petrila, J., Poythress, N. G., & Slobogin, C. (1997). *Psychological evaluations for the courts: A handbook for mental health professional and lawyers* (2nd ed.). New York: Guilford.
- Muthén, L. K., & Muthén, B. O. (2001). *Mplus user's guide* (2nd ed.). Los Angeles, CA: Muthén & Muthén.

- Nicholson, R. A., Briggs, S. R., & Robertson, H. C. (1988). Instruments for assessing competency to stand trial: How do they work? *Professional Psychology: Research and Practice, 19*, 383-394.
- Nunnally, J. C. (1978). *Psychometric theory*. New York: McGraw-Hill.
- Poythress, N., Nicholson, R., Otto, R. K., Edens, J. F., Bonnie, R. J., Monahan, J., & Hoge, S. K. (1999). *The MacArthur Competence Assessment Tool—Criminal Adjudication: Professional manual*. Odessa, FL: Psychological Assessment Resources.
- Quinlan, J., & Grisso, T. (2004, March). *Juvenile Court Clinical Services: A Nationwide Survey*. Paper presented at the annual convention of the American Psychology-Law Society, Scottsdale, AZ.
- R. v. D. (W.A.L.-1), 2002 SKPC 38.
- R. v. W.(C.), 2001 ABPC 148.
- Redding, R., & Frost, L. (2001). Adjudicative competence in the modern juvenile court. *Virginia Journal of Social Policy and the Law, 9*, 353-410.
- Roesch, R., Zapf, P. A., Eaves, D., & Webster, C. D. (1998). *Fitness Interview Test* (rev. ed.). Burnaby, BC: Mental Health, Law and Policy Institute, Simon Fraser University.
- Rogers, R., Grandjean, N. R., Tillbrook, C. E., Vitacco, M. J., & Sewell, K. W. (2001). Recent interview-based measures of competency to stand trial: A critical review augmented with research data. *Behavioral Sciences and the Law, 19*, 503-518.
- Rogers, R., Jackson, R. L., Sewell, K. W., Tillbrook, C. E., & Martin, M. A. (2003). Assessing dimensions of competency to stand trial: Construct validation of the ECST-R. *Assessment, 10*, 344-351.
- Rogers, R., Tillbrook, C. E., & Sewell, K. W. (2004). *Evaluation of Competency to Stand Trial™-Revised (ECST™-R)*. Lutz, FL: Psychological Assessment Resources.
- Rogers, R., Ustad, K. L., Sewell, K. W., & Reinhart, V. (1996). Dimensions of incompetency: A factor analytic study of the Georgia court competency test. *Behavioral Sciences and the Law, 14*, 323-330.
- Ryba, N. L., Cooper, V. G., & Zapf, P. A. (2003a). Juvenile competence to stand trial evaluations: A Survey of current practices and test usage among psychologists. *Professional Psychology: Research and Practice, 34*, 499-507.
- Ryba, N. L., Cooper, V. G., & Zapf, P. A. (2003b). Assessment of maturity in juvenile competency to stand trial evaluations: A survey of practitioners. *Journal of Forensic Psychology Practice, 3*, 23-45.

- Schreiber, J., Roesch, R., & Golding, S. (1987). An evaluation of procedures for assessing competency to stand trial. *Bulletin of the American Academy of Psychiatry and Law*, 15, 187-203.
- Schwarzer, R. (1986). Evaluation of convergent and discriminant validity by use of structural equations. In A. Angleitner & J. S. Wiggins (Eds.), *Personality assessment via questionnaires: Current issues in theory and measurement* (pp. 191-213). Berlin: Springer-Verlag.
- Snyder, H. N., & Sickmund, M. (1999). *Juvenile offenders and victims: 1999 national report*. Washington, DC: Office of Juvenile Justice and Delinquency Prevention.
- Thissen, D., Steinberg, L., Pyszczynski, T., & Greenberg, J. (1983). An item response theory for personality and attitude scales: Item analysis using restricted factor analysis. *Applied Psychological Measurement*, 7, 211-226.
- Ustad, K. L., Rogers, R., Sewell, K. W., & Guarnaccia, C. A. (1996). Restoration of competency to stand trial: Assessment with the GCCT-MSH and the CST. *Law and Human Behavior*, 20, 131-146.
- van Schuur, W. H., & Kiers, H. A. (1994). Why factor analysis often is the incorrect model for analyzing bipolar concepts, and what model to use instead. *Applied Psychological Measurement*, 18, 97-110.
- Viljoen, J. L., Roesch, R., & Zapf, P. A. (2002). Interrater reliability of the Fitness Interview Test across four professional groups. *Canadian Journal of Psychiatry*, 47, 945-952.
- Yu, C. Y., & Muthén, B. (2001). *Evaluation of model fit indicates for latent variable models with categorical and continuous outcomes*. Technical report in preparation.
- Zapf, P. A., & Roesch, R. (1997). Assessing fitness to stand trial: A comparison of institution-based evaluations and a brief screening interview. *Canadian Journal of Community Mental Health*, 16, 53-66.
- Zapf, P. A., & Roesch, R. (2001). A comparison of the MacCAT-CA and the FIT for making determinations of competency to stand trial. *International Journal of Law and Psychiatry*, 24, 81-92.
- Zapf, P. A., Roesch, R., & Viljoen, J. L. (2001). The utility of the Fitness Interview Test for assessing fitness to stand trial. *Canadian Journal of Psychiatry*, 46, 426-432.
- Zapf, P. A., Skeem, J. L., & Golding, S. L. (2004). *Empirical analysis of the factor structure of the MacArthur Competence Assessment Tool-Criminal Adjudication*. Unpublished manuscript.

Table 1: FIT Item Distributions and Reliability

	Mean (SD)	Skew	ICCs
<i>Section 1: Understanding</i>			
1: Understanding of Arrest Process	1.49 (.63)	-0.86*	.74
2: Understanding of Current Charges	1.51 (.69)	-1.06*	.60
3: Understanding of Key Participants	1.19 (.78)	-0.35	.83
4: Understanding of Legal Process	0.84 (.74)	0.26	.72
5: Understanding of Pleas	0.90 (.74)	0.15	.71
6: Understanding of Court Procedures	1.08 (.73)	-0.12	.73
<i>Section 2: Appreciation</i>			
7: Appreciation of Possible Penalties	1.30 (.78)	-0.57*	.53
8: Appraisal of Available Defences	1.12 (.85)	-0.23	.64
9: Appraisal of Likely Outcome	1.51 (.69)	-1.09*	.69
<i>Section 3: Communication</i>			
10: Capacity to Communicate Facts	1.64 (.53)	-1.10*	.08
11: Capacity to Relate to Lawyer	1.28 (.68)	-0.43*	.65
12: Capacity to Plan Strategy	1.06 (.79)	-0.11	.73
13: Capacity to Engage in Defence	1.24 (.67)	-0.33	.63
14: Capacity to Challenge Witnesses	1.11 (.71)	-0.16	.73
15: Capacity to Testify Relevantly	1.59 (.57)	-1.03*	.39
16: Capacity to Manage Behaviour	1.64 (.52)	-1.04*	.16

Note: * denotes items that are significantly skewed.

Table 2: FIT Section Scores and Reliability

	Mean (SD)	ICCs
<i>Section 1: Understanding</i>		
Structured Clinical Rating	1.34 (.69)	.65
Numerical Summary Score	7.01 (3.10)	.91
<i>Section 2: Appreciation</i>		
Structured Clinical Rating	1.34 (.78)	.80
Numerical Summary Score	3.92 (1.81)	.82
<i>Section 3: Communication</i>		
Structured Clinical Rating	1.47 (.63)	.59
Numerical Summary Score	9.54 (3.26)	.83
<i>Global Rating</i>		
Structured Clinical Rating	2.47 (.74)	.69
Numerical Summary Score	20.35 (7.21)	.91

Note: * denotes items that are significantly skewed. Structured clinical ratings for sections and the global rating can be scored as 0, 1, or 2. The total possible numerical summary score is 12 for *Understanding*, 6 for *Appreciation*, 14 for *Communication*, and 32 for the total score.

Table 3: Confirmatory Factor Analyses

Models	CFI	TLI	RMSEA	WRMR
<i>Theoretical FIT Factor Structure</i>				
Discrete Abilities Model	.929	.959	.107	1.038
Discrete Abilities Model, Dominant Factor Added	.939	.962	.102	1.026
<i>Other Conceptual Models of Competence</i>				
One Factor Model	.948	.941	.128	1.205
Domain Model	.933	.959	.107	1.038
Domain Model, Dominant Factor Added	.933	.959	.107	1.038
Cognitive Complexity Model	.914	.950	.118	1.101
Cognitive Complexity Model, Dominant Factor Added	.914	.950	.118	1.101
<i>Adjusted Model</i>				
Adjusted Discrete Abilities Model	.943	.968	.095	0.935
Adjusted Discrete Abilities Model, Dominant Factor Added	.959	.973	.086	0.935

CHAPTER 3: LEGAL ABILITIES

Abstract

Although there is growing evidence of developmental differences in interrogative and adjudicative competence, the correlates of adolescents' legal abilities remain unclear. This study examined the relationship of legal abilities to cognitive development, legal learning opportunities, and psychological symptoms. Participants were 152 male and female defendants aged 11 to 17, who completed Grisso's Instruments for Assessing Understanding and Appreciation of Miranda Rights, the Fitness Interview Test (Revised Edition), the Woodcock-Johnson III Cognitive Assessment Battery, and the Brief Psychiatric Rating Scale for Children. Performance on measures of interrogative and adjudicative abilities increased with age. These developmental differences were partially mediated or explained by cognitive development. Of the specific cognitive abilities examined (general intellectual ability, verbal ability, reasoning, long-term retrieval, attention, and executive functioning), verbal ability was a particularly strong predictor of performance on competency measures. Also, defendants obtained lower scores on competency measures if they showed evidence of attention deficits or hyperactivity, came from below average socioeconomic classes, and/or had spent limited time with their attorneys.

Introduction

To protect the fairness and dignity of legal proceedings, it has long been held that adults accused of a crime must have the capacity to understand and participate in legal

proceedings against them. For adolescents, this requirement was historically considered unnecessary given the rehabilitative ideals of the early juvenile justice system (Bonnie & Grisso, 2000; Grisso, 1997; Grisso, Miller, & Sales, 1987). However, as the juvenile justice system has evolved to become more adult-like in nature, courts have extended adult rights and protections to adolescents.

As of the 1960s, courts have given adolescents the right to remain silent and consult with an attorney during police interrogation and required that, to waive these rights, juveniles must be competent to do so, or in other words, able to understand the meaning of these interrogation rights (*In re Gault*, 1967; Grisso, 2003). In more recent decades, courts have increasingly held that adolescents tried within the adult court or the juvenile justice system must be competent to proceed with adjudication (competent to stand trial), meaning that they must understand and appreciate adjudicative proceedings, and be able to communicate with their attorneys (Grisso et al., 1987; Redding & Frost, 2001).

In extending these legal standards to adolescents, courts have often presumed that youth, like adults, are competent (Redding & Frost, 2001; Scott & Grisso, 1997). This presumption is inconsistent with a growing body of research. In 1980, Grisso found that youth aged 14 and under had poorer understanding and appreciation of their interrogation rights than older adolescents and adults, whereas adolescents aged 16 and older were comparable to adults. Since then, several studies have provided additional support for the existence of developmental differences in interrogative capacities (Abramovitch, Peterson-Badali, & Rohan, 1995; Goldstein, Condie, Kalbeitzer, Osman, & Geier, 2003; Redlich, Silverman, & Steiner, 2003).

Research findings on adjudicative competency have yielded similar developmental patterns. Specifically, Grisso and colleagues (2003) reported that youth aged 15 and younger had poorer legal understanding, appreciation, and reasoning abilities than older adolescents and adults, whereas adolescents aged 16 and older were comparable to adults. A number of other researchers have also found that young adolescents are at greater risk of deficits in adjudicative capacities (Peterson-Badali & Abramovitch, 1992; Peterson-Badali & Abramovitch, 1993; Peterson-Badali, Abramovitch, & Duda, 1997; Pierce & Brodsky, 2002; Redlich et al., 2003; Savitsky & Karras, 1984).

At this point, therefore, there is convincing evidence of developmental differences in interrogative and adjudicative competency. Correlates and risk factors for age-related differences are less clear. In important developmental conceptualizations of competence, Scott, Reppucci, and Woolard (1995) and Steinberg and Cauffman (1996) proposed that psychosocial factors, such as risk-taking, might contribute to developmental differences in legal abilities and judgment. To expand on current conceptualizations, this study focused on the role of cognitive development, legal learning opportunities, and psychological symptoms. In the following sections, existing research on these potential correlates is reviewed and research gaps are identified.

Cognitive Development

Studies have found that intelligence, as measured by brief screening measures, is a strong predictor of adolescents' performance on measures of interrogative and adjudicative abilities (Goldstein et al., 2003; Grisso, 1980; Grisso et al., 2003; Peterson-Badali & Abramovitch, 1993). Also, there is some evidence that intelligence may be a

particularly strong predictor of interrogative abilities in adolescents as compared to adults (Grisso, 1980; Grisso, 1997). However, while cognitive abilities are clearly an important predictor of interrogative and adjudicative competency in adolescents, there are several significant gaps in our knowledge.

First, research has not yet investigated the relationship between specific cognitive abilities and legal abilities. This is significant because there is growing theoretical and empirical support that intelligence includes not only a global component, but also multiple, specific cognitive clusters (Carroll, 1993; Sternberg & Kaufman, 1998). Many of the legal abilities relevant to competency, such as understanding of interrogation warnings and the ability to communicate with lawyers and testify relevantly, appear to have a strong verbal component.

Other cognitive and neuropsychological abilities, however, may also be needed (Kirkish & Sreenivasan, 1999; Martell, 1992; Nestor, Daggett, Haycock, & Price, 1999). Defendants may require attention and memory to comprehend what police and attorneys have told them about their interrogation rights, charges, and possible court outcomes, and reasoning abilities to be able to weigh legal choices and make rational decisions. Executive functioning, which is defined as “higher-order cognitive processes” such as initiation, planning, and self-regulation (Spreeen, & Strauss, 1998, p. 171), may impact decision-making and the ability to manage courtroom behavior.

A second significant research gap is that, thus far, research has not yet considered the possible influence of cognitive development on legal abilities. This is significant because there is empirical evidence that cognition and brain structures continue to mature during adolescence. Specifically, studies have found that during adolescence performance improves on measures of verbal fluency (Levin et al., 1991;

Kramer, Delis, Kaplan, O'Donnell, & Prifitera, 1997; Welsh, Pennington, & Groisser, 1991), memory and learning (Curry, Logue, & Butler, 1986; Levin et al., 1991; Paniak, Murphy, Miller, & Lee, 1998; Ryan, 1990), reasoning (Klaczynski, 2001; Valanides, 1999), sustained attention (McKay, Halperin, Schwartz, & Sharma, 1994), and executive abilities (Davies & Rose, 1999; Levin et al., 1991; Welsh et al., 1991).

Also, recent neuroimaging research has indicated that frontal brain structures continue to develop during adolescence and are not fully formed until early adulthood (Giedd et al., 1999; Sowell, Thompson, Holmes, Jernigan, & Toga, 1999). In light of this evidence for continued maturation, it is possible that adolescents have not yet acquired the cognitive abilities necessary to understand and participate in legal proceedings, and that this may in turn partially explain or account for developmental differences in interrogative and adjudicative abilities.

Legal Learning Opportunities

It seems plausible that exposure to the legal system may be associated with better legal abilities in that it provides defendants with an opportunity to learn about the legal system. If this is the case, adolescent defendants may be at a disadvantage given that they are likely to have less legal experience than adult defendants. Studies, however, have yielded mixed results on the relationship between legal experience, as measured by arrests and/or convictions, and legal abilities (Grisso, 1997). One possible, but untested, reason why this relationship is not more robust is that perhaps defendants require a certain basal level of intelligence in order to benefit or learn from prior legal experience.

In addition to the potential learning opportunities provided by prior arrests and convictions, contact with attorneys might provide adolescent defendants with another opportunity to learn about legal rights and processes. This possibility is noted by Buss (2000), who proposes that attorneys may, through spending time with clients, facilitate young defendants' legal abilities by providing legal instruction and developing a collaborative relationship with them. As of yet, this hypothesis has not been empirically examined.

Psychological Symptoms

Although psychological symptoms have been shown to be common in young defendants (Grisso, Barnum, Fletcher, Cauffman, & Peuschold, 2001; Teplin, Abram, McClelland, Dulcan, & Mericle, 2002; Wasserman, McReynolds, Lucas, Fisher, & Santos, 2002), Grisso and colleagues (2003) failed to find an association between adolescents' adjudicative competency and broad psychological symptoms, including alcohol and drug use, anger and irritability, depression and anxiety, somatic complaints, suicidal ideation, and thought disturbance. Further exploration of the relationship between psychological symptoms and adolescent competency is nevertheless merited.

First, research has not yet examined the relationship between competency and symptoms of attention-deficit/hyperactivity disorder (ADHD). Symptoms of ADHD are prevalent among adolescent offenders (Teplin et al., 2002), and may have plausible links to competency. For instance, deficits in attention may make it difficult to attend to courtroom proceedings and lawyers' instructions, and hyperactivity may impair a defendant's ability to manage courtroom behavior. Second, while Grisso et al. (2003) examined the relationship between adolescents' adjudicative competency and

psychological symptoms, to our knowledge research has not yet examined the relationship between adolescents' interrogative competency and psychological symptoms.

Purpose of this Study

This study examined possible predictors of interrogative and adjudicative abilities in child and adolescent defendants, namely cognitive development, legal learning opportunities, and psychopathology. First, we examined the relationship of legal abilities to cognitive development. We hypothesized that there would be developmental differences in cognitive abilities and legal abilities, and that overall cognitive development would partially mediate or account for the association between age and legal abilities. Consistent with Grisso (1997), we hypothesized that cognitive abilities would be a particularly strong predictor of legal abilities for young adolescents (aged 11 to 13), or in other words, that age would moderate the relationship between cognitive abilities and performance. Also, we predicted that, of the specific cognitive domains examined, including general intellectual ability, verbal ability, reasoning, memory, attention, and executive functioning, verbal ability would emerge as a particularly strong predictor of legal abilities.

Second, we examined the relationship of legal abilities to legal learning opportunities, including previous arrests and contact with attorneys. We predicted that contact with attorneys would be associated with higher scores on competency measures. Although we anticipated that prior arrests would not be a particularly strong predictor of legal abilities, we predicted that prior arrests may be associated with higher scores on some legal measures, and might even mediate or account for developmental

differences in performance on these measures. Also, we predicted that prior arrests would be a stronger predictor of legal abilities among defendants with average or above average intelligence.

Finally, we investigated the relationship of legal abilities to psychological variables, including depression, anxiety, ADHD symptoms, behavior problems, and institutional classification as having a psychological disturbance. We hypothesized that while, in general, these variables would not predict legal abilities, ADHD symptoms would be associated with lower scores on measures of the capacity to manage courtroom behavior and attend to legal proceedings.

Method

Participants

Participants included 152 pretrial defendants (73 females and 79 males), aged 11 to 17 years ($M = 14.52$, $SD = 1.68$), held in a detention facility in the state of Washington. The majority of defendants remanded to this facility were 15 and older. To ensure that younger defendants were adequately represented, we stratified our sample by age (11 to 13, 14 to 15, and 16 to 17) by extending an equal number of invitations to participate to adolescents who were randomly selected from each of these age groups. The rate of agreement for participation was 94.4%. Defendants who did not participate ($n = 9$) appeared representative of the larger sample in terms of age, gender, race, and current charge. All participants indicated that English was their first language, or the language they spoke at home or at school.

The average IQ of participants was 82.57 ($SD = 13.91$). While low, this is comparable to other samples. For instance, Grisso et al. (2003) reported that the average IQ of detained individuals in their multi-site study was 86. Sixty percent of participants ($n = 92$) in the overall sample were non-Hispanic Caucasians, 26.3% ($n = 40$) were African-American, 7.9% ($n = 12$) were Hispanic, 3.9% ($n = 6$) were Native-American, and 1.3% ($n = 2$) were Asian. The majority of participants (66.7%, $n = 96$) were classified as being at the two lowest socioeconomic levels (levels IV and V) according to Hollingshead's classification system (1975). For 37.5% ($n = 57$) of participants the most serious charge was a violent offense against persons, for 36.8% ($n = 56$) it was a property offense, and for 25.7% ($n = 39$) it was another offense, such as a drug offense, obstruction, or failure to appear at court. Age groups (11 to 13, 14 to 15, and 16 to 17) did not significantly differ with respect to IQ, current charge, ethnicity, gender, and SES (see Table 1).

Procedure

All study procedures were approved by the appropriate review boards of Simon Fraser University and the study facility, and were consistent with current ethical procedures. Potential participants were contacted and asked if they were interested in participating in a study on legal abilities. Information about the study was presented orally to individuals who expressed interest in participating and a form was also provided so that potential participants could read the information presented. The Flesch-Kincaid reading level of this form was grade 3.6.

Participants were tested to assess if they understood and appreciated study procedures, and were able to make a stable choice about participation. To do this, an

adapted version of the MacArthur Competence Assessment Tool for Clinical Research (MacCAT-CR; Appelbaum & Grisso, 2001)⁶ was administered. If a participant showed inadequate comprehension of a concept, this concept was re-explained to improve the participant's understanding of study procedures and facilitate his or her ability to provide informed consent. In addition, the institutional administrator, acting as the defendants' legal guardian, provided consent for all participating defendants.

Participants completed a battery of tests. Testing typically occurred in two or three separate sessions of approximately 40 to 90 minutes in length. Overall, the test battery generally took 3 to 4 hours. Confidentiality was assured, except in cases of risk of harm to self or others. Identifying information was not recorded, and participants were instructed not to provide details on the current charge for which they were undergoing adjudication.

In the first test session, participants generally completed several measures of legal abilities, including Grisso's Instruments for Assessing Understanding and Appreciation of Miranda Rights (hereinafter, "Grisso's Miranda Scales"; Grisso, 1998) and the Fitness Interview Test, Revised Edition (FIT; Roesch, Zapf, Eaves, & Webster, 1998). The order in which these instruments were presented was counterbalanced. Following test sessions focused on the assessment of cognitive abilities, as measured by the Woodcock-Johnson III Cognitive Assessment Battery (WJ III; Woodcock, McGrew, & Mather, 2001), and psychopathology, as measured by the Brief Psychiatric

⁶ The version of the MacCAT-CR used in this study included 4 items on understanding (nature of study, benefits of participation, risks of participation, confidentiality), 2 items on appreciation (no impact on court case or care, decisions to decline/withdraw will be respected), and 1 item on choice (ability to make a stable choice about decision to participate).

Rating Scale for Children (BPRS-C; Hughes, Rintelmann, Emslie, Lopez, & MacCabe, 2001).

The test battery was administered by a doctoral student in clinical psychology trained in the use of study instruments. Participants' performance on the dependent variables (Grisso's Miranda Scales and the FIT) was scored independent of and blind to all other participant information, such as age, cognitive development, and psychopathology. To assess the reliability of Grisso's Miranda Scales and the FIT, 26 randomly selected protocols were re-coded by a second doctoral student in clinical psychology, with similar training as the original rater. Training on these instruments included familiarization with the test manual, viewing a training videotape (for the FIT), and completion of several practice protocols.

Upon completion of the study, participants were given 10 points as compensation for their time. These points could be used to pay for food and toiletry items at the facility, and was enough to buy approximately two chocolate bars or a small bottle of shampoo. This amount was thought to be sufficient to compensate participants for their time but not enough to coerce participation.

Predictors

Demographic Variables

Information on the age, ethnicity, and criminal charges of participants was obtained from institutional records. Socioeconomic status (SES) was coded using Hollingshead's (1975) five-level classification system based on participants' descriptions of their parents' education and occupation.

Cognitive Abilities

The Woodcock-Johnson III Cognitive Assessment Battery (WJ III; Woodcock et al., 2001) is based on the Cattell-Horn-Carroll theory of cognitive abilities. This theory is supported by factor analytic research and conceptualizes intelligence as hierarchical and consisting of general intelligence, broad cognitive clusters, and narrow abilities. For the present study, we examined general intelligence, and several broad cognitive clusters, including comprehension-knowledge or verbal ability (the ability to apply language and acquired knowledge), fluid reasoning (the ability to recognize patterns and make logical inferences), long-term retrieval (the ability to store and retrieve information), attention (the ability to attend to relevant information, and includes selective attention, sustained attention, divided attention, and attentional capacity), and executive processing (the ability to plan strategically, resist interference, and shift one's mental set). Research has demonstrated that the WJ III clusters have strong reliability and that the WJ III is adequately correlated with other measures of intellectual ability (McGrew & Woodcock, 2001). Also, this instrument has received very positive reviews in the *Mental Measurements Yearbook* (Cizek, 2003; Sandoval, 2003).

Psychological Symptoms

To measure psychopathology, the anchored version of the Brief Psychiatric Rating Scale for Children (BPRS-C; Hughes et al., 2001) was used. The BPRS-C is a widely used rating scale that is used to assess mental status in children and adolescents, and comprises 21 symptoms. To rate BPRS-C items, the examiner conducted standardized mental status interviews that were 20 to 30 minutes in length.

Also, institutional records on psychological disturbances⁷ and psychiatric medication use were available. For this study, we examined several BPRS-C subscales derived by Hughes et al.'s (2002) factor analytic study. These subscales include depression-anxiety (symptoms such as depressed mood and feelings of inferiority), psychomotor excitation (symptoms such as hyperactivity and distractibility), and behavior problems (symptoms such as hostility and manipulativeness). Research has found the interscorer reliability of items and subscales on the BPRS-C to be adequate (Hughes et al., 2001; Lachar et al., 2001). In addition, theoretically consistent correlations have been found between the BPRS-C and a number of other diagnostic instruments, such as the Child-Behavior Checklist and Diagnostic Interview for Children and Adolescents (Hughes et al., 2001; Stavrakaki, Williams, Walker, Roberts, & Kotsopoulos, 1991).

Legal Learning Opportunities

To measure legal experience, defendants were asked if they had ever been arrested before (coded as "0" for no prior arrests and "1" for one arrest, and "2" for 2 or more prior arrests). Participants were also asked how many times they had met with their lawyer about their case, how much time they had spent with their lawyer, and the type of lawyer they had (i.e., private lawyer or public defender).

⁷ At the time of admission to the pretrial facility that was the study site, all defendants are screened for psychological and emotional problems by facility staff. On the basis of this screening, defendants are dichotomously classified by the institution as having a psychological/emotional disturbance or not.

Competency Measures

Instruments for Assessing Understanding and Appreciation of Miranda Rights

Interrogative competency was examined with Grisso's Miranda Scales (Grisso, 1998). The first three measures on Grisso's Miranda Scales assess understanding of interrogation warnings. Comprehension of Miranda Rights (CMR) measures examinee's ability to paraphrase the elements of the interrogation warnings, Comprehension of Miranda Rights—Recognition (CMR-R) requires examinees to recognize sentences that have the same meaning as a statement from the interrogation warnings, and Comprehension of Miranda Vocabulary (CMV) requires examinees to define words contained in the interrogation warnings. The final measure on this instrument, Function of Rights in Interrogation (FRI), assesses the appreciation of interrogation rights. It consists of three separate subscales, including Nature of Interrogation (NI), Right to Counsel (RC), and Right to Silence (RS). On this measure, examinees are shown drawings of youth involved in various legal scenarios, and are read short vignettes about each scenario. They are then asked a series of questions about the vignette.

To check interrater reliability, 26 randomly selected protocols were re-coded by a second rater. Intraclass correlation coefficients were calculated for single raters with a two-way random effects model (Model 2, McGraw & Wong, 1996), and were as follows: .91 for CMR, .94 for CMV, .88 for NI, .93 for RC, and .92 for RS. As evidence of validity, subtests on Grisso's Miranda Scale have been found to correlate with other subtests on this measure and with IQ estimates (Fulero & Everington, 1995; Grisso, 1998).

Fitness Interview Test.

Adjudicative competency (competency to stand trial) was measured with the Fitness Interview Test, Revised Edition (FIT; Roesch, Zapf, Eaves, & Webster, 1998). The FIT is a semi-structured clinical interview, which comprises 16 items and takes approximately 30 to 45 minutes to administer. The first section, Understanding (Factual Knowledge), examines a defendant's understanding of the arrest process, current charges, role of key participants, legal process, pleas, and court procedures. The second section, Appreciation (Understanding of the Possible Consequences of Proceedings or Rational Understanding), examines a defendant's appreciation of the possible penalties, available legal defenses, and likely outcome. The third section, Communication with Counsel (Participation), examines a defendant's ability to communicate facts, relate to lawyers, plan legal strategy, engage in the defense, challenge witnesses, testify relevantly, and manage courtroom behaviour.

For this study, 26 randomly selected protocols were re-coded by second rater. Intraclass correlation coefficients were .91 for Understanding, .82, for Appreciation, and .83 for Communication (Model 2, McGraw & Wong, 1996).⁸ In terms of its validity, the FIT shows high agreement with clinician judgments of competency to stand trial (Zapf, Roesch, & Viljoen, 2001), is able to distinguish between defendants who are and are not referred for competency evaluations (Viljoen & Zapf, 2002), and is correlated with a second measure of adjudicative competency, the MacArthur Competency Assessment Tool-Criminal Adjudication (Zapf & Roesch, 2001).

⁸ In this study, we used summary scores of sections rather than structured clinical judgments of sections, as summary scores had better interrater reliability.

Data Analysis

Overview of Analyses

First, developmental differences in cognitive abilities for three age groups of defendants (11 to 13, 14 to 15, 16 to 17) were examined using a multiple analysis of variance (MANOVA). Games-Howell post hoc comparisons, which do not assume equality of variances across groups, were calculated. Following this, the relationship between performance on competency measures and the primary predictor sets (i.e., cognitive development, legal learning opportunities, and psychological symptoms) were investigated using linear regression. Although not a primary focus of this study, we also examined the relationship of demographic variables, including SES, ethnicity, and gender, to legal abilities. Specific mediator and moderator hypotheses were tested using regression analyses. After conducting analyses for separate sets of predictors, a final set of linear regression analyses was performed, in which the variables that had emerged as significant predictors in earlier analyses were entered into regression models.

Moderator Analyses

A variable is said to moderate a relationship between a predictor and outcome if it “affects the direction and/or strength of a relation” between the predictor and outcome (Baron & Kenny, 1986, p. 1174). In conducting moderator analyses, predictor and moderator variables, which were continuous, were first transformed into z-scores to reduce multicollinearity (high correlations) among variables (Cohen, Cohen, West, & Aiken, 2003; Frazier, Tix, & Barron, 2004). Then, the standardized (z-scores) predictors and moderators were multiplied to form product terms that represented the interaction between the predictor and moderator. To test for moderation, the predictor and

moderator were entered into regression equations, followed by product term (see Baron & Kenny, 1986; Holmbeck, 1997 for a further description of this procedure). In interpreting results, the interaction term was examined. The unstandardized regression coefficient (B) was interpreted rather than the standardized regression coefficient (β), as β cannot be properly interpreted in moderator analyses (Frazier et al., 2004; Judd et al., 1995).

Mediator Analysis

A variable is said to mediate a relationship between a predictor and outcome if it helps to explain or account for the relationship between the predictor and the outcome. In other words, a mediator effect exists if the predictor “influences the mediator which, in turn, influences the outcome” (Holmbeck, 1997, p. 600). Mediator analyses were conducted using regression analysis in the four-step procedure outlined by Baron, Kenny, and Judd (Baron & Kenny, 1986; Judd & Kenny, 1981). Using this procedure, the associations between the predictor and outcome (Step 1), predictor and mediator (Step 2), and mediator and outcome (Step 3) must be examined for significance. If these associations are significant, then the association between the predictor and outcome is examined after the mediator is added to the model (Step 4). If there is mediation, the association between the predictor and outcome will be substantially reduced when the mediator is added. The significance of the mediated effect was tested using the z-score test developed by Kenny, Kashy, and Bolger (1998).⁹

⁹ The product of a and b is divided by the square root of $b^2sa^2 + a^2sb^2 + sa^2sb^2$, in which a and b are unstandardized regression coefficients and sa and sb are their standard errors.

Results

Cognitive Development

Are There Developmental Differences in Cognitive Abilities?

Cognitive abilities on the WJ III across age groups (11 to 13, 14 to 15, 16 to 17) were examined with a MANOVA. *W* scores, which provide a measure of cognitive development (McGrew & Woodcock, 2001), were used as the unit of measurement for cognitive abilities. *W* scores are centered at a value of 500, which is the average performance of a 10 year-old. Age group positively predicted performance on general intellectual ability (GIA), verbal abilities, attention, and executive ability (see Table 2). On GIA and attention, defendants aged 11 to 13 and those aged 14 to 15 scored significantly lower than defendants aged 16 to 17. On verbal and executive abilities, defendants aged 11 to 13 scored significantly lower than defendants aged 16 to 17.

Does Development in General Intellectual Ability Explain the Relationship Between Age and Legal Abilities?

Age significantly predicted performance on all legal measures, except for NI. In Table 2, mean scores and standard deviations are reported for defendants in our sample aged 11 to 13, 14 to 15, and 16 to 17. Also, adult norms are provided for comparison (from Grisso, 1998; Viljoen & Zapf, 2002).¹⁰ Effect sizes, which were calculated with Cohen's *d* formula (Cohen, 1988), were large by Cohen's standards for comparisons between defendants aged 11 to 13 and those aged 16 to 17 (see Table 3).

¹⁰ Means and standard deviations for adult offenders on CMR, CMR-R, and CMV were calculated from tables on p. 84, 85, and 86 in Grisso (1998).

We hypothesized that GIA may mediate or partially explain the relationship between age and legal abilities. As shown in Figure 1, the conditions for mediation were met for all legal abilities except NI. Specifically, there were significant associations between age and legal abilities, between the age and GIA (*W* scores), and between the GIA and legal abilities. Also, the association between age and legal abilities significantly decreased when GIA, in addition to age, was entered in regression equations. Age remained a significant predictor of legal abilities even after GIA was controlled, indicating that age was a partial but not a complete mediator of performance on legal measures.

Does Age Affect the Relationship Between GIA and Legal Abilities?

We hypothesized that GIA may be a particularly strong predictor of legal abilities in young adolescents. To test this, GIA (*W* scores) and age, followed by the interaction between GIA and age, were entered as predictors in regression equations, with performance on legal measures as the outcome. The interaction between GIA and age was significant for CMR, $B = -.34$, $t(145) = -2.22$, $p = .028$, NI, $B = .29$, $t(145) = 2.62$, $p = .010$, Appreciation, $B = -.29$, $t(145) = -2.09$, $p = .039$, and Communication, $B = -.47$, $t(145) = -2.04$, $p = .043$, indicating that age moderated the relationship between GIA and performance on these measures.

To facilitate interpretation of the interactions, we tested the significance of the simple slopes (relationship between GIA and legal abilities) for defendants aged 11 to 13, 14 to 15, and 16 to 17 (for further details on this procedure see Cohen et al., 2003; Frazier et al., 2004). GIA was a stronger predictor of performance in younger versus older defendants on CMR (11 to 13: $\beta = .54$, $p < .001$; 14 to 15: $\beta = .44$, $p = .001$; 16 to 17: $\beta = .36$, $p = .009$), Appreciation (11 to 13: $\beta = .44$, $p = .002$; 14 to 15: $\beta = .38$, $p =$

.006; 16 to 17: $\beta = .22, p = .122$), and Communication (11 to 13: $\beta = .53, p < .001$; 14 to 15: $\beta = .49, p < .001$; 16 to 17: $\beta = .26, p = .063$). On NI, GIA was a stronger predictor of performance in older versus younger defendants (11 to 13: $\beta = -.12, p = .429$; 14 to 15: $\beta = .26, p = .061$; 16 to 17: $\beta = .46, p = .001$).

Which Specific Cognitive Abilities Are Most Predictive of Legal Abilities?

W scores on verbal ability, long-term retrieval, fluid reasoning, attention, and executive functioning were entered simultaneously in regression equations. Verbal abilities emerged as a strong predictor of legal abilities in that it significantly predicted performance on all of the legal measures except for NI (see Table 5). Attention predicted scores on CMR, NI, Appreciation, and Communication.

Legal Learning Opportunities

Do Prior Arrests Explain the Relationship Between Age and Legal Abilities?

There was a significant association between age and arrests, $\beta = .21, t(150) = 2.59, p = .010$, in that younger defendants had fewer prior arrests. Arrests significantly predicted performance on RC, $\beta = .19, t(150) = 2.42, p = .017$, and Understanding, $\beta = .21, t(150) = 2.56, p = .011$, but none of the other legal abilities. Although we hypothesized that arrests might explain or mediate the relationship between age and legal abilities, when arrests along with age were entered as predictors in regression equations for RC and Understanding, arrests did not significantly mediate the relationship between age and performance on RC and Understanding, $z = 1.76, p = .078$, and $z = 1.71, p = .087$, respectively.

Does GIA Affect the Relationship Between Arrests and Legal Abilities?

We predicted that arrests would be a stronger predictor of legal abilities among defendants with average or above average intelligence. To test this, arrests and GIA, followed by the interaction between arrests and GIA (*W* scores), were entered as predictors in regression equations, with performance on legal measures as the outcome. The interaction between arrests and GIA did not reach significance for any of the legal abilities, indicating that GIA did not affect (moderate) the relationship between arrests and performance on these measures.

Does Contact with Attorneys Predict Legal Abilities?

Reported time spent with attorneys ranged from 0 minutes to 6 hours, with a mean of 25.18 minutes (*SD* = 44.12). Time spent with attorneys was found to predict higher scores on CMR, $\beta = .26$, $t(150) = 3.33$, $p = .001$, CMV, $\beta = .18$, $t(150) = 2.18$, $p = .031$, RC, $\beta = .18$, $t(150) = 2.28$, $p = .024$, RS, $\beta = .17$, $t(150) = 2.12$, $p = .036$, Understanding, $\beta = .31$, $t(150) = 3.98$, $p < .001$, Appreciation, $\beta = .24$, $t(150) = 3.02$, $p = .003$, and Communication, $\beta = .21$, $t(150) = 2.62$, $p = .010$.

Given that it is possible that defendants may have had difficulty accurately estimating the time they spent with attorneys, we conducted an additional series of regression equations in which contact with attorneys was entered as a dichotomous variable. Defendants were coded as "1" if they had met with their attorney about their case, and "0" if they had not. When coded this way, contact with attorneys remained an important predictor. Specifically, having met with an attorney significantly predicted performance on CMR, $\beta = .17$, $t(150) = 2.18$, $p = .033$, CMV, $\beta = .19$, $p = .020$, NI, $\beta = .26$, $t(150) = 3.23$, $p = .002$, Understanding, $\beta = .27$, $t(150) = 3.42$, $p = .001$,

Appreciation, $\beta = .23$ $t(150) = 2.87$, $p = .005$, and Communication, $\beta = .23$, $t(150) = 2.92$, $p = .004$.

Among those defendants who had met with a lawyer ($n = 128$), we examined the relationship of legal abilities to type of lawyer (private lawyer or public defender) using regression. Twenty-one defendants (16.5%) had a private lawyer, and the remaining defendants had public defenders. Type of lawyer did not significantly predict legal abilities.

Psychological Symptoms

Do Psychological Symptoms Predict Legal Abilities?

Depression-anxiety, psychomotor excitation (ADHD symptoms), behavior problems, and institutional classification (as having a psychological/emotional disturbance) were entered simultaneously in regression equations. Thirty-four defendants (22.4%) were classified as having a psychological or emotional disturbance. The mean scores were 8.19 for depression-anxiety ($SD = 6.30$, Range = 0-25), 3.04 for psychomotor excitation ($SD = 3.48$, Range = 0-15), and 9.72 for behavior problems ($SD = 3.23$, Range = 1-16). Although the BPRS-C also has a scale that measures thought disturbance, we did not analyze the association between this scale and legal abilities, given the low prevalence of symptoms on this scale ($M = 0.95$, $Mdn = 0$, $Mode = 0$). Psychomotor excitation inversely predicted performance on CMR, CMR-R, Appreciation, and Communication (see Table 6).

Demographic Variables

Do Gender, Ethnicity, or SES Predict Legal Abilities?

Gender (male vs. female), ethnicity (non-Hispanic Caucasian defendants vs. other groups), and SES (classes I-III vs. classes IV-V) were entered simultaneously in regression equations (see Table 7). Given that these variables are associated with differences in intellectual ability, GIA (*W* scores) was added to regression equations to control for intellectual differences. In these models, the standardized coefficient for GIA was not interpreted. Female gender was associated with lower scores on RS, $\beta = -.22$, $t(145) = -2.72$, $p = .007$, and Understanding, $\beta = -.23$, $t(145) = -3.09$, $p = .002$. Low SES was associated with lower scores on CMR, $\beta = -.24$, $t(145) = -3.41$, $p = .001$, CMR-R, $\beta = -.18$, $t(145) = -2.35$, $p = .020$, CMV, $\beta = -.18$, $t(145) = -2.57$, $p = .011$, NI, $\beta = -.20$, $t(145) = -2.40$, $p = .018$, RS, $\beta = -.24$, $t(145) = -3.09$, $p = .002$, and Understanding, $\beta = -.24$, $t(145) = -3.29$, $p = .001$. Ethnicity was not a significant predictor.

Combined Model

Which Predictors Emerge as the Strongest?

The variables found to be important predictors of legal abilities in previous analyses were entered simultaneously in regression models to examine the independent influence of each variable once shared variance was accounted for. These variables included age (entered as a continuous variable), GIA, verbal ability, attention, psychomotor excitation, time spent with attorneys, and SES (classes I-III vs. classes IV-V). In this model, age was a significant predictor of CMR, CMV, and RS on Grisso's Miranda Scales, and all legal abilities on the FIT (see Table 7). GIA generally was not a significant predictor,

although it was inversely associated with Understanding. It appeared to act as a suppressor variable in extracting error variance (Conger, 1974). Verbal ability was associated with performance on all legal measures except for NI; attention was associated with performance on CMR, NI, Understanding, Appreciation, and Communication; and psychomotor excitation was inversely associated with Communication. In addition, time spent with attorneys predicted higher scores on CMR, CMV, RC, and all legal abilities on the FIT, and average or above average SES predicted higher scores on CMR, CMV, NI, RS, and Understanding.

Discussion

As the youth justice system has evolved to become more adult-like, courts have increasingly required that adolescents accused of crimes must be able to communicate with attorneys, and comprehend legal rights and processes (Grisso, 1980, 1997; Grisso et al., 1987; Redding & Frost, 2001). Although research has provided convincing evidence that adolescents aged 15 and under are more likely to be impaired in these areas than older adolescents and adults (Grisso, 1980; Grisso et al., 2003), relatively little is known about the predictors of legal abilities in youth. The present study examined the relationship of cognitive development, legal learning opportunities, and psychological symptoms to interrogative and adjudicative abilities.

Cognitive Development

Consistent with a growing body of research (e.g., Grisso, 1980, Grisso et al., 2003), our results indicate that performance on measures of interrogative and adjudicative competency continues to improve during adolescence. Also, we found

evidence of development in cognitive abilities. Specifically, defendants who were 13 and under obtained significantly lower scores than older adolescents on general intellectual ability, verbal ability, attention, and executive functioning. Like other research on youth involved in delinquency proceedings (e.g., Grisso et al., 2003), the intellectual functioning of defendants in our sample was substantially below expected developmental levels. For instance, the reasoning abilities of defendants aged 16 to 17 did not even reach the average performance of 10-year olds in community samples.

As predicted, cognitive development partially mediated or explained age-based difference in performance on competency measures. This indicates that young adolescents may not yet have acquired the cognitive abilities necessary to adequately understand and participate in legal proceedings. Importantly, however, overall cognitive development did not entirely account for age-based differences in legal abilities. As suggested by Scott et al. (1995) and Steinberg and Cauffman (1996) psychosocial factors might also contribute to developmental differences in legal abilities and judgment. Therefore, further research could test a model of competence that incorporated both cognitive development and psychosocial factors.

Overall cognitive ability was an important predictor of legal abilities across age groups. However, it was a particularly strong predictor of understanding of interrogation warnings, appreciation of adjudicative proceedings, and the ability to communicate with counsel among young adolescents, aged 11 to 13. With age, these legal abilities may become more ingrained and consolidated, and therefore less related to cognitive ability.

Intelligence includes not only a global component, but also multiple, specific abilities (Sternberg & Kaufman, 1998). Of the cognitive abilities examined, which included general intellectual ability, verbal ability, reasoning, long-term retrieval,

attention, and executive functioning, verbal ability emerged as a particularly strong predictor of performance on competency measures, even more so than general intellectual abilities, and attention predicted performance on a number of legal measures. Many aspects of competency, such as communication with counsel and understanding of interrogation warnings, intuitively appear to have a substantial verbal component and as such, the relationship between verbal abilities and legal abilities is not surprising. Also, attentional abilities may be necessary to adequately attend to and comprehend interrogation rights and adjudicative proceedings.

However, another potential explanation for these results is that individuals must have high levels of verbal abilities and attention, which may be unrelated to the actual construct of competency, to perform well on measures of competency. We believe this explanation is unlikely to account for our findings. Various competency measures were used in this study, which appeared to place different demands on cognitive abilities (e.g., recall and recognition tests), but we obtained consistent results across these measures. Also, as described in the Method sections, research has supported the validity of the legal measures chosen for this study.

Legal Learning Opportunities

Although it seems plausible that legal experience could be associated with better legal abilities, research has generally found that previous arrests are not a particularly strong predictor of performance on competency measures (Grisso, 1997). In this study, previous arrests were associated with higher scores on two legal measures, appreciation of the right to counsel and understanding of adjudicative proceedings. While young defendants were less likely to have previous arrests, this did not significantly account for

developmental differences on these legal measures at $p < .05$. We hypothesized that intellectual ability might moderate the relationship between legal experience and legal abilities, in that perhaps only defendants with adequate cognitive abilities may be able to benefit from legal experience. However, our results did not support this hypothesis.

An intriguing finding of the present study was that, for all age groups, contact with attorneys was a strong predictor of the legal abilities relevant to police interrogation and adjudication. There are several possible explanations for this finding. First, it may be that contact with attorneys increases clients' legal abilities. This interpretation is consistent with recent cognitive developmental models and legal theory. Cognitive developmental models appear to have increasingly emphasized the importance of others in guiding cognitive growth and learning (Berg, 1992; Flavell, Miller, & Miller, 1993; Vygotsky, 1962, 1978). For instance, Vygotsky (1962, 1978) distinguishes between the level at which the child can function independently, and the level at which a child can function with adult assistance. Also, recent legal models have theorized that lawyers can facilitate clients' legal abilities by providing legal instruction and support (Bonnie, 1992; Buss, 2000).

Second, it could be that attorneys spend less time with low functioning clients. This explanation did not appear to account for our results however. In follow up analyses, general intellectual ability and age were not significantly correlated with time spent with attorneys.¹¹ Also, time spent with attorneys remained an important predictor of legal abilities even after these factors were controlled in regression models. The impact of contact with attorneys on legal abilities will be an important variable for future

¹¹ The Pearson r correlations were .025 ($p = .768$) between GIA and time with attorneys, and .095 ($p = .246$) between age and time with attorneys.

research to examine, perhaps using longitudinal and/or experimental designs, and alternative methods of measuring attorney contact.

Psychological Symptoms

Consistent with Grisso et al. (2003), we failed to find an association between adjudicative competency and depression, anxiety, and behavior problems. Interrogative competency was also not significantly associated with these factors. This finding is perhaps unsurprising given that these types of symptoms have been found to be uncorrelated with interrogative and adjudicative abilities in adults (Hoge et al., 1997; Viljoen, Roesch, & Zapf, 2002; Viljoen, Zapf, & Roesch, 2003). Institutional classification as having a psychological disturbance also was not predictive of legal abilities. This classification is made at the time of admission to the detention facility, and may therefore reflect immediate institutional adjustment rather than true psychological problems.

As predicted, attention deficits and hyperactivity was associated with lower scores on the measure of ability to communicate with counsel, even after other factors such as cognitive abilities and age were controlled. This measure of communication includes items, such as capacity to manage courtroom behavior, testify relevantly, and relate to lawyers, which could very plausibly be affected by ADHD symptoms. Further evidence for the importance of attention is provided by the relationship between attention on the WJ III and legal abilities, described earlier. Given that this study used a brief screening measure of psychopathology, future research is needed using more comprehensive assessment procedures.

Demographic Variables

While past research on the relationship between socioeconomic status and legal abilities have yielded mixed results (see Grisso, 1980; Wall & Furlong, 1985), in this study socioeconomic status was an important predictor of legal abilities even after intellectual deficits, which are more common among individuals from low socioeconomic classes (Bradley & Corwyn, 2002), were controlled. In contrast, we did not find ethnic differences in legal abilities once intellectual abilities and socioeconomic status were controlled. It is possible that the association between socioeconomic status and legal abilities may reflect adolescents' attitudes towards and experience with legal rights. Specifically, Melton (1980) asserted that children from higher socioeconomic backgrounds are more likely to grow up believing they are entitled to rights, and have greater opportunities to try out social roles in which they are able to assert their rights.

Grisso et al. (2003) did not find gender differences in legal abilities relevant to adjudication. In this study, however, females scored significantly lower on understanding of adjudicative proceedings and appreciation of the right to silence. Explanations for these results are unclear. These results could, in part, stem from female defendants' lower reported rates of contact with their attorneys.¹² Also, females' lower scores on appreciation of the right to silence could potentially reflect differences in attitudes about the right to silence, such as a tendency to wish to comply with the police during questioning.

¹² Female defendants reported that they had spent significantly time with their attorneys than male defendants, $t(143) = 2.52, p = .013$.

Limitations and Research Recommendations

While the measures of legal abilities chosen for this study are supported by empirical research and derived from case law, they also have several important limitations. The FIT, like all other existing measures of adjudicative competency, does not actually observe defendants during adjudicative proceedings (Grisso, 2003). Therefore, it measures hypothetical functioning rather than actual functioning. Grisso's Miranda Scales are unlikely to capture the stressful nature of real-life interrogation settings at which time defendants' comprehension of interrogation rights may be more limited (Grisso, 1998, 2003). Also, the wording for interrogation warnings varies across jurisdictions, which could limit our ability to generalize our results to other wordings. Goldstein et al. (2003) recently developed a revised version of Grisso's Miranda Scales, which is aimed to be more consistent with modern wordings for interrogation warnings. We did not use this instrument in the present study, as it was not available at the time of the study. However, this might be an appropriate instrument to use in future research if data supports its psychometric properties.

A second set of study limitations relates to our sample, which comprised defendants aged 11 to 17. Given that our goal was to investigate predictors of legal abilities of youth involved in justice proceedings, we did not include a sample of adult defendants or a community sample of youth. Research has found that adolescents aged 16 and older perform similarly to adults on legal measures, and that developmental patterns are consistent across detained and community samples (Grisso, 1980; Grisso et al., 2003). Nevertheless, predictors of legal abilities in these samples may differ, and therefore, our findings should not be generalized to adult and community samples without further investigation. Future research could use moderator analyses to

investigate whether predictors of legal abilities differ for adolescents versus adults, and for detained versus community samples.

Implications

Courts have increasingly recognized the provision of juvenile competency, and in recent years, there has been an increase in the number of adolescents who are referred for competency evaluations (Redding & Frost, 2001). Our results suggest that lawyers and judges who initiate referrals for competency evaluations, and clinicians who evaluate young defendants' legal abilities should be particularly alert to legal impairments in youth with poor verbal abilities, attention deficits, and limited contact with attorneys, and youth from low socioeconomic classes.

Often legal standards of adjudicative competency explicitly state that legal deficits must be due to a mental disorder (Bonnie & Grisso, 2000). However, with the exception of ADHD symptoms, we did not find a relationship between competency and the psychological symptoms common in young defendants. Psychotic disorders and symptoms, which are associated with legal deficits in adults (Hoge et al., 1997; Viljoen et al., 2002), are less likely to occur in adolescents (American Psychological Association, 2000). This suggests that psychological symptoms are, perhaps, less relevant to competency in adolescents than adults. Therefore, legal standards of competency in adolescents should perhaps consider broader possible explanations of possible legal deficits, such as cognitive development, which, as our results indicated, contributed to legal competence.

Although research has noted that young adolescents are at risk of legal deficits, little research has examined possible approaches to facilitating the legal abilities of

adolescent defendants (but see Cooper, 1997). Our findings suggest that legal abilities may be improved simply through routine consultation with attorneys. Attorney contact may provide defendants with a chance to learn about legal processes, and increase their willingness as well as ability to communicate and collaborate with attorneys. In practice, adolescents may have little opportunity to consult with attorneys, because many waive the right to counsel and because juvenile lawyers typically have large caseloads, which leaves them with little time to spend with individual clients (American Bar Association Juvenile Justice Center, 1995; Feld, 1988, 2000). In light of the possible relationship between attorney contact and legal abilities, this limited opportunity for attorney contact raises concern.

References

- Abramovitch, R., Peterson-Badali, M., & Rohan, M. (1995). Young people's understanding and assertion of their rights to silence and legal counsel. *Canadian Journal of Criminology*, 37, 1-18.
- American Bar Association Juvenile Justice Center (1995). *A call for justice: An assessment of access to counsel and quality of representation in delinquency proceedings*. Washington, DC: Author.
- American Psychological Association (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text revision). Washington, DC: American Psychological Association.
- Appelbaum, P. S., & Grisso, T. (2001). *MacArthur competency assessment tool for clinical research (MacCAT-CR)*. Sarasota, FL: Professional Resource Press.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.
- Berg, C. A. (1992). Perspectives for viewing intellectual development throughout the life course. In R. J. Sternberg & C. A. Berg (Eds.), *Intellectual development* (pp. 1-15). New York: Cambridge University Press.
- Bonnie, R. J. (1992). The competence of criminal defendants: A theoretical reformulation. *Behavioral Sciences and the Law*, 10, 291-316.
- Bonnie, R. J., & Grisso, T. (2000). Adjudicative competence and youthful offenders. In T. Grisso & R. G. Schwartz (Eds.), *Youth on trial: A developmental perspective on juvenile justice* (pp.73-103). Chicago: University of Chicago Press.
- Bradley, R. H., & Corwyn, R. F. (2002). Socioeconomic status and child development. *Annual Review of Psychology*, 53, 371-399.
- Buss, E. (2000). The role of lawyers in promoting juveniles' competence as defendants. In T. Grisso & R. G. Schwartz (Eds.), *Youth on trial: A developmental perspective on juvenile justice* (pp. 73-103). Chicago: University of Chicago Press.
- Carroll, J. B. (1993). *Human cognitive abilities: A survey of factor analytic studies*. New York: Cambridge University.
- Cizek, G. J. (2003). Test review of the Woodcock-Johnson III. From B. S. Plake, J. C. Impara, and R. A. Spies (Eds.), *The fifteenth mental measurements yearbook*. Lincoln, NE: Buros Institute.

- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). New York: Academic Press.
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Mahway, NJ: Lawrence Erlbaum.
- Cooper, D. K. (1997). Juveniles' understanding of trial-related information: Are they competent defendants? *Behavioral Sciences and the Law*, 15, 167-180.
- Conger, A. J. (1974). A revised definition for suppressor variables: A guide to their identification and interpretation. *Educational and Psychological Measurement*, 34, 35-46.
- Cowden, V. L., & McKee, G. R. (1995). Competency to stand trial in juvenile delinquency proceedings—cognitive maturity and the attorney-client relationship. *University of Louisville Journal of Family Law*, 33, 629-660.
- Curry, J. F., Logue, P. E., & Butler, B. (1986). Child and adolescent norms for Russell's revision of the Wechsler Memory Scale. *Journal of Clinical Child Psychology*, 15, 214-220.
- Davies, P. L., & Rose, J. D. (1999). Assessment of cognitive development in adolescents by means of neuropsychological tasks. *Developmental Neuropsychology*, 15, 227-248.
- Dusky v. U.S., 362 U.S. 402 (1960).
- Feld, B. C. (1988). In re Gault revisited: A cross-state comparison of the right to counsel in juvenile court. *Crime and Delinquency*, 34, 393-424.
- Feld, B. C. (2000). Juveniles' waiver of legal rights: Confessions, Miranda, and the right to counsel. In T. Grisso & R. G. Schwartz (Eds.), *Youth on trial: A developmental perspective on juvenile justice* (pp.105-138). Chicago: University of Chicago Press.
- Flavell, J. H., Miller, P. H., & Miller, S. A. (1993). *Cognitive development* (3rd ed.). Upper Saddle River, NJ: Prentice-Hall.
- Frazier, P. A., Tix, A. P., & Barron, K. E. (2004). Testing moderator and mediator effects in counseling psychology research. *Journal of Counseling Psychology*, 51, 115-134.
- Fulero, S. M., & Everington, C. (1995). Assessing competency to waive Miranda rights in defendants with mental retardation. *Law and Human Behavior*, 19, 533-543.
- Giedd, J. N., Blumenthal, J., Jeffries, N. O., Castellanos, F. X., Liu, H., Zijdenbos, A., Paus, T., Evans, A. C., & Rapoport, J. L. (1999). Brain development during childhood and adolescence: a longitudinal MRI study. *Nature Neuroscience*, 2, 861-863.

- Goldstein, N. E. S., Condie, L. O., Kalbeitzner, R., Osman, D., & Geier, J. L. (2003). Juvenile offender's Miranda rights comprehension and self-reported likelihood of offering false confessions. *Assessment, 10*, 359-369.
- Grisso, T. (1980). Juveniles' capacities to waive Miranda rights: An empirical analysis. *California Law Review, 68*, 1134-1166.
- Grisso, T. (1997). The competence of adolescents as trial defendants. *Psychology, Public Policy, and Law, 3*, 3-32.
- Grisso, T. (1998). *Instruments for assessing understanding and appreciation of Miranda rights*. Sarasota, FL: Professional Resource Press/Professional Resource Exchange.
- Grisso, T. (2003). *Evaluating competencies: Forensic assessments and instruments* (2nd ed.). New York: Kluwer Academic/Plenum Press.
- Grisso, T., Barnum, R., Fletcher, K. E., Cauffman, E., Peuschold, D. (2001). Massachusetts Youth Screening Instrument for mental health needs of juvenile justice youths. *Journal of the American Academy of Child and Adolescent Psychiatry, 40*, 541-548.
- Grisso, T., Miller, M. O., & Sales, B. (1987). Competency to stand trial in juvenile court. *International Journal of Law and Psychiatry, 10*, 1-20.
- Grisso, T., Steinberg, L., Woolard, J., Cauffman, E., Scott, E., Graham, S., Lexcen, F., Reppucci, N. D., & Schwartz, R. (2003). Juveniles' competence to stand trial: A comparison of adolescents' and adults' capacities as trial defendants. *Law and Human Behavior, 27*, 333-363.
- Hoge, S. K., Poythress, N., Bonnie, R. J., Monahan, J., Eisenberg, M., & Feucht-Haviar, T. (1997). The MacArthur adjudicative competence study: Diagnosis, psychopathology, and competence-related abilities. *Behavioral Sciences and the Law, 15*, 329-345.
- Hollingshead, A. (1975). *Four factor index of social status*. New Haven, CT: Department of Sociology, Yale University.
- Holmbeck, G. N. (1997). Toward terminological, conceptual, and statistical clarity in the study of mediators and moderators: Examples from the child-clinical and pediatric psychology literatures. *Journal of Consulting and Clinical Psychology, 65*, 599-610.
- Hughes, C. W., Rintelmann, J., Emslie, G. J., Lopez, M., & MacCabe, N. (2001). A revised anchored version of the BPRS-C for childhood psychiatric disorders. *Journal of Child and Adolescent Psychopharmacology, 11*, 77-93.
- In re Gault, 387 U. S. 1 (1967).

- Judd, C. M., & Kenny, D. A. (1981). Process analysis: Estimating mediation in treatment evaluations. *Evaluation Review, 5*, 602-619.
- Judd, C. M., McClelland, G. H., & Culhane, S. E. (1995). Data analysis: Continuing issues in the everyday analysis of psychological data. *Annual Review of Psychology, 46*, 433-465.
- Kenny, D. A., Kashy, D. A., & Bolger, N. (1998). Data analysis in social psychology. In D. T. Gilbert, S. T. Fiske, & G. Lindsey (Eds.), *The handbook of social psychology* (4th ed., pp. 233-265). New York: Oxford University Press.
- Kirkish, P., & Sreenivasan, S. (1999). Neuropsychological assessment of competency to stand trial evaluations: A practical conceptual model. *Journal of the American Academy of Psychiatry and Law, 27*, 101-113.
- Klaczynski, P. A. (2001). Analytic and heuristic processing influences on adolescent reasoning and decision-making. *Child Development, 72*, 844-861.
- Kramer, J. H., Delis, D. C., Kaplan, E., O'Donnell, L., & Prifitera, A. (1998). Developmental sex differences in verbal learning. *Neuropsychology, 11*, 577-584.
- Lachar, D., Randle, S. L., Harper, R. A., Scott-Gurnell, K. C., Lewis, K. R., Santos, C. W. et al. (2001). The brief psychiatric rating scale for children (BPRS-C): Validity and reliability of an anchored version. *Journal of the American Academy of Child and Adolescent Psychiatry, 40*, 333-340.
- Levin, H. S., Culhane, K. A., Hartmann, J., Evankovich, K., Mattson, A. J., Harward, H., Ringholz, G., Ewing-Cobbs, L., & Fletcher, J. M. (1991). Developmental changes in performance on tests of purported frontal lobe functioning. *Developmental Neuropsychology, 7*, 377-395.
- Martell, D. A. (1992). Forensic neuropsychology and the criminal law. *Law and Human Behavior, 16*, 313-336.
- McGraw, K. O., & Wong, S. P. (1996). Forming inferences about some intraclass correlation coefficients. *Psychological Methods, 1*, 30-46.
- McGrew, K. S., & Woodcock, R. W. (2001). Technical manual. *Woodcock-Johnson III*. Itasca, IL: Riverside Publishing.
- McKay, K. E., Halperin, J. M., Schwartz, S. T., & Sharma, V. (1994). Developmental analysis of three aspects of information processing: sustained attention, selective attention, and response organization. *Developmental Neuropsychology, 10*, 121-132.
- Melton, G. B. (1980). Children's concepts of their rights. *Journal of Clinical Child Psychology, 9*, 186-190.

- Nestor, P. G., Daggett, D., Haycock, J., & Price, M. (1999). Competence to stand trial: A neuropsychological inquiry. *Law and Human Behavior, 23*, 397-412.
- Paniak, C., Murphy, D., Miller, H., & Lee, M. (1998). Wechsler Memory Scale--Revised Logical Memory and Visual Reproduction norms for 9- to 15-year-olds. *Developmental Neuropsychology, 14*, 555-562.
- Peterson-Badali, M., & Abramovitch, R. (1992). Children's knowledge of the legal system: Are they competent to instruct legal counsel? *Canadian Journal of Criminology, 34*, 139-160.
- Peterson-Badali, M., & Abramovitch, R. (1993). Grade related changes in young people's reasoning about plea decisions. *Law and Human Behavior, 17*, 537-552.
- Peterson-Badali, M., Abramovitch, R., & Duda, J. (1997). Young children's legal knowledge and reasoning ability. *Canadian Journal of Criminology, 39*, 145-170.
- Pierce, C. S., & Brodsky, S. L. (2002). Trust and understanding in the attorney-juvenile relationship. *Behavioral Sciences and the Law, 20*, 89-107.
- Redlich, A. D., Silverman, M., & Steiner, H. (2003). Pre-adjudicative and adjudicative competence in juveniles and young adults. *Behavioral Sciences and the Law, 21*, 393-410.
- Redding, R., & Frost, L. (2001). Adjudicative competence in the modern juvenile court. *Virginia Journal of Social Policy and the Law, 9*, 353-410.
- Roesch, R., Zapf, P. A., Eaves, D., & Webster, C. D. (1998). *Fitness Interview Test* (rev. ed.). Burnaby, BC: Mental Health, Law and Policy Institute, Simon Fraser University.
- Ryan, C. M. (1990). Age-related improvement in short-term memory efficiency during adolescence. *Developmental Neuropsychology, 6*, 193-205.
- Sandoval, J. (2003). The Woodcock Johnson III. In B. S. Plake, J. C. Impara, & R. A. Spies (Eds.) *The fifteenth mental measurements yearbook*. Lincoln, NB: Buros Institute of Mental Measurements, University of Lincoln Press.
- Savitsky, J. C., & Karras, D. (1984). Competency to stand trial among adolescents. *Adolescence, 19*, 349-358.
- Scott, E. S., & Grisso, T. (1997). The evolution of adolescence: A developmental perspective on juvenile justice reform. *Journal of Criminal Law and Criminology, 88*, 137-189.
- Scott, E. W., Reppucci, N. D., & Woolard, J. L. (1995). Evaluating adolescent decision making in legal contexts. *Law and Human Behavior, 19*, 221-244.

- Sowell, E.R., Thompson, P. M., Holmes, C. J., Jernigan, T. L., & Toga, A. W. (1999). In vivo evidence for post-adolescent brain maturation in frontal and striatal regions. *Nature Neuroscience*, 2, 859-861.
- Spreen, O., & Strauss, E. (1998). *A compendium of neuropsychological tests: Administration, norms, and commentary* (2nd ed.). New York: Oxford University Press.
- Stavrakaki, C., Williams, E. C., Walker, S., Roberts, N., & Kotsopoulos, S. (1991). Pilot study of anxiety and depression in prepubertal children. *Canadian Journal of Psychiatry*, 36, 332-338.
- Steinberg, L., & Cauffman, E. (1996). Maturity of judgment in adolescence: Psychosocial factors in adolescent decision making. *Law and Human Behavior*, 20, 249-272.
- Sternberg, R. J., & Kaufman, J. C. (1998). Human abilities. *Annual Review of Psychology*, 49, 479-502.
- Teplin, L. A., Abram, K. M., McClelland, G. M., Dulcan, M. K., & Mericle, A. A. (2002). Psychiatric disorders in youth in juvenile detention. *Archives of General Psychiatry*, 59, 1133-1143.
- Viljoen, J. L., Roesch, R., & Zapf, P. A. (2002). An examination of the relationship between competency to stand trial, competency to waive interrogation rights, and psychopathology. *Law and Human Behavior*, 26, 481-506.
- Viljoen, J. L., & Zapf, P. A. (2002). Fitness to stand trial evaluations: A comparison of referred and non-referred defendants. *International Journal of Forensic Mental Health*, 1, 127-138.
- Viljoen, J. L., Zapf, P. A., & Roesch, R. (2003). Diagnosis, current psychiatric symptoms, and legal abilities. *Journal of Forensic Psychology Practice*, 3, 23-37.
- Vygotsky, L. S. (1962). *Thought and language*. Cambridge, MA: MIT Press.
- Vygotsky, L. S. (1978). *Mind in society. The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Wall, S. M., & Furlong, M. (1985). Comprehension of Miranda rights by urban adolescents with law-related education. *Psychological Reports*, 56, 359-372.
- Wasserman, G. A., McReynolds, L. S., Lucas, C. P., Fisher, P., & Santos, L. (2002). The voice DISC-IV with incarcerated male youths: Prevalence of disorder. *Journal of the American Academy of Child and Adolescent Psychiatry*, 41, 314-321.
- Welsh, M. C., Pennington, B. F., & Groisser, D. B. (1991). A normative-developmental study of executive function: A window on prefrontal function in children. *Developmental Neuropsychology*, 7, 131-149.

Woodcock, R., McGrew, K. & Mather, N. (2001). *The Woodcock-Johnson III Cognitive Assessment Battery*. Itasca, IL: Riverside.

Zapf, P. A., & Roesch, R. (2001). A comparison of the MacCAT-CA and the FIT for making determinations of competency to stand trial. *International Journal of Law and Psychiatry*, 24, 81-92.

Zapf, P. A., Roesch, R., & Viljoen, J. L. (2001). The utility of the Fitness Interview Test for assessing fitness to stand trial. *Canadian Journal of Psychiatry*, 46, 426-432.

Table 1: Sample Characteristics

	Age Groups		
	11-13 (<i>n</i> = 50)	14-15 (<i>n</i> = 51)	16-17 (<i>n</i> = 51)
Mean Age	12.56 (<i>SD</i> = 0.58)	14.49 (<i>SD</i> = 0.50)	16.47 (<i>SD</i> = 0.50)
Male	60.0%	52.9%	43.1%
<i>Ethnicity</i>			
Non-Hispanic White	60.0%	62.7%	58.8%
African-American	26.0%	25.5%	27.5%
Hispanic	10.0%	5.9%	7.8%
Indian	2.0%	5.9%	2.0%
Asian	2.0%	-	3.9%
<i>Socioeconomic Class</i>			
Classes I-II	2.2%	4.0%	16.7%
Class III	23.9%	24.0%	29.2%
Class IV-V	73.9%	72.0%	54.2%
IQ Score	82.69 (<i>SD</i> =13.88)	81.19 (<i>SD</i> = 13.36)	83.84 (<i>SD</i> = 14.61)

Table 2: Mean (SD) Age Differences in Cognitive Abilities

	Age Groups			<i>F</i> (2, 150)
	11-13 (<i>n</i> = 50)	14-15 (<i>n</i> = 51)	16-17 (<i>n</i> = 51)	
GIA	498.93 (10.23) ^a	501.65 (9.94) ^a	507.10 (11.71) ^b	7.39**
<i>Cognitive Clusters</i>				
Verbal	500.42 (11.33) ^a	504.22 (10.86) ^{a,b}	509.25 (12.13) ^b	7.21**
Retrieval	496.89 (5.20)	497.61 (5.89)	498.90 (5.05)	1.73
Fluid Reasoning	494.62 (14.20)	497.10 (14.77)	499.14 (14.92)	1.14
Attention	503.00 (10.30) ^a	507.73 (9.02) ^a	513.31 (11.74) ^b	11.81***
Executive Ability	500.82 (8.82) ^a	504.08 (9.16) ^{a,b}	508.06 (9.16) ^b	7.70**

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. Mean *W* scores are listed, followed by standard deviation is listed in parentheses. Superscripts refer to age groups comparisons using Games-Howell post hoc comparisons. Age groups with different superscripts differed significantly from each at $p < .05$. *W* scores are centered at a value of 500, which is the average performance of a 10 year-old (McGrew & Woodcock, 2001).

Table 3: Mean (SD) Age Differences in Legal Abilities

	Adolescent Age Groups			Adult Norms
	11-13 (n = 50)	14- 15 (n = 51)	16-17 (n = 51)	
<i>Grisso's Miranda Scales</i>				
CMR	3.94 (2.13)	5.00 (2.25)	6.24 (1.53)	6.78 (1.44)
CMR-R	8.10 (2.06)	8.77 (1.81)	9.54 (1.86)	10.39 (2.05)
CMV	5.94 (2.49)	6.78 (2.94)	9.04 (1.92)	9.35 (2.38)
NI	9.24 (1.12)	8.83 (1.51)	9.35 (1.28)	9.60 (1.04)
RC	6.76 (2.18)	7.20 (2.38)	8.18 (1.76)	9.25 (1.31)
RS	3.67 (2.88)	4.84 (2.61)	6.22 (2.51)	7.48 (2.07)
<i>FIT</i>				
Understanding	5.30 (3.14)	7.16 (2.74)	8.53 (2.58)	11.03 (1.44)
Appreciation	2.92 (1.87)	4.16 (1.80)	4.67 (1.26)	5.16 (1.37)
Communication	7.62 (3.18)	9.94 (2.72)	11.02 (2.96)	12.88 (1.59)

Note: The total possible score on CMR is 8, CMR-R and CMV is 12, and NI, RC, and RS is 10. The total possible score on Understanding is 12, Appreciation is 6, and Communication is 14. Adult norms on Grisso's Miranda Scales are taken from Grisso (1998), and adult norms for the FIT are taken from Viljoen and Zapf (2002).

Table 4: Effect Sizes (Cohen's *d*) for Age Differences in Legal Abilities

	Age Groups		
	11-13 vs.14-15	11-13 vs. 16-17	14-15 vs. 16-17
<i>Grisso's Miranda Scales</i>			
CMR	0.47	1.06	0.61
CMR-R	0.34	0.69	0.41
CMV	0.31	1.15	0.83
NI	-0.31	0.09	0.37
RC	0.19	0.68	0.46
RS	0.43	0.86	0.52
<i>FIT</i>			
Understanding	0.60	0.98	0.50
Appreciation	0.64	0.96	0.32
Communication	0.73	0.97	0.37

Note: Effect sizes considered to be large by Cohen's (1988) standards (i.e., above .80) are marked in bold font. Cohen (1988) considers effects sizes that range from .50 to .80 to be medium.

Table 5: Regression Equations for Cognitive Clusters

	Adjusted R^2	Standardized Coefficients for Predictors (β)				
		Verbal	Retrieval	Fluid	Attention	Executive
<i>Grisso's Miranda Scales</i>						
CMR	.33***	.39***	.12	-.10	.24*	.02
CMR-R	.24***	.39***	-.09	.12	.09	.04
CMV	.43***	.51**	.05	.00	.20	-.02
NI	.08**	-.19	.11	.20	.30*	-.11
RC	.13***	.27*	.01	.10	.13	-.05
RS	.14***	.38**	-.07	-.03	.12	.02
<i>FIT</i>						
Understanding	.32***	.50***	-.07	.05	.15	-.03
Appreciation	.24***	.21*	.10	-.02	.38**	-.12
Communication	.32***	.32**	-.01	-.11	.37**	.05

Note: * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 6: Regression Equations for Psychopathology Variables

	Adjusted R^2	Standardized Coefficients for Predictors (β)			
		Depression/ Anxiety	Excitation	Behavior Problems	Institution Classific.
<i>Grisso's</i>					
<i>Miranda Scales</i>					
CMR	.03	.00	-.24*	.02	-.04
CMR-R	.02	.11	-.17*	.11	-.05
CMV	.01	.00	-.16	.11	-.02
NI	.02	-.16	-.04	.14	-.07
RC	.01	-.09	-.10	.07	-.09
RS	.01	-.04	-.07	.07	-.05
<i>FIT</i>					
Understanding	.00	-.02	-.15	.10	-.01
Appreciation	.04*	.05	-.25**	.01	-.03
Communication	.17***	-.08	-.40***	-.11	.01

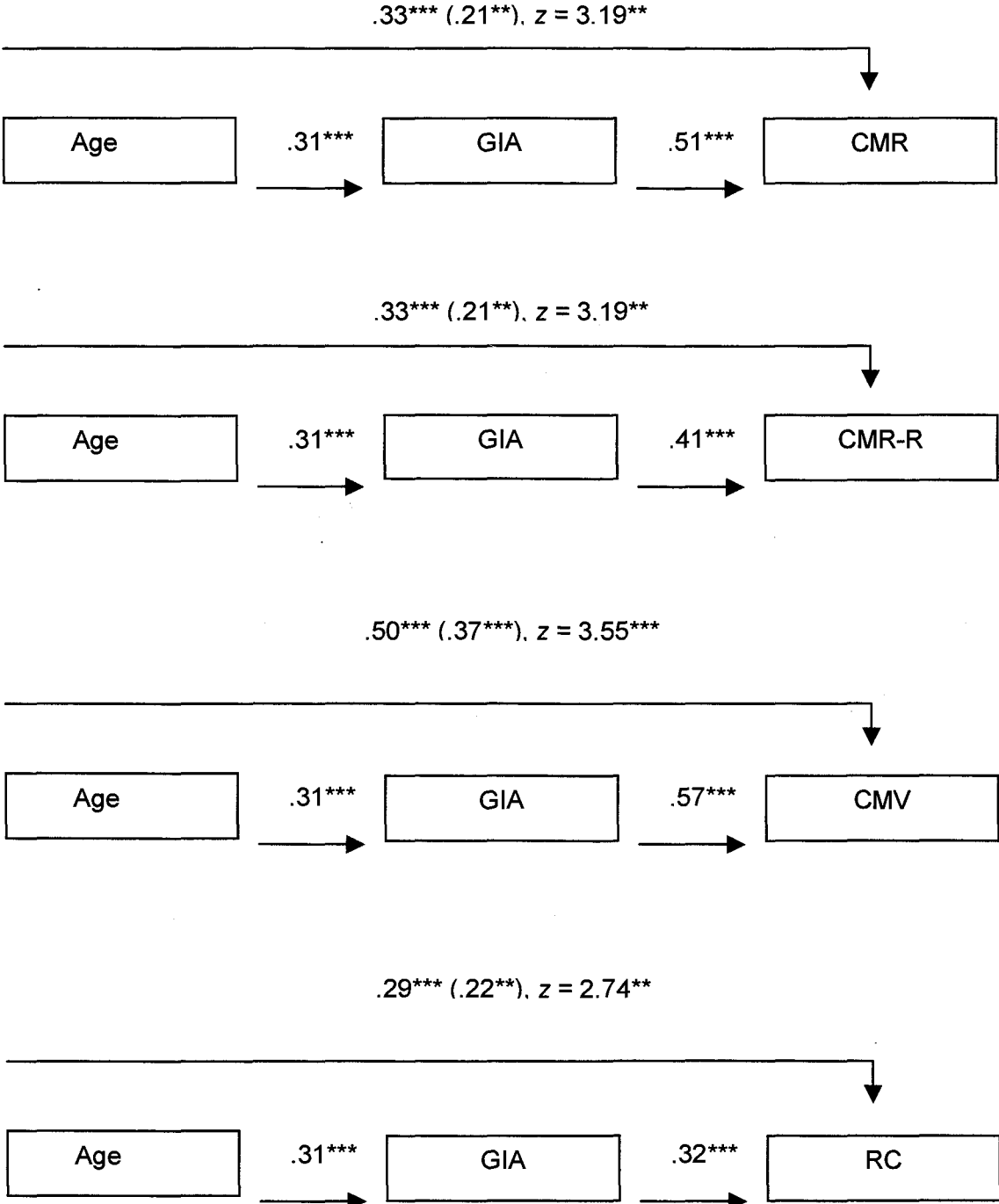
Note: * $p < .05$, ** $p < .01$, *** $p < .001$.

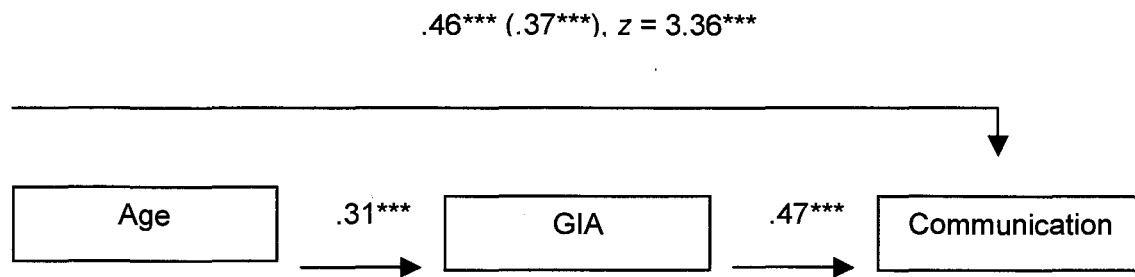
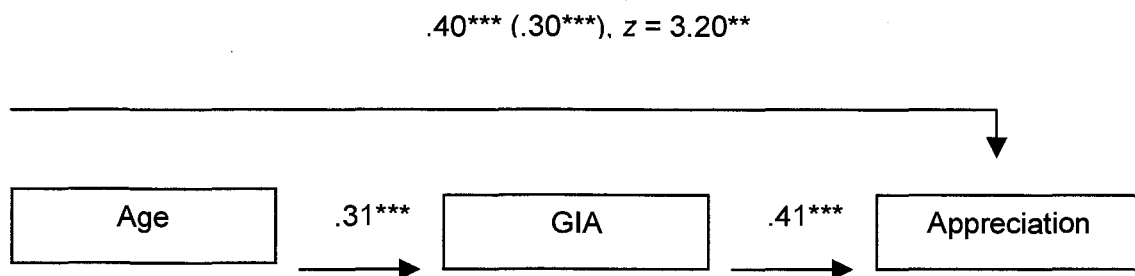
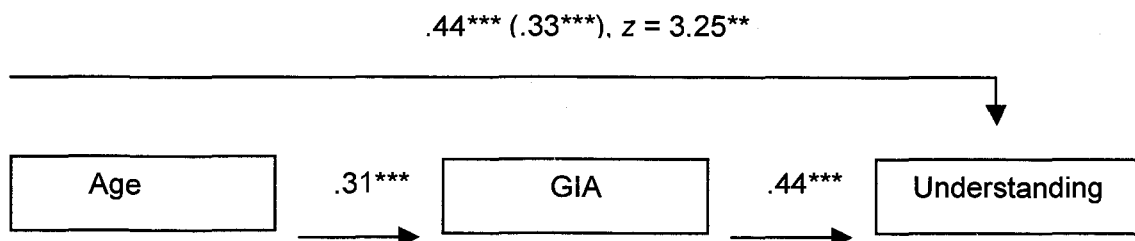
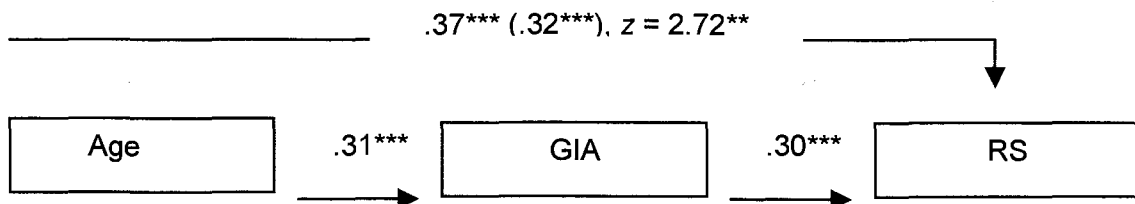
Table 7: Combined Regression Models

	Adj. R^2	Standardized Coefficients for Predictors (β)						
		Age	GIA	Verbal	Attn	Excit.	Time	SES
<i>Grisso's Miranda Scales</i>								
CMR	.48***	.21**	-.14	.39***	.28*	-.07	.23***	-.20**
CMR-R	.27***	.13	-.20	.47***	.21	.02	.10	-.12
CMV	.55***	.30***	-.11	.52***	.19	.05	.14*	-.12*
NI	.11**	-.08	.11	-.19	.34*	.02	.05	-.24**
RC	.20***	.14	-.25	.37**	.26	.03	.16*	-.15
RS	.27***	.25**	-.33	.44***	.24	.08	.13	-.17*
<i>FIT</i>								
Understanding	.50***	.21**	-.38*	.61***	.29*	.03	.27***	-.17**
Appreciation	.33***	.19*	-.26	.31*	.40**	-.08	.21**	-.02
Communication	.49***	.22**	-.27	.37***	.37**	-.25***	.19**	-.05

Note: * $p < .05$, ** $p < .01$, *** $p < .001$.

Figure 1: Mediation Influence of GIA (W scores) on the Association Between Age and Legal Abilities





Note: Path coefficients outside parentheses are the standardized regression coefficients for the direct relationship between the two variables. Path coefficients in parentheses are the partial regression coefficients for age once GIA is included in the equation. * $p < .05$, ** $p < .01$, *** $p < .001$.

CHAPTER 4: LEGAL STANDARDS ¹³

Abstract

Currently, there appears to be considerable variability and ambiguity in legal standards for juvenile competency. This study investigated rates of impairments under various criteria, and patterns of agreement in the legal abilities relevant to police interrogation and adjudication. One hundred and fifty-two young defendants aged 11 to 17 were assessed with Grisso's Miranda Scales and the Fitness Interview Test. When only understanding of interrogation rights was required, substantially fewer young defendants were classified as impaired in interrogative abilities than when both understanding and appreciation was required. Over half of young defendants showed impairment on one or more adjudicative abilities when adult norms were applied, whereas the use of adolescent norms resulted in very low requirements for adjudicative abilities. Given that configural frequency analysis indicated that defendants did not consistently show patterns of agreement across abilities, the legal standards that are chosen could have a substantial impact on how many adolescents could be considered impaired.

Introduction

For a century, legal standards for competency within criminal proceedings have appeared stable and unwavering, particularly in comparison to other legal concepts such

¹³ Dr. Patricia Zapf and Dr. Thomas Grisso provided feedback on this chapter, which was used in making revisions. They were aware that the chapter would be included in this dissertation, and provided written consent for this.

as criminal responsibility (Grisso, 1996). Recently, however, these legal standards have encountered debate and change. One major debate that currently pervades the legal arena regards what legal abilities or competencies should be required of adolescent defendants during interrogation and adjudication (Grisso, 1997; Grisso, Miller, & Sales, 1987; Redding & Frost, 2001; Szymanski, 1998a, 1998b).

At the core of this debate is the issue of whether adult standards for competency to waive interrogation rights (referred to here as interrogative competency) and adjudicative competency should be applied to adolescents, or if instead separate standards should be developed for adolescents. This study investigated rates of adolescents' legal impairments under various legal standards that have been proposed, and patterns of agreement across the particular legal abilities that comprise these standards.

Interrogative Competence

In the 1960s, courts began to require that adult suspects must be informed of their interrogation rights, namely the right to silence and counsel, upon arrest (*Miranda v. Arizona*, 1966), and in 1967, *In re Gault* extended these rights to juvenile suspects. In order to validly waive interrogation rights, suspects' waiver decisions must be made competently as well as voluntarily (Grisso, 2003). This requirement holds for both adult and juvenile suspects, and if these criteria are not met, then confessions can be held inadmissible.

To judge the validity of waiver decision, courts must consider the "totality of circumstances" (*Dickerson v. U.S.*, 2000; *Fare v. Michael C.*, 1979). Under the "totality of circumstances" test, young age of suspects is one of a number of factors that is routinely

considered as a potential risk factor for invalid waivers. Within certain jurisdictions, however, young age is presumed to heighten the risk of impairments enough to warrant special protections for adolescents during police questioning, such as the option or the requirement to consult with an “interested adult,” such as a parent (Feld, 2000).

Szymanski (1998a), in her review of tests for the admissibility of juveniles’ confessions, found that 35 states use this “interested adult” rule or a variation of this rule. Canada also uses a variation of the “interested adult” rule (*Youth Criminal Justice Act*, 2002).

The specific legal abilities required for a suspect to be considered competent to waive interrogation rights have varied across courts and over time (Feld, 2000; Grisso, 2003; Ogloff, Wallace, & Otto, 1991; Whittemore & Ogloff, 1994). Previously, a number of court rulings required that suspects not only understand the meaning of interrogation rights, but also appreciate the significance of these rights (e.g., *In re Patrick W.*, 1978; *People v. Lara*, 1967). In more recent American and Canadian cases, courts have often required only basic understanding of interrogation rights (e.g., *Michigan v. Daoud*, 2000; *R. v. Whittle*, 1994).

It is unclear how these variations in legal standards could affect the rate of young defendants who could be judged incompetent. While research has found that adolescents 14 and under score lower on legal measures relevant to interrogation (Abramovitch, Peterson-Badali, & Rohan, 1995; Goldstein, Condie, Kalbeitzler, Osman, & Geier, 2003; Grisso, 1980; Redlich, Silverman, & Steiner, 2003), research has not examined how many young defendants might be considered impaired under a standard that requires only understanding of interrogation warnings versus a standard that also requires appreciation of the significance of warnings. Also, while research has found correlations between *measures* of understanding and appreciation among young

defendants (Grisso, 1998; Redlich et al., 2003), studies have not yet examined if, for *individuals*, there are particular patterns of agreement across these legal abilities.

Adjudicative Competence

In addition to requirements for interrogative competence, in recent decades courts have also increasingly held that adolescent defendants must also be competent for adjudication (or competent to stand trial), particularly when they are transferred to adult court (Grisso, 1997; Grisso et al., 1987; Redding & Frost, 2001). Courts have been less clear as to whether competency applies to adolescents tried within the juvenile justice system. Specifically, Syzmanski (1998b), in her 1998 review of states' tests for juveniles' adjudicative competency, found that 29 states had acknowledged the provision of competency in juvenile court proceedings, 3 states had ruled that competency provisions do not apply to juvenile court, and 19 states had not yet addressed this issue.

Most courts that have addressed the issue of adolescents' adjudicative competency have required that adolescents must possess the same types of legal abilities as adults, namely understanding and appreciation of legal proceedings, and the ability to communicate with counsel (Redding & Frost, 2001). However, court findings differ on the issue of whether adolescents should have the same *degree* or level of these legal abilities as adults, or if lower levels of these abilities are sufficient.

The Minnesota Court of Appeals, in *In the Matter of the Welfare of D.D.N.* (1998), held that "the *level* of competence require to permit a child's participation in juvenile court proceedings can be no less than the competence demanded for trial or sentencing of an adult" (*italics added*). In contrast, in *Ohio v. Settles* (1998) the Ohio Court of Appeals established lower requirements for adolescents in that it held that "juveniles are

assessed by juvenile rather than adult norms.” As yet another possibility, Bonnie and Grisso (2000, p. 98) suggested that it may be appropriate to require that adolescents tried in the juvenile justice system only have “basic understanding of the purpose of the proceedings” and an ability to “communicate rationally with counsel,” and not necessarily an ability to reason or a comprehensive appreciation of legal proceedings.

Lower standards of competency for adolescents tried within the juvenile justice system may be appropriate because penalties are less severe within the juvenile justice system (Bonnie & Grisso, 2000). Also, proposals for lower standards may stem from concerns that a very large number of young defendants could be considered impaired if adult standards were applied. Grisso and colleagues (2003), for instance, reported that as many as one-third of defendants aged 11 to 13 might be considered impaired by adult standards of competency. However, research has yet to consider the possible rates of impairments under the alternative standards, such a standard that compares juveniles to other juveniles rather than adults.

Purpose

This study investigated what proportion of defendants appeared impaired under various legal standards.¹⁴ Specifically, we compared the rates of impairments in the legal abilities relevant to police interrogation when a higher standard was applied, which required both understanding and appreciation, versus a lower standard, which required only understanding. In addition, we compared the rates of impairments in the legal abilities relevant to adjudication when impairment was judged according to adult norms,

¹⁴ While this study was part of a larger study in which we examined developmental differences in the legal abilities, this was not the focus of the present article.

adolescent norms, and the requirement of only basic understanding of the purpose of proceedings” and an ability to “communicate rationally with counsel” (Bonnie & Grisso, 2000, p. 98). This study also investigated patterns of agreement across the legal abilities that comprise standards for interrogative and adjudicative competency through configural frequency analyses. If there are patterns of agreement across legal abilities, it may suggest that variations in legal standards may not make a sizable impact.

Method

Participants

Participants included 152 pretrial defendants (73 females and 79 males), aged 11 to 17 years ($M = 14.52$, $SD = 1.68$), held in a detention facility in the state of Washington. The majority of defendants remanded to this facility were 15 and older. To ensure that younger defendants were adequately represented, we stratified our sample by age (11 to 13, 14 to 15, and 16 to 17) by extending an equal number of invitations to participate to adolescents who were randomly selected from each of these age groups. The rate of agreement for participation was 94.4%. Defendants who did not participate ($n = 9$) appeared representative of the larger sample in terms of age, gender, race, and current charge. All participants indicated that English was their first language, or the language they spoke at home or at school.

The average IQ of participants was 82.57 ($SD = 13.91$). While low, this is comparable to other samples of delinquent youth. For instance, Grisso et al. (2003) reported that the average IQ of detained youths in their multi-site study was 86. Sixty percent of participants ($n = 92$) in the overall sample were non-Hispanic Caucasian,

26.3% ($n = 40$) were African-American, 7.9% ($n = 12$) were Hispanic, 3.9% ($n = 6$) were Native-American, and 1.3% ($n = 2$) were Asian. The majority of participants (66.7%, $n = 96$) were classified as being at the two lowest socioeconomic levels (levels IV and V) according to Hollingshead's classification system (1975). For 37.5% ($n = 57$) of participants the most serious charge was a violent offense against persons, for 36.8% ($n = 56$) it was a property offense, and for 25.7% ($n = 39$) it was another offense, such as a drug offense, obstruction, or failure to appear at court.

Procedure

All study procedures were approved by the appropriate review boards of Simon Fraser University and the study facility, and were consistent with current ethical procedures. Potential participants were contacted and asked if they were interested in participating in a study on legal abilities. Information about the study was presented orally to individuals who expressed interest in participating and a form was also provided so that potential participants could read the information presented. The Flesch-Kincaid reading level of this form was grade 3.6.

Participants were tested to assess if they understood and appreciated study procedures, and were able to make a stable choice about participation. To do this, an adapted version of the MacArthur Competence Assessment Tool for Clinical Research (MacCAT-CR; Appelbaum & Grisso, 2001)¹⁵ was administered. If a participant showed inadequate comprehension of a concept, this concept was re-explained to improve the

¹⁵ The version of the MacCAT-CR used in this study included 4 items on understanding (nature of study, benefits of participation, risks of participation, confidentiality), 2 items on appreciation (no impact on court case or care, decisions to decline/withdraw will be respected), and 1 item on choice (ability to make a stable choice about decision to participate).

participant's understanding of study procedures and facilitate his or her ability to provide informed consent. In addition, the institutional administrator, acting as the defendants' legal guardian, provided consent for all participating defendants.

In order to maximize the legal relevance of this study, we chose competency assessment instruments that are closely derived from legal criteria and case law (see Grisso, 1980, 1998, 2003; Roesch, Zapf, Eaves, & Webster, 1998). Participants completed Grisso's Instruments for Assessing Understanding and Appreciation of Miranda Rights (hereinafter, "Grisso's Miranda Scales"; Grisso, 1998) and the Fitness Interview Test, Revised Edition (FIT; Roesch et al., 1998). The order in which these instruments were presented was counterbalanced. This study was part of a larger research project that investigated psychopathology and cognitive abilities. Confidentiality was assured, except in cases of risk of harm to self or others. Identifying information was not recorded, and participants were instructed not to provide details on the current charge for which they were undergoing adjudication.

The test battery was administered by a doctoral student in clinical psychology trained in the use of study instruments. Participants' performance on the dependent variables (Grisso's Miranda Scales and the FIT) was scored independent of and blind to all other participant information, such as age. To assess the reliability of Grisso's Miranda Scales and the FIT, 26 randomly selected protocols were re-coded by a second doctoral student in clinical psychology, with similar training as the original rater. Training on these instruments included familiarization with the test manual, viewing a training videotape (for the FIT), and completion of several practice protocols.

Upon completion of the study, participants were given 10 points as compensation for their time. These points could be used to pay for food and toiletry items at the facility,

and was enough to buy approximately two chocolate bars or a small bottle of shampoo. This amount was thought to be sufficient to compensate participants for their time but not enough to coerce participation.

Measures

Instruments for Assessing Understanding and Appreciation of Miranda Rights

Legal abilities relevant to police interrogation, namely understanding and appreciation of interrogation rights, were examined with Grisso's Miranda Scales (Grisso, 1998). The elements of the warnings examined by this instrument include the right to remain silent, that statements made can be used as evidence, the right to counsel prior to and during interrogation, and the right to free counsel if one cannot afford to pay. These elements are consistent with the content of interrogation warnings used in the United States and Canada (*Canadian Charter of Human Rights and Freedoms*, 1982; *Miranda v. Arizona*, 1966). However, it is important to note that the exact wording used in interrogation warnings varies somewhat across jurisdictions (Grisso, 1998, 2003).

The first three measures on Grisso's Miranda Scales assess understanding of interrogation warnings. Comprehension of Miranda Rights (CMR) measures examinees' ability to paraphrase the elements of the interrogation warnings, Comprehension of Miranda Rights—Recognition (CMR-R) requires examinees to recognize sentences that have the same meaning as statements from the interrogation warnings, and Comprehension of Miranda Vocabulary (CMV) requires examinees to define words contained in the interrogation warnings. The final measure on this instrument, Function

of Rights in Interrogation (FRI), assesses the appreciation of interrogation rights. It consists of three separate subscales, including Nature of Interrogation (NI), Right to Counsel (RC), and Right to Silence (RS). On this measure, examinees are shown drawings of youth involved in various legal scenarios, and are read short vignettes about each scenario. They are then asked a series of questions about the vignette.

To check interrater reliability, 26 randomly selected protocols were re-coded by a second rater. Intraclass correlation coefficients were calculated for single raters with a two-way random effects model (Model 2, McGraw & Wong, 1996), and were as follows: .91 for CMR, .94 for CMV, .88 for NI, .93 for RC, and .92 for RS. As evidence of validity, subtests on Grisso's Miranda Scale have been found to correlate with other subtests on this measure and with IQ estimates (Fulero & Everington, 1995; Grisso, 1998).

Fitness Interview Test, Revised Edition

Legal abilities relevant to adjudication and standing trial, namely understanding of legal proceedings, appreciation of legal proceedings, and ability to communicate with counsel, were examined with the FIT (Roesch, Zapf, Eaves, & Webster, 1998). The legal abilities measured by the FIT are consistent with American and Canadian legal standards as set out in *Dusky v. the United States* (1960) and the *Criminal Code of Canada* (1985) (Grisso, 2003; Roesch et al., 1998).

The FIT is a semi structured clinical interview, which comprises 16 items and takes approximately 30 to 45 minutes to administer. The first section, Understanding (Factual Knowledge), examines a defendant's understanding of the arrest process, current charges, role of key participants, legal process, pleas, and court procedures. The second section, Appreciation (Rational Understanding or Understanding of the Possible

Consequences of Proceedings), examines a defendant's appreciation of the possible penalties, available legal defenses, and likely outcome. The third section, Communication with Counsel (Participation), examines a defendant's ability to communicate facts, relate to lawyers, plan legal strategy, engage in the defense, challenge witnesses, testify relevantly, and manage courtroom behaviour.

For this study, 26 randomly selected protocols were re-coded by second rater. Intraclass correlation coefficients were .91 for Understanding, .82, for Appreciation, and .83 for Communication (Model 2, McGraw & Wong, 1996). In terms of its validity, the FIT shows high agreement with clinician judgments of competency to stand trial (Zapf, Roesch, & Viljoen, 2001), is able to distinguish between defendants who are and are not referred for competency evaluations (Viljoen & Zapf, 2002), and is correlated with a second measure of legal abilities relevant to adjudication, the MacArthur Competency Assessment Tool-Adjudication (Zapf & Roesch, 2001).

Data Analysis

Overview of Analyses

To examine how many young defendants could be considered impaired under various legal standards, the rates of impairment on various combinations of measures was calculated. Given that studies have found that adolescents aged 14 or 15 and under are more likely than older individuals to evidence legal impairments (e.g., Grisso, 1980; Grisso et al., 2003), rates of impairments were presented separately for defendants aged 11 to 14 and those aged 15 to 17. Although not a major focus of this study, chi-square tests were conducted to examine whether rates of impairments differed

significantly by age group. To investigate patterns of agreement among legal abilities for *individuals*, configural frequency analysis was used. Since these patterns could conceivably vary by age, these analyses were conducted separately for defendants aged 11 to 14 and those aged 15 to 17.

Cut-Off Scores

In this study, continuous scores on competency measures were not used but instead defendants were classified as impaired or unimpaired. This was done because the court is primarily interested in dichotomous classifications of whether an individual is impaired or unimpaired (competent or incompetent), and beyond this dichotomous distinction, varying degrees of competence are irrelevant. We classified an adolescent as impaired (by adult norms) on a legal measure if his or her score fell two or more standard deviations below the mean for adults presumed to be competent according to reported norms (Grisso, 1998; Viljoen & Zapf, 2002).¹⁶ This cut-off was chosen because it was consistent with cut-offs used by similar studies (e.g., Grisso & Appelbaum, 1995), and because it was thought to be a conservative value.

Configural Frequency Analysis

Configural frequency analysis (profile analysis) is a multivariate statistical method, which compares observed and expected frequencies for possible patterns of performance with chi-square statistics after rates of impairments are controlled (von Eye,

¹⁶ The following scores were classified as impaired on the FIT: ≤ 8 on Understanding, ≤ 2 on Appreciation, and ≤ 8 on Communication with Counsel. The following scores were classified as impaired on Grisso's Miranda Scales: ≤ 3 on CMR, ≤ 6 on CMR-R, ≤ 4 on CMV, ≤ 7 on NI, ≤ 6 on RC, and ≤ 3 on RS.

Spiel, & Wood, 1996).¹⁷ This statistical method is similar to cluster analysis, which also examines intraindividual patterns, but is appropriate for dichotomous variables (Davison & Kuang, 2000). Also, unlike cluster analysis, configural frequency analysis focuses on patterns of performance versus both patterns and levels and, therefore, controls for levels (or rates) of impairments. This feature was useful for the present study, given that we were interested in examining patterns of performance for two age groups (11 to 14, and 15 to 17), which research has found have different levels of impairment (e.g., Grisso, 1980; Grisso et al., 2003).

With configural frequency analysis, when a particular pattern of performance (e.g., impairment on one measure and non-impairment on a second measure) is observed in more individuals than expected after rates of impairments are controlled, this pattern is referred to as a *type*. When a particular pattern of performance is observed in fewer individuals than expected after rates of impairments are controlled, this pattern is referred to as an *antitype*. For this study, we were specifically interested in determining whether adolescents demonstrated patterns of *agreement* in legal abilities, specifically, whether there were patterns of *types* for impairment across measures and unimpairment across measures and/or patterns of *antitipes* for various combinations of impairment and unimpairment across measures.

¹⁷ The expected frequency for each pattern is calculated by multiplying the proportion with impaired or unimpaired performance on each of the abilities by the sample size. The chi-square test is calculated as the square of the observed minus expected frequency divided by the expected frequency.

Results

Interrogative Competence

Rates of Impairment Under Various Standards

Understanding of Interrogation Warnings

Recent court cases on interrogative competence have often required only that defendants have basic understanding of their interrogation rights (Grisso, 2003). Table 1 displays the rates of impairment on the scales from Grisso's Miranda Scales.

Defendants aged 11 to 14 had significantly higher rates of impairment than defendants aged 15 to 17 (see Table 1). In total, 52.6% ($n = 40$) of defendants aged 11 to 14 and 13.2% ($n = 10$) of defendants aged 15 to 17 were classified as impaired (i.e., scored two or more standard deviations below adult means) on one or more of the understanding scales.

Understanding and Appreciation

While many courts have required that defendants must only understand their interrogation rights, other courts have required that defendants appreciate the significance of these rights as well (Grisso, 2003). Substantially more defendants were classified as impaired on a measure of understanding and/or appreciation, than on only a measure of understanding. Specifically, while 52.6% ($n = 40$) of defendants aged 11 to 14 were impaired on a measure of understanding, 78.4% ($n = 58$) were impaired a measure understanding and/or appreciation. Similarly, while 13.2% ($n = 10$) of

defendants aged 15 to 17 were impaired a measure of understanding, 41.8% ($n = 31$) were impaired on a measure of understanding and/or appreciation.

Patterns of Agreement Across Abilities

Understanding

Approximately one-quarter of defendants (28.3%, $n = 43$) did not show consistent agreement across the measures of understanding (see Table 2). When the base rates of impairment on each of the measures were taken into consideration using configural frequency analysis, more individuals than expected in both the 11 to 14 and 15 to 17 age groups showed a pattern of being impaired across all three measures (as denoted by the uppercase "T" in Table 2). In addition, for the 11 to 14 age group, trends were noted wherein fewer individuals than expected showed a pattern of being unimpaired on CMR and CMR-R but impaired on CMV (as denoted by the lowercase "a" in Table 2). For the 15 to 17 year olds, more individuals than expected showed a pattern of being impaired on CMR and CMV but unimpaired on CMR-R (as denoted by the lowercase "t" in Table 2).

Appreciation

Approximately half of defendants (50.7%, $n = 77$) did not show consistent agreement across the measures of appreciation (see Table 3). For the 15 to 17 year olds, but not 11 to 14 year olds, significantly more individuals than expected showed a pattern of being impaired across all three measures after base rates were controlled.

Understanding and Appreciation

Over half of defendants (58.6%, $n = 89$) did not show consistent agreement across the measures of understanding and appreciation (see Table 4). Overall, it was much more common for defendants to be impaired on one or more of the appreciation subscales but not on any of the understanding subscales (25.9%, $n = 39$), than on one or more of the understanding subscales but not on any of the appreciation subscales (4.6%, $n = 7$). For the 11 to 14 year olds, trends were noted wherein more individuals than expected demonstrated a pattern of being unimpaired on understanding and appreciation, and fewer individuals than expected demonstrated a pattern of being impaired on understanding but unimpaired on appreciation. For the 15 to 17 year olds, a trend was noted wherein more individuals than expected demonstrated a pattern of being impaired on both abilities.

Adjudicative Competence

Rates of Impairment Under Various Standards

Adult Norms

Courts have often applied adult standards of adjudicative competence to adolescents (Redding & Frost, 2001). Table 1 displays the rates of impairment on the legal abilities relevant to adjudication when adult norms were applied. Defendants aged 11 to 14 had significantly higher rates of impairment than defendants aged 15 to 17 (see Table 1). Overall, 85.5% ($n = 65$) of defendants aged 11 to 14 and 53.9% ($n = 41$) of defendants aged 15 to 17 were classified as impaired (i.e., scored 2 or more standard deviations below adult means) on one or more scales on the FIT.

Adolescent Norms

Because some courts have compared juveniles to their peers to judge legal impairments (*Ohio v. Settles*, 1998), rates of impairment based on adolescent norms were examined. The cut-off score for impairment was set as two standard deviations below the mean of our overall sample of young defendants.¹⁸ As a result of defendants' low mean scores, however, this resulted in extremely low cut-off scores. Specifically, defendants were classified as impaired on Understanding if they scored 0, impaired on Appreciation if they scored 0, and impaired on Communication if they score 3 or lower. Table 1 displays rates of impairment on the FIT scales when adolescent norms were applied. Based on these cut-offs, 16.2% ($n = 12$) of defendants aged 11 to 14 and 2.8% ($n = 2$) of defendants aged 15 to 17 were classified as impaired on one or more scales on the FIT.

Basic Understanding and Communication

Bonnie and Grisso (2000, p. 98) noted that courts could require that adolescents tried within the juvenile justice system have only "basic understanding of the purpose of proceedings" and an ability to "communicate rationally with counsel." To operationalize this proposed standard, we examined how many defendants in our sample fell three or more standard deviations below adult means on Understanding and Communication.¹⁹ Using this cut-off, 68.4% of defendants aged 11 to 14 ($n = 54$) demonstrated significant impairment on Understanding and 50.0% ($n = 38$) on Communication. Among defendants aged 15 to 17, 35.5% ($n = 27$) demonstrated significant impairment in

¹⁸ The mean score for adolescents in this sample was 7.01 ($SD = 3.10$) on Understanding, 3.92 ($SD = 1.81$) on Appreciation, and 9.54 ($SD = 3.26$) on Communication.

Understanding and 21.1% ($n = 16$) on Communication. Overall, 73.7% ($n = 56$) of defendants aged 11 to 14, and 40.8% ($n = 31$) of defendants aged 15 to 17 scored three or more standard deviations below adult norms on Understanding and/or Communication.

Patterns of Agreement Across Abilities

Over half of defendants (53.9%, $n = 82$) did not show consistent agreement across the abilities required for adjudication (see Table 5). When the base rates of impairment on each of the measures were taken into consideration, more individuals than expected in both the 11 to 14 and 15 to 17 age groups showed a pattern of being impaired across all three measures. In addition, for the 11 to 14 year olds, significantly more individuals than expected demonstrated a pattern of being unimpaired on all three abilities. For the 11 to 14 years olds, a trend was noted wherein fewer individuals than expected showed a pattern of being impaired on Understanding and Appreciation but unimpaired on Communication, whereas for the 15 to 17 year olds fewer individuals than expected demonstrated a pattern of being impaired on Communication but unimpaired on Understanding and Appreciation.

Interrogative and Adjudicative Competence

Patterns of Agreement Across Abilities

Individuals were classified as impaired on the abilities relevant to adjudication if they fell 2 or more standard deviations below the mean for adult norms on one or more

¹⁹ Defendants were classified as impaired in Understanding if they scored 7 or lower, and as impaired on Communication if they fell 8 or lower.

scales on the FIT, and as impaired on the abilities relevant to waiving interrogation rights if they fell 2 or more standard deviations below the adult mean on one or more scales on Grisso's Miranda Scales. This approach was used because, while standards for competency typically comprise several legal abilities, individuals can be found incompetent on the basis of severe impairment in a single ability (Roesch et al., 1998). Approximately one-quarter of defendants (23.9%, $n = 35$) did not show consistent agreement across abilities relevant to interrogation and adjudication (see Table 6). For defendants aged 11 to 14, significantly more individuals than expected showed a pattern of being unimpaired on abilities related to police interrogation and those related to adjudication, once base rates of impairment were controlled. For the 15 to 17 year olds, trends were noted wherein fewer individuals than expected demonstrated a pattern of being impaired across the two types of abilities, and more individuals than expected demonstrated a pattern of being impaired on the abilities relevant to police interrogation but not on the abilities related to adjudication.

Discussion

There is debate about the appropriate legal standards that should be applied to adolescents when judging their competence to waive interrogation rights and undergo adjudication (Grisso, 1997; Redding & Frost, 2001). The standards adopted could have substantial implications in terms of who and how many defendants the courts can consider impaired or incompetent. This study investigated what proportion of defendants appear impaired under various legal standards, as well as whether and to what extent adolescents' legal abilities are characterized by patterns of agreement across abilities.

Interrogative Competence

Rates of impairment on the legal measures relevant to interrogation were high, particularly for defendants aged 11 to 14. In our sample, 76% of defendants aged 11 to 14 fell two or more standard deviations below adult means on one or more of the measures of understanding or appreciation of interrogation rights. This figure, though very high, could possibly even underestimate levels of deficits on these measures, as it has been suggested that defendants' actual understanding and appreciation of interrogation warnings may be lower during police interrogation due to stress (Grisso, 1998, 2003). While it has been suggested that adolescents' legal abilities may have improved since the 1980 norming study for Grisso's Miranda Scales and that adolescents today could be more legally sophisticated (Grisso, 2003), we did not find evidence of this. Instead, although our sample was fairly comparable to Grisso's sample in IQ, ethnicity, and gender composition, our sample appeared to have comparable, and even slightly poorer, understanding and appreciation of interrogation rights than did the youth in Grisso's original study.²⁰

The high rate of impairment in understanding and appreciation of interrogation rights suggests that special protections for adolescents may be appropriate during police questioning, particularly for adolescents aged 14 and under. Courts that have attempted to provide extra protection have generally done so by giving adolescents the option or requirement to consult with an "interested adult," typically a parent (Feld, 2000). Parents, however, may not be a suitable protection, as they may have limited legal understanding

themselves and they may coerce their child to confess (Grisso & Ring, 1979). Instead, scholars have suggested that attorney presence should be required during the interrogation of adolescents (American Bar Association, 1995; Grisso, 1980; Grisso & Ring, 1979). However, this requirement has only been implemented by several states (Feld, 2000).

In recent decades, courts have often required only understanding of interrogation warnings and not appreciation of their significance (e.g., *Michigan v. Daoud*, 2000; *R. v. Whittle*, 1994). In this study, substantially fewer defendants were classified as impaired when only understanding was required than when both understanding and appreciation was required. Also, while there were patterns of agreement between the measures of understanding and appreciation, many defendants evidenced discrepancies between these abilities. Therefore, the adoption of a legal standard that requires only understanding might appreciably reduce the number of young defendants who could be considered incompetent to waive interrogation rights, as well as the number of juvenile confessions that could be excluded from proceedings due to concerns that these confessions were made incompetently.

Grisso's Miranda Scales measures understanding of interrogation warnings using a variety of approaches, namely recall, recognition, and vocabulary tests. While there was some evidence of agreement across these measures for defendants aged 11 to 14 and those aged 15 to 17, approximately one-quarter of defendants did not show agreement across these measures. This suggests that multiple approaches to assessing

²⁰ For instance, Grisso (1998) reported that the mean score for 13 year olds was 5.64 for CMR, 7.00 on CMV, and 22.13 on the total score for FRI, whereas we found it was 3.97 ($SD = 2.01$) on CMR, 6.56 ($SD = 2.46$) on CMV, and 20.07 ($SD = 3.72$) on FRI. Also, Grisso reported the mean score for 15 year

understanding of interrogation warnings in adolescents may be valuable. In addition to these understanding measures, Grisso's Miranda Scales has three scales that measure various aspects of appreciation, including appreciation of the nature of interrogation, the right to silence, and the right to counsel. While defendants aged 15 to 17 had a pattern of impairment on the three measures of appreciation, this was not the case for younger adolescents, who appeared more likely to show discrepancies across various aspects of appreciation after rates of impairment were controlled.

Adjudicative Competence

In addition to high rates of impairments in interrogative abilities, results indicated that there were high rates of impairment in adjudicative abilities, as measured by the FIT, particularly for defendants aged 11 to 14. Over half of defendants aged 11 to 14 fell two or more standard deviations below adult means on understanding of legal proceedings, appreciation of legal proceedings, and/or the ability to communicate with counsel. Grisso et al. (2003) also found high rates of impairment in juvenile defendants' adjudicative competencies, when measured by the MacArthur Competency Assessment Tool for Criminal Adjudication (MacCAT-CA; Poythress, Bonnie, Monahan, Otto, & Hoge, 2002), although their rates were lower than ours. Specifically, they reported that one-third of youth aged 11 to 13 and one-fifth of youth aged 14 and 15 fell at least 1.5 standard deviations below adult means on the relevant legal abilities.

The higher rates of impairment in our sample as compared to the Grisso et al. (2003) study may stem from differences in instruments. While Grisso et al. classified

olds was 6.04 for CMR, 8.55 on CMV, and 23.72 on FRI, whereas we found it was 5.52 ($SD = 2.04$) on CMR, 7.48 ($SD = 2.42$) on CMV, and 21.68 ($SD = 4.45$) on FRI.

rates of impairment based on scores on understanding and/or reasoning, this study classified it based on scores on understanding, *appreciation*, and/or *communication*. Also, whereas the understanding scale used in the Grisso et al. (2003) study includes a teaching component, which may lead to higher scores, the understanding scale used in the present study does not incorporate teaching.

Despite variations in specific rates of impairments, the results of this study, the Grisso et al. (2003) study, and other studies (Peterson-Badali & Abramovitch, 1992; Peterson-Badali & Abramovitch, 1993; Peterson-Badali, Abramovitch, & Duda, 1997; Redlich et al., 2003; Savitsky & Karras, 1984) have consistently indicated that adolescent defendants, particularly those aged 14 and under, are at high risk for impairments in adjudicative abilities. Given the high rates of impairments, it is clear that adoption of adult standards for adjudicative competency could place an enormous and perhaps infeasible burden on the legal system. Also, while findings of incompetence protect young defendants' rights to understand and participate in their adjudicative proceedings, such findings have possible negative consequences as well, such as potential delays in adjudication (Barnum & Grisso, 1994).

Recognizing these issues, Bonnie and Grisso (2000) suggested a two-tiered system. For youth transferred to adult court, they proposed that adult standards of adjudicative competency should be applied, especially given that adult-level consequences are applied to those found guilty. For adolescents tried in juvenile court, Bonnie and Grisso (2000) proposed that lower, more relaxed standards of competency may be appropriate because the consequences of convictions are not as severe and the juvenile justice system was developed, in part, to address adolescents' lower levels of maturity.

One alternative may be to require that defendants tried within the youth justice system have only basic understanding of legal proceedings and an ability to communicate with counsel (Bonnie & Grisso, 2000). By this standard, a high proportion of adolescent defendants in our sample might still be considered impaired; 73.7% of defendants aged 11 to 14 fell three or more standard deviations below adult norms on the understanding or communication scales of the FIT.

A second option for juvenile courts could be to compare adolescents to their peers (Redding & Frost, 2001). One difficulty with using adolescent norms, however, is that research has indicated there are developmental differences in legal abilities (Grisso et al., 2003). Therefore, it is unclear whether such a standard would mean that adolescents should be compared to same-age peers or adolescents in general. Because adolescents in who are tried in the juvenile justice system are presumably treated similarly regardless of age, this might suggest that adolescents should be compared to adolescents in general rather than same-age peers. However, it is unclear what age composition should comprise a general adolescent sample.

When adolescent norms were developed based on our overall sample, which had an even distribution of ages, we found that 15.8% of defendants aged 11 to 14 fell two or more standard deviations below adolescent norms (using the overall sample). Notably, using a cut-off of two standard deviations below adolescent norms resulted in extremely low cut-offs scores for impairment because of the low mean scores of defendants. For instance, a defendant was only classified as impaired on understanding of legal proceedings if she or he received a score of zero on this scale out of a total possible score of 12. Therefore, judging adolescents through comparison to their peers could lead to very low expectations and requirements for youths' legal abilities.

Similar to research by Zapf and Roesch (2001) with adult defendants, configural frequency analysis indicated that for both defendants aged 11 to 14 and those aged 15 to 17, there was some evidence of agreement across adjudicative abilities measured by the FIT. Specifically, in this study, defendants were more likely than expected to be impaired on all three FIT scales, including understanding of legal proceedings, appreciation of legal proceedings, and the ability to communicate with counsel. At the same time, there were notable discrepancies within legal abilities required for adjudication. Over half of defendants did not show consistent agreement across the abilities required for adjudication. Also, we did not find patterns of a *type* for unimpairment across sections or *antitypes* for various combinations of impairment and unimpairment, which would have provided further evidence of agreement across abilities.

This evidence of discrepancies may provide support for the conclusion of Grisso and Appelbaum (1995), who note that the use of multiple abilities in competency standards is useful because it is more comprehensive and stable. They state, “a compound standard is useful in preventing many decision makers with substantial cognitive deficiencies from ‘slipping through the net’” (p. 1036). Mullen (2002), on the other hand, notes that consideration of multiple abilities can become unwieldy and suggests that North American courts might consider narrower standards of competency, such as applied in United Kingdom and Australia.

Although, theoretically, appreciation of adjudicative proceedings would seem to be a more difficult task than understanding of adjudicative proceedings, this study suggests that these adjudicative abilities are not hierarchical in adolescents. Results indicated that rates of impairment on appreciation were lower than rates of impairment

on understanding. In an adult sample, Bonnie et al. (1997) also found that these adjudicative abilities were not hierarchical (see also Berg, Appelbaum, & Grisso, 1996; Grisso & Appelbaum, 1995 regarding competence to consent to treatment). For interrogative competence in contrast, our results suggested that understanding and appreciation might be hierarchical, in that more young defendants demonstrated impairments in appreciation of the right to silence and counsel, than in understanding of these rights.

Interrogative and Adjudicative Competence

The legal system delineates various types of competency depending on the stage in legal proceedings at which the issue of competency is raised. Courts have generally differentiated between types of competencies, such as interrogative and adjudicative competency, and applied separate standards for each (Felthous, 1994; Ogloff et al., 1991; Whittemore & Ogloff, 1994). However, there is some evidence that American and Canadian courts appear to view these types of competency as being very similar and assume that they do not require appreciably different levels, or possibly even types, of abilities (see *R. v. Whittle*, 1994; *Godinez v. Moran*, 1993). Notably, however, the interpretation of case law on this issue is very contentious (see Appelbaum, 1993; Felthous, 1994; Perlin, 1996).

This study found that interrogative and adjudicative abilities did appear similar, in that there were patterns of agreement in these abilities. Specifically, once rates of impairment were controlled, defendants aged 11 to 14 were more likely than expected to be unimpaired, and defendants aged 15 to 17 were more likely than expected to be impaired across interrogative and adjudicative abilities. However, on the other hand,

23% of defendants who showed impairment in interrogative abilities, when adult norms were applied, did not show impairment in adjudicative abilities or vice versa. Whittemore, Ogloff, and Roesch (1997), in a study on adult defendants remanded for competency evaluations, similarly noted some discrepancies in defendants' interrogative and adjudicative abilities.

Therefore, given the discrepancies in interrogative and adjudicative abilities, it is critical that clinicians and courts do not automatically equate these types of competencies but rather focus on the abilities relevant to each legal domain (see Grisso, 2003). At the same time, when questions of competency arise with respect to a defendant's adjudicative abilities, it may also be appropriate to consider possible impairments in their interrogative abilities, and vice versa.

Limitations and Caveats

It is important to note that the specific estimated rates and patterns of legal impairments found in this study might differ when other instruments and cut-off scores are used. Therefore, our conclusions may be strengthened by future research with alternative methodologies. Also, it is important to emphasize that this study provides evidence regarding how many young defendants *could* be considered impaired under various legal standards, not on who *is*, in practice, considered impaired or incompetent under various legal standards. It is likely that the rates of incompetency are substantially lower than the rates of impairment found here, because legal tests of competency may be more stringent than our cut-offs for impairment, and/or because defendants with significant legal impairments may, at times, be overlooked.

Conclusions

Currently, there appears to be considerable variability and ambiguity in legal standards and professional opinions regarding which and what level of legal abilities should be required of young defendants. As demonstrated in this study, the legal standards that are chosen will have a substantial impact on how many adolescents could be considered impaired. This is especially true given that defendants do not consistently show patterns of agreement across specific abilities. To gain further understanding of differences in professional opinions regarding which and what level of legal abilities should be expected of adolescents, and to help attain consistency and consensus in standards, future research could survey judges, attorneys, and mental health professionals to examine which views are most common or prototypical. A useful model for this research may be provided by Salekin et al.'s studies on juvenile transfers to adult court (see Salekin, Rogers, & Ustad, 2001; Salekin, Yff, Neumann, Leistico, & Zalot, 2002).

References

- Abramovitch, R., Peterson-Badali, M., & Rohan, M. (1995). Young people's understanding and assertion of their rights to silence and legal counsel. *Canadian Journal of Criminology*, 37, 1-18.
- American Bar Association Juvenile Justice Center (1995). *A call for justice: An assessment of access to counsel and quality of representation in delinquency proceedings*. Washington, DC: Author.
- Appelbaum, P. S. (1993). Godinez v. Moran: The U.S. Supreme court considers competence to stand trial. *Hospital and Community Psychiatry*, 44, 929-930.
- Appelbaum, P. S., & Grisso, T. (2001). *MacArthur competency assessment tool for clinical research (MacCAT-CR)*. Sarasota, FL: Professional Resource Press.
- Barnum, R., & Grisso, T. (1994). Competence to stand trial in juvenile court in Massachusetts: Issues of therapeutic jurisprudence. *New England Journal on Criminal and Civil Confinement*, 20, 321-344.
- Berg, J., Appelbaum, P., & Grisso, T. (1996). Constructing competence: Formulating standards of legal competence to make medical decisions. *Rutgers Law Review*, 48, 345-396.
- Bonnie, R. J., Hoge, S. K., Monahan, J., Poythress, N., Eisenberg, M., & Feucht-Haviar, T. (1997). The MacArthur Adjudicative Competence Study: A comparison of criteria for assessing the competence of criminal defendants. *Journal of the American Academy of Psychiatry and the Law*, 25, 249-259.
- Bonnie, R. J., & Grisso, T. (2000). Adjudicative competence and youthful offenders. In T. Grisso and R. G. Schwartz (Eds.), *Youth on trial: A developmental perspective on juvenile justice* (pp. 73-103). Chicago, IL: University of Chicago Press.
- Canadian Charter of Rights and Freedoms*, being Part I of the *Constitution Act 1982* being Schedule B to the *Canadian Act 1982*, U.K., 1982, c. 11, as amended.
- Criminal Code*, R.S.C. 1985, c. C-46, as amended.
- Davison, M. L., & Kuang, H. (2000). Profile patterns: Research and professional interpretation. *School Psychology Quarterly*, 15, 457-464.
- Dickerson v. U.S., 166 F.3d 667 (2000).
- Dusky v. U.S., 362 U.S. 402 (1960).
- Fare v. Michael C., 442 U.S. 707 (1979).

- Feld, B. C. (2000). Juveniles' waiver of legal rights: Confessions, Miranda, and the right to counsel. In T. Grisso & R. G. Schwartz (Eds.), *Youth on trial: A developmental perspective on juvenile justice* (pp.105-138). Chicago: University of Chicago Press.
- Felthous, A. R. (1994). The right to represent oneself incompetently: Competency to waive counsel and conduct one's own defense before and after Godinez. *Mental and Physical Disability Law Reporter*, 18, 105-112.
- Fulero, S. M., & Everington, C. (1995). Assessing competency to waive Miranda rights in defendants with mental retardation. *Law and Human Behavior*, 19, 533-543.
- Godinez v. Moran, 113 S.Ct. 2680 (1993).
- Goldstein, N. E. S., Condie, L. O., Kalbeitzer, R., Osman, D., & Geier, J. L. (2003). Juvenile offender's Miranda rights comprehension and self-reported likelihood of offering false confessions. *Assessment*, 10, 359-369.
- Grisso, T. (1980). Juveniles' capacities to waive Miranda rights: An empirical analysis. *California Law Review*, 68, 1134-1166.
- Grisso, T. (1996). Pretrial clinical evaluations in criminal cases: Past trends and future directions. *Criminal Justice and Behavior*, 23, 90-106.
- Grisso, T. (1997). The competence of adolescents as trial defendants. *Psychology, Public Policy, and Law*, 3, 3-32.
- Grisso, T. (1998). Instruments for assessing understanding and appreciation of Miranda rights. Sarasota, FL: Professional Resource Press/Professional Resource Exchange.
- Grisso, T. (2003). *Evaluating competencies: Forensic assessments and instruments* (2nd ed.). New York: Kluwer Academic/Plenum Press.
- Grisso, T., & Appelbaum, P. S. (1995). Comparison of standards for assessing patients' capacities to make treatment decisions. *American Journal of Psychiatry*, 152, 1033-1037.
- Grisso, T., Miller, M. O., & Sales, B. (1987). Competency to stand trial in juvenile court. *International Journal of Law and Psychiatry*, 10, 1-20.
- Grisso, T., & Ring, M. (1979). Parents' attitudes toward juveniles' rights in interrogation. *Criminal Justice and Behavior*, 6, 211-226.
- Grisso, T., Steinberg, L., Woolard, J., Cauffman, E., Scott, E., Graham, S., Lexcen, F., Reppucci, N. D., & Schwartz, R. (2003). Juveniles' competence to stand trial: A comparison of adolescents' and adults' capacities as trial defendants. *Law and Human Behavior*, 27, 333-363.

Hollingshead, A. (1975). *Four factor index of social status*. New Haven, CT: Department of Sociology, Yale University.

In re Gault, 387 U. S. 1 (1967).

In the Matter of the Welfare of D.D.N., 582 N.W.2d 278 (Minn. Ct. App. 1998).

In re Patrick W., 148 Cal. Rptr. 735 (1978).

McGraw, K. O., & Wong, S. P. (1996). Forming inferences about some intraclass correlation coefficients. *Psychological Methods*, 1, 30-46.

Michigan v. Daoud, 614 N.W.2d 152 (2000).

Miranda v. Arizona, 384 U.S. 436 (1966).

Mullen, P. E. (2002). Commentary: Competence assessment practices in England and Australia versus the United States. *Journal of the American Academy of Psychiatry and Law*, 30, 486-487.

Ohio v. Settles, No. 13-97-50, 1998 Ohio App. LEXIS 4973 (Ohio App. 3d. 1998).

Ogloff, J. R. P., Wallace, D. H., & Otto, R. K. (1991). Competencies in the criminal process. In D. K. Kagehiro & W. S. Laufer (Eds.), *Handbook of psychology and law* (pp. 343-360). New York: Springer-Verlag.

People v. Lara, 432 P.2d 202 (1967).

Perlin, M. L. (1996). "Dignity was the first to leave": *Godinez v. Moran*, Colin Ferguson, and the trial of mentally disabled criminal defendants. *Behavioral Sciences and the Law*, 14, 61-81.

Peterson-Badali, M., & Abramovitch, R. (1992). Children's knowledge of the legal system: Are they competent to instruct legal counsel? *Canadian Journal of Criminology*, 34, 139-160.

Peterson-Badali, M., & Abramovitch, R. (1993). Grade related changes in young people's reasoning about plea decisions. *Law and Human Behavior*, 17, 537-552.

Peterson-Badali, M., Abramovitch, R., & Duda, J. (1997). Young children's legal knowledge and reasoning ability. *Canadian Journal of Criminology*, 39, 145-170.

Poythress, N. G., Bonnie, R. J., Monahan, J., Otto, R., & Hoge, S. K. (2002). *Adjudicative competence: The MacArthur studies*. New York: Kluwer/Plenum.

R. v. Whittle, 2 S.C.R. 914 (1994).

- Redding, R., & Frost, L. (2001). Adjudicative competence in the modern juvenile court. *Virginia Journal of Social Policy and the Law*, 9, 353-410.
- Redlich, A. D., Silverman, M., & Steiner, H. (2003). Pre-adjudicative and adjudicative competence in juveniles and young adults. *Behavioral Sciences and the Law*, 21, 393-410.
- Roesch, R., Zapf, P. A., Eaves, D., & Webster, C. D. (1998). *Fitness Interview Test* (rev. ed.). Burnaby, BC: Mental Health, Law and Policy Institute, Simon Fraser University.
- Salekin, R. T., Rogers, R., & Ustad, K. L. (2001). Juvenile waiver to adult criminal courts: Prototypes for dangerousness, sophistication-maturity, and amenability to treatment. *Psychology, Public Policy, and Law*, 7, 381-408.
- Salekin, R. T., Yff, R. M. A., Neumann, C. S., Leistico, A. R., & Zalot, A. A. (2002). Juvenile transfer to adult courts: A look at the prototypes for dangerousness, sophistication-maturity, and amenability to treatment through a legal lens. *Psychology, Public Policy, and Law*, 8, 373-410.
- Savitsky, J. C., & Karras, D. (1984). Competency to stand trial among adolescents. *Adolescence*, 19, 349-358.
- Szymanski, L. (1998a). *Test of the validity of a juvenile's waiver of his or her Miranda rights*. NCJJ Snapshot, 3. Pittsburgh, PA: National Center for Juvenile Justice.
- Szymanski, L. (1998b). *Juvenile competency to stand trial in juvenile court*. NCJJ Snapshot 3. Pittsburgh, PA: National Center for Juvenile Justice, 1998b.
- Viljoen, J. L., & Zapf, P. A. (2002). Fitness to stand trial evaluations: A comparison of referred and non-referred defendants. *International Journal of Forensic Mental Health*, 1, 127-138.
- von Eye, A., Spiel, C., & Wood, P. K. (1996). Configural frequency analysis in applied psychological research. *Applied Psychology: An International Review*, 45, 301-327.
- Whittemore, K. E., & Ogloff, J. R. P. (1994). Fitness and competency issues in Canadian criminal courts: Elucidating the standards for mental health professionals. *Canadian Journal of Psychiatry*, 39, 198-210.
- Whittemore, K. E., Ogloff, J. R. P., & Roesch, R. (1997). An investigation of competency to participate in legal proceedings in Canada. *Canadian Journal of Psychiatry*, 42, 869-875.
- Youth Criminal Justice Act*, S.C. 2002, c. 1.
- Zapf, P. A., & Roesch, R. (2001). A comparison of the MacCAT-CA and the FIT for making determinations of competency to stand trial. *International Journal of Law and Psychiatry*, 24, 81-92.

Zapf, P. A., Roesch, R., & Viljoen, J. L. (2001). The utility of the Fitness Interview Test for assessing fitness to stand trial. *Canadian Journal of Psychiatry, 46*, 426-432.

Table 1: Rates of Impairment

	Age Groups		χ^2 (1, 152)
	11-14 (n = 74)	15-17 (n = 74)	
<i>Grisso's Miranda Scales</i>			
<i>Understanding</i>			
CMR	40.8%	9.2%	20.21***
CMR-R	18.4%	5.3%	6.30*
CMV	27.6%	6.6%	11.88**
<i>Appreciation</i>			
NI	9.2%	10.5%	0.79
RC	38.2%	19.7%	6.27*
RS	47.4%	22.4%	10.46**
<i>Fitness Interview Test</i>			
<i>Adult Norms</i>			
Understanding	77.6%	50.0%	12.57***
Appreciation	32.8%	10.5%	11.19**
Communication	60.5%	25.0%	19.60***
<i>Adolescent Norms²¹</i>			
Understanding	7.9%	0	6.25*
Appreciation	10.5%	1.3%	5.79*
Communication	7.9%	2.6%	2.11

Note: A defendant was classified as impaired on a measure if his or her score fell two or more standard deviations below norms. CMR is Comprehension of Miranda Rights, CMR-R is Comprehension of Miranda Warnings-Recognition, CMV is Comprehension of Miranda Vocabulary, NI is Appreciation of the Nature of Interrogation, RC is Appreciation of the Right to Counsel, and RS is Appreciation of the Right to Silence. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

²¹ Consistent results were obtained using Fisher's Exact Tests, which are appropriate when cell counts are low.

Table 2: Profile Analysis of Understanding Measures on Grisso's Miranda Scales

Profile			Results		
CMR	CMR-R	CMV	Observed	Expected	χ^2
<i>Ages 11-14 (n = 76)</i>					
U	U	U	36	26.57	3.35
I	U	U	12	18.30	2.17
U	I	U	5	6.00	0.17
U	U	I	3 (a)	10.14	5.03*
U	I	I	1	2.29	0.73
I	I	U	2	4.13	1.10
I	U	I	11	6.99	2.30
I	I	I	6 (T)	1.58	12.39**
<i>Ages 15-17 (n = 76)</i>					
U	U	U	66	61.07	0.40
I	U	U	3	6.20	1.65
U	I	U	1	3.39	1.69
U	U	I	1	4.30	2.53
U	I	I	1	0.24	2.42
I	I	U	1	0.34	1.25
I	U	I	2 (t)	0.44	5.60*
I	I	I	1 (T)	0.02	39.28**

Note: U means unimpaired legal ability; I means impaired. Critical Value = 3.84 for $p = .05$, Critical Value = 7.38 for $p = 0.00625$ (Bonferroni correction for 8 comparisons $.05/8$).
 * $p < 0.05$, ** $p < 0.00625$.

Table 3: Profile Analysis of Appreciation Measures on Grisso's Miranda Scales

NI	Profile		Results		
	RC	RS	Observed	Expected	χ^2
<i>Ages 11-14 (n = 76)</i>					
U	U	U	23	22.46	0.01
I	U	U	3	2.28	0.23
U	I	U	14	13.86	0
U	U	I	19	20.21	0.07
U	I	I	13	12.47	0.02
I	I	U	0	1.41	1.41
I	U	I	2	2.05	0
I	I	I	2	1.27	0.43
<i>Ages 15-17 (n = 76)</i>					
U	U	U	47	42.37	0.51
I	U	U	4	4.98	0.19
U	I	U	7	10.42	1.12
U	U	I	10	12.21	0.40
U	I	I	4	3.00	0.33
I	I	U	1	1.23	0.04
I	U	I	0	1.44	1.44
I	I	I	3 (T)	0.35	19.84**

Note: U means unimpaired legal ability; I means impaired. Critical Value = 3.84 for $p = .05$, Critical Value = 7.38 for $p = 0.00625$ (Bonferroni correction for 8 comparisons $.05/8$). * $p < 0.05$, ** $p < 0.00625$.

Table 4: Profile Analysis of Understanding and Appreciation Measures on Grisso's Miranda Scales

Profile		Results		
Understanding	Appreciation	Observed	Expected	χ^2
<i>Ages 11-14 (n = 76)</i>				
U	U	18 (t)	10.89	4.63*
U	I	18	25.11	2.01
I	U	5 (a)	12.11	4.17*
I	I	35	27.89	1.82
<i>Ages 15-17 (n = 76)</i>				
U	U	45	40.82	0.43
U	I	21	25.18	0.70
I	U	2	6.18	2.83
I	I	8 (t)	3.82	4.59*

Note: U means unimpaired legal ability; I means impaired. Individuals were classified as impaired on understanding if they were impaired on one or more understanding scales, and impaired on appreciation if they were impaired on one or more appreciation scales. Critical Value = 3.84 for $p = 0.05$, Critical Value = 6.63 for $p = 0.010$ (Bonferroni correction for 4 comparisons $.05/4=0.0125$). * $p < .05$, ** $p < .01$.

Table 5: Profile Analysis of FIT

Profile			Results		
Understanding	Appreciation	Communication	Observed	Expected	χ^2
<i>Ages 11-14 (n = 76)</i>					
U	U	U	11 (T)	4.50	9.37**
I	U	U	16	15.63	0.01
U	I	U	1	2.21	0.66
U	U	I	4	6.90	1.22
U	I	I	1	3.38	1.68
I	I	U	2 (a)	7.66	4.18*
I	U	I	20	23.96	0.66
I	I	I	21 (t)	11.75	7.29*
<i>Ages 15-17 (n = 76)</i>					
U	U	U	35	25.50	3.54
I	U	U	18	25.50	2.21
U	I	U	1	3.00	1.33
U	U	I	1 (a)	8.50	6.62*
U	I	I	1	1.00	0
I	I	U	3	3.00	0
I	U	I	14	8.50	3.55
I	I	I	3 (t)	1.00	4.00*

Note: U means unimpaired legal ability; I means impaired. Critical Value = 3.84 for $p = .05$, Critical Value = 7.38 for $p = 0.00625$ (Bonferroni correction for 8 comparisons $.05/8$).
 * $p < 0.05$, ** $p < 0.00625$.

Table 6: Profile Analysis of FIT and Grisso's Miranda Scales

Profile		Results		
Grisso's Miranda Scales	FIT	Observed	Expected	χ^2
<i>Ages 11-14 (n = 76)</i>				
U	U	8 (T)	2.84	9.36**
U	I	10	15.16	1.76
I	U	4	9.16	2.91
I	I	54	48.84	0.54
<i>Ages 15-17 (n = 76)</i>				
U	U	30	21.32	3.54
U	I	15	23.68	3.18
I	U	6 (a)	14.68	5.14*
I	I	25 (t)	16.32	4.62*

Note: U means unimpaired legal ability; I means impaired. Individuals were classified as impaired on Grisso's Miranda Scales if they were impaired on one or more scales on that instrument, and impaired on the FIT if they were impaired on one or more FIT scales. Critical Value = 3.84 for $p = 0.05$, Critical Value = 6.63 for $p = 0.01$ (Bonferroni correction for 4 comparisons $.05/4 = 0.0125$). * $p < .05$, ** $p < .01$.

CHAPTER 5: LEGAL DECISIONS ²²**Abstract**

While recent research has found developmental difference in adolescents' understanding and appreciation of legal proceedings, there may also be developmental differences in legal decision-making. This study examined the legal decisions of 152 defendants aged 11 to 17 (73 females, 79 males). Adolescents aged 15 and younger were more likely than older adolescents to confess and waive their right to counsel, and less likely to report that they would appeal their case or discuss disagreements with their attorneys. Also, while adolescents aged 15 to 17 were more likely to confess, plead guilty, and accept a plea bargain if they perceived that there was strong evidence against them, younger defendants' legal decisions were not predicted by strength of evidence. Importantly, defendants with poor legal abilities were more likely to waive legal protections, such as the right to counsel and appeals. Defendants from below average socioeconomic backgrounds were more likely to waive their interrogation rights. In addition, defendants from ethnic minority groups were less likely to report that they would disclose information to their attorneys. The advice of attorneys, parents, and peers emerged as important predictors of plea decisions. When parents were present during police questioning, most adolescents reported that their parents wanted them to confess.

²² Jessica Klaver and Dr. Ronald Roesch provided feedback on this chapter, which was used in making revisions. They were aware that the chapter would be included in this dissertation, and provided written consent for this.

Introduction

With the growing severity of punishments available in the juvenile justice system and the diminishing distinction between juvenile and adult justice systems, it has become increasingly important that juvenile defendants are able to understand and reason about police interrogation and subsequent adjudication proceedings (Grisso, 1997). Research, however, has demonstrated that adolescents aged 15 and younger often demonstrate deficits in the legal abilities relevant to police interrogation and adjudication (Goldstein et al., 2003; Grisso, 1980; Grisso et al., 2003).

Recently, it has been recognized that there may also be developmental differences in legal judgment and decision-making (Grisso et al., 2003; Scott, Reppucci, & Woolard, 1995; Steinberg & Cauffman, 1996). Specifically, the rates and correlates of confessions, guilty pleas, and other legal decisions may differ across age groups as a result of cognitive and psychosocial development, as well as psychopathology, which is common among young defendants (Teplin, Abram, McClelland, Dulcan, & Mericle, 2002; Wasserman, McReynolds, Lucas, Fisher, & Santos, 2002). In this study, we examined the relationship of young defendants' legal decisions to age, cognitive development, psychopathology, and legal abilities.

Police Questioning

Although adolescent defendants have the right to remain silent and the right to speak with an attorney at the time of arrest, research has suggested that a large proportion waive these rights (Abramovitch, Peterson-Badali, & Rohan, 1995; Ferguson & Douglas, 1970; Grisso & Pomicter, 1977; Peterson-Badali, Abramovitch, Koegel, &

Ruck, 1999). Several studies found that young adolescents are more likely than older adolescents to waive the right to silence (Grisso & Pomicter, 1977; Abramovitch, Higgins-Biss, & Biss, 1993; Abramovitch et al., 1995). On the other hand, one study found that young adolescents were no more likely than older adolescents to waive the right to counsel during police questioning (Abramovitch et al., 1995).

Situational and criminological factors may influence decisions to assert or waive interrogation rights. Specifically, research has suggested that adolescent suspects are more likely to assert the right to silence if they have prior convictions and/or if they are accused of a violent offense (Grisso & Pomicter, 1977). While research has found that adult suspects are more likely to confess if they perceive that there is strong evidence against them (Gudjonsson & Petursson, 1991; Gudjonsson & Bownes, 1992; Sigurdsson & Gudjonsson, 1994; Stephenson & Moston, 1993), this may not necessarily be the case among adolescent defendants (but see Abramovitch et al., 1995).

The relationship of cognitive abilities, psychopathology, and legal abilities to waiver decisions is unclear. In a sample of adult suspects, Pearse Gudjonsson, Clare, and Rutter (1998) found that confessions were not associated with legal abilities, cognitive abilities, or psychological vulnerability. However, Abramovitch and colleagues (1993) found that adolescents were more likely to report that they would waive their rights if they had poor legal understanding. This discrepancy may reflect developmental differences in predictors, or it could stem from methodological differences in the studies. Specifically, while Pearse et al. (1998) examined actual confessions, Abramovitch et al. (1993) used a vignette design.

Adjudication

Among both adolescents and adults, guilty pleas and plea bargains are extremely common (Bala, 1992; Hoge, Bonnie, Poythress, & Monahan, 1992; Wundersitz, Naffine, & Gale, 1991). However, young adolescents may be more likely to accept a plea bargain than older individuals. Grisso and colleagues (2003) recently reported that 74% of defendants aged 11 to 13 indicated that they would accept a plea bargain in comparison to 50% of young adults.

Research has found that adult defendants are more likely to plead guilty when they perceive that there is strong evidence against them or that there is a high probability of conviction (McAllister & Bergman, 1986). Peterson-Badali and Abramovitch (1993) predicted that youth, in contrast, would be more likely to base plea decisions on moral guilt rather than considerations about the strength of evidence. However, they found that even children as young as 10 years old considered strength of evidence in their plea decisions (see also Peterson-Badali, Abramovitch, & Duda, 1997).

In addition to plea decisions, adolescent defendants must make a number of important decisions regarding their communication with attorneys, including whether to disclose information about their case to their attorneys and how to handle disagreements with their attorneys. Although adolescents often express high levels of disappointment and distrust in lawyers (Catton, 1978; Walker, 1971), most adolescents report that they would disclose information to their attorneys (Grisso et al., 2003; Peterson-Badali & Abramovitch, 1992). In a recent study, Grisso and colleagues (2003) found that age was unrelated to disclosure decisions.

Young defendants are given similar rights to appeal their conviction as adults (American Bar Association Juvenile Justice Center, 1995; Youth Criminal Justice Act,

2002). While as many as 50% of adolescent defendants' legal cases contain appealable errors (Knitzer & Sobie, 1984), appeals are, in practice, extremely uncommon within the juvenile justice system (American Bar Association Juvenile Justice Center, 1995). This may be because adolescents are generally detained for shorter periods of time than adults, and are rarely released during appeals. Also, Saunders (1981) found that very few adolescents are even aware of their right to appeal. To date, no research has investigated adolescents' decision-making about appeals.

This study extends existing research by examining the relationship of a variety of legal decisions (i.e., statements to the police, requests for counsel, pleas, plea bargains, disclosures to attorneys, and appeals) to age, cognitive development, psychopathology, legal abilities, and situational factors. In contrast to previous studies using vignette designs, we aimed to enhance ecological validity by examining defendants' decisions and reasoning about their own legal situation.

Method

Participants

Participants included 152 pretrial defendants (73 females and 79 males), aged 11 to 17 years ($M = 14.52$, $SD = 1.68$), held in a detention facility in the state of Washington. The majority of defendants remanded to this facility were 15 and older. To ensure that younger defendants were adequately represented, we stratified our sample by age (11 to 13, 14 to 15, and 16 to 17) by extending an equal number of invitations to participate to adolescents who were randomly selected from each of these age groups. The rate of agreement for participation was 94.4%. Defendants who did not participate

($n = 9$) appeared representative of the larger sample in terms of age, gender, race, and current charge. All participants indicated that English was their first language, or the language they spoke at home or at school.

The average IQ of participants was 82.57 ($SD = 13.91$). While low, this is comparable to other samples of delinquent youth. For instance, Grisso et al. (2003) reported that the average IQ of detained youths in their multi-site study was 86. Sixty percent of participants ($n = 92$) in the overall sample were non-Hispanic Caucasians, 26.3% ($n = 40$) were African-American, 7.9% ($n = 12$) were Hispanic, 3.9% ($n = 6$) were Native-American, and 1.3% ($n = 2$) were Asian. The majority of participants (66.7%, $n = 96$) were classified as being at the two lowest socioeconomic levels (levels IV and V) according to Hollingshead's classification system (1975). For 37.5% ($n = 57$) of participants the most serious charge was a violent offense against persons, for 36.8% ($n = 56$) it was a property offense, and for 25.7% ($n = 39$) it was another offense, such as a drug offense, obstruction, or failure to appear at court. Age groups did not significantly differ with respect to IQ, current charge, race, gender, and socioeconomic status (SES).

Procedure

All study procedures were approved by the appropriate review boards of the university and the study facility, and were consistent with current ethical procedures. Potential participants were contacted and asked if they were interested in participating in a study on legal abilities. Information about the study was presented orally to individuals who expressed interest in participating and a form was also provided so that potential participants could read the information presented. The Flesch-Kincaid reading level of this form was grade 3.6.

Participants were tested to assess if they understood and appreciated study procedures, and were able to make a stable choice about participation. To do this, an adapted version of the MacArthur Competence Assessment Tool for Clinical Research (MacCAT-CR; Appelbaum & Grisso, 2001)²³ was administered. If a participant showed inadequate comprehension of a concept, this concept was re-explained to improve the participant's understanding of study procedures and facilitate his or her ability to provide informed consent. In addition, the institutional administrator, acting as the defendants' legal guardian, provided consent for all participating defendants.

Participants completed a battery of tests. Testing typically occurred in two or three separate sessions of approximately 40 to 90 minutes in length. Overall, the test battery generally took 3 to 4 hours. Confidentiality was assured, except in cases of risk of harm to self or others. Identifying information was not recorded, and participants were instructed not to provide details on the current charge for which they were undergoing adjudication.

In the first test session, participants generally completed several measures of legal abilities, including Grisso's Instruments for Assessing Understanding and Appreciation of Miranda Rights (hereinafter "Grisso's Miranda Scales"; Grisso, 1998) and the Fitness Interview Test, Revised Edition (FIT; Roesch, Zapf, Eaves, & Webster, 1998). The order in which these instruments were presented was counterbalanced. Following test sessions focused on the assessment of cognitive abilities, as measured by the Woodcock-Johnson III Cognitive Assessment Battery (WJ III; Woodcock,

²³ The version of the MacCAT-CR used in this study included 4 items on understanding (nature of study, benefits of participation, risks of participation, confidentiality), 2 items on appreciation (no impact on court case or care, decisions to decline/withdraw will be respected), and 1 item on choice (ability to make a stable choice about decision to participate).

McGrew, & Mather, 2001), and psychopathology, as measured by the Brief Psychiatric Rating Scale for Children (BPRS-C; Hughes, Rintelmann, Emslie, Lopez, & MacCabe, 2001),

The test battery was administered by a doctoral student in clinical psychology trained in the use of study instruments. Participants' performance on the dependent variables (Grisso's Miranda Scales and the FIT) was scored independent of and blind to all other participant information, such as age, cognitive development, and psychopathology. To assess the reliability of Grisso's Miranda Scales and the FIT, 26 randomly selected protocols were re-coded by a second doctoral student in clinical psychology, with similar training as the original rater. Training on these instruments included familiarization with the test manual, viewing a training videotape (for the FIT), and completion of several practice protocols.

Upon completion of the study, participants were given 10 points as compensation for their time. These points could be used to pay for food and toiletry items at the facility, and was enough to buy approximately two chocolate bars or a small bottle of shampoo. This amount was thought to be sufficient to compensate participants for their time but not enough to coerce participation.

Measures

Demographic, Criminological, and Situational Variables

Information on the age, ethnicity, and criminal charges of participants was obtained from institutional records. SES was coded using Hollingshead's (1975) five-level classification system based on participants' descriptions of their parents' education

and occupation. For eight participants (5.3%), SES could not be coded because participants reported inadequate knowledge about parent's education and occupation. Offense severity was coded as "1" if the most severe index offense was an A level offense, "2" for a B offense, "3" for a C offense, "4" for a D offense, and "5" for an "E" offense.

To measure legal experience, defendants were asked if they had ever been arrested before (coded as "0" for no prior arrests, "1" for 1 prior arrest, and "2" for 2 or more prior arrests). Participants were also asked if they had met with their lawyer about their case, and to rate how much evidence the courts had against them on scale of 0 to 10 (with "0" being no evidence against them and "10" being really strong evidence against them).

Participants were asked if they were anxious or under the influence of substances at the time of police questioning, and what legal advice attorneys, parents, and friends who were present gave them (e.g., What did your parents want you to say to the police? That you did it, that you didn't do it, or to say nothing?). Participants were also asked what legal advice attorneys, parents, and friends gave them about pleas (e.g., What do your parents want you to plead? Guilty or not guilty?).

Woodcock-Johnson III Cognitive Assessment Battery

The Woodcock-Johnson III Cognitive Assessment Battery (WJ III; Woodcock et al., 2001) is based on the Cattell-Horn-Carroll theory of cognitive abilities. This theory is supported by factor analytic research and conceptualizes intelligence as hierarchical and consisting of general intelligence, broad cognitive clusters, and narrow abilities. For the present study, we examined general intelligence, and several broad cognitive clusters,

including comprehension-knowledge or verbal ability (the ability to apply language and acquired knowledge), fluid reasoning (the ability to recognize patterns and make logical inferences), long-term retrieval (the ability to store and retrieve information), attention (the ability to attend to relevant information, and includes selective attention, sustained attention, divided attention, and attentional capacity), and executive processing (the ability to plan strategically, resist interference, and shift one's mental set). Research has demonstrated that the WJ III clusters have strong reliability and that the WJ III is adequately correlated with other measures of intellectual ability (McGrew & Woodcock, 2001). Also, this instrument has received very positive reviews in the *Mental Measurements Yearbook* (Cizek, 2003; Sandoval, 2003).

Brief Psychiatric Rating Scale for Children

To measure psychopathology, the anchored version of the Brief Psychiatric Rating Scale for Children (BPRS-C; Hughes et al., 2001) was used. The BPRS-C is a widely used rating scale that is used to assess mental status in children and adolescents, and comprises 21 symptoms. To rate BPRS-C items, the examiner conducted standardized mental status interviews that were 20 to 30 minutes in length. Also, institutional records on psychological disturbances²⁴ and psychiatric medication use were available. For this study, we examined several BPRS-C subscales derived by Hughes et al.'s (2002) factor analytic study. These subscales include depression-anxiety (symptoms such as depressed mood and feelings of inferiority), psychomotor excitation (symptoms such as hyperactivity and distractibility), and behavior problems (symptoms

²⁴ At the time of admission to the pretrial facility that was the study site, all defendants are screened for psychological and emotional problems by facility staff. On the basis of this screening, defendants are dichotomously classified by the institution as having a psychological/emotional disturbance or not.

such as hostility and manipulateness). Research has found the interscorer reliability of items and subscales on the BPRS-C to be adequate (Hughes et al., 2001; Lachar et al., 2001). In addition, theoretically consistent correlations have been found between the BPRS-C and a number of other diagnostic instruments, such as the Child-Behavior Checklist and Diagnostic Interview for Children and Adolescents (Hughes et al., 2001; Stavrakaki, Williams, Walker, Roberts, & Kotsopoulos, 1991).

Instruments for Assessing Understanding and Appreciation of Miranda Rights

Legal abilities relevant to police interrogation, namely understanding and appreciation of interrogation rights, were examined with Grisso's Miranda Scales (Grisso, 1998). The first three measures on Grisso's Miranda Scales assess understanding of interrogation warnings. Comprehension of Miranda Rights (CMR) measures examinee's ability to paraphrase the elements of the interrogation warnings, Comprehension of Miranda Rights—Recognition (CMR-R) requires examinees to recognize sentences that have the same meaning as a statement from the interrogation warnings, and Comprehension of Miranda Vocabulary (CMV) requires examinees to define words contained in the interrogation warnings. The final measure on this instrument, Function of Rights in Interrogation (FRI), assesses the appreciation of interrogation rights. It consists of three separate subscales, including Nature of Interrogation (NI), Right to Counsel (RC), and Right to Silence (RS). On this measure, examinees are shown drawings of youth involved in various legal scenarios, and are read short vignettes about each scenario. They are then asked a series of questions about the vignette.

To check interrater reliability, 26 randomly selected protocols were re-coded by a second rater. Intraclass correlation coefficients were calculated for single raters with a two-way random effects model (Model 2, McGraw & Wong, 1996), and were as follows: .91 for CMR, .94 for CMV, .88 for NI, .93 for RC, and .92 for RS. As evidence of validity, subtests on Grisso's Miranda Scale have been found to correlate with other subtests on this measure and with IQ estimates (Fulero & Everington, 1995; Grisso, 1998).

Fitness Interview Test, Revised Edition

Legal abilities relevant to adjudication and standing trial, namely understanding of legal proceedings, appreciation of legal proceedings, and ability to communicate with counsel, were examined with the FIT (Roesch et al., 1998). The FIT is a semi-structured clinical interview, which comprises 16 items and takes approximately 30 to 45 minutes to administer. The first section, Understanding (Factual Knowledge), examines a defendant's understanding of the arrest process, current charges, role of key participants, legal process, pleas, and court procedures. The second section, Appreciation (Understanding of the Possible Consequences of Proceedings or Rational Understanding), examines a defendant's appreciation of the possible penalties, available legal defenses, and likely outcome. The third section, Communication with Counsel (Participation), examines a defendant's ability to communicate facts, relate to lawyers, plan legal strategy, engage in the defense, challenge witnesses, testify relevantly, and manage courtroom behaviour.

For this study, 26 randomly selected protocols were re-coded by second rater. Intraclass correlation coefficients were .91 for Understanding, .82, for Appreciation, and

.83 for Communication (Model 2, McGraw & Wong, 1996).²⁵ In terms of its validity, the FIT shows high agreement with clinician judgments of competency to stand trial (Zapf, Roesch, & Viljoen, 2001), is able to distinguish between defendants who are and are not referred for competency evaluations (Viljoen & Zapf, 2002), and is correlated with a second measure of adjudicative competency, the MacArthur Competency Assessment Tool-Criminal Adjudication (Zapf & Roesch, 2001).

Legal Decisions

Defendants' legal decisions were assessed in an interview procedure. Regarding interrogation, defendants were asked whether they spoke to the police, whether they asked to speak to their parents, whether they asked to speak to a lawyer, and whether they had ever (for this arrest or another) falsely confessed to the police. With respect to adjudication, defendants were asked how they had decided to plead (Will you plead guilty or not guilty in your trial?), and whether they would accept a plea bargain (If your lawyer can get the prosecutor to accept a plea bargain, in which you plead guilty to a less serious charge in return for the prosecutor dropping a more serious charge, would you agree to it?).

Participants were also asked whether they would appeal their case (Suppose the prosecutor makes some mistakes and your lawyer wants to appeal/redo the case. Would you agree to it?), if they would tell their lawyer what actually happened in their case (Would you trust your lawyer enough to tell him/her what really happened in your case?), and what they would do if they disagreed with their lawyer (What will you do if you disagree with your lawyer about how to handle your case?).

²⁵ In this study, we used summary scores of sections rather than structured clinical judgments of

The decisions relevant to police questioning were added as a separate questionnaire. The decisions relevant to adjudication were asked as part of the Communication with Counsel scale on the FIT. However, it is important to note that, in rating this scale, the reasoning behind a legal decision is rated rather than the decision itself (see Roesch et al., 1998). To lessen the possibility of bias, we also calculated an adjusted score on the Communication with Counsel scale, which did not include the items in which questions on legal decisions were asked (i.e., ability to relate to lawyers, ability plan legal strategy, and ability to engage in the defense).

Data Analysis

The predictors of legal decisions were examined using chi-squares tests (two-tailed) and analyses of variance (ANOVAs). When significant differences were found, Games-Howell post hoc comparisons were made for continuous variables. The p -value was set at .05. The predictors investigated included demographic variables, criminological variables, situational variables, legal abilities, cognitive abilities, and psychopathology. W scores, which provide a measure of cognitive development, were used as the unit of measurement for cognitive abilities rather than age-normed standard scores since age itself was a critical variable in these analyses (McGrew & Woodcock, 2001). W scores are centered at a value of 500, which is the average performance of a 10 year-old.

The specific legal abilities investigated as possible predictors of decisions varied depending on the type of decisions. In particular, for decisions relevant to police interrogation, we examined decisions' relationship to understanding and appreciation of

sections, as summary scores had better interrater reliability.

interrogation warnings as measured by Grisso's Miranda scales. For decisions relevant to adjudication, we decisions' relationship to understanding of legal proceedings, appreciation of legal proceedings, and ability to communicate with counsel as measured by the FIT.

The situational variables investigated as possible predictors of decisions also varied by decision, and included variables such as perceived evidence, others' advice, and previous legal decisions. For instance, for confession decisions we examined the following situational variables: perceived evidence, anxiety at the time of police questioning, whether a defendant was under the influence of drugs and alcohol at the time of police questioning, and whether a defendant was advised to confess by parents or friends.

Results

Police Questioning

Statements to the Police

Seventy-five percent of defendants ($n = 113$) reported that the police questioned them about the crime with which they were charged. Slightly over half of defendants indicated that they felt worried at the time of police questioning (58.8%, $n = 67$), and a sizable proportion of defendants reported that they were drunk or high (18.4%, $n = 21$). Most defendants (72.8%, $n = 83$) remembered being read their interrogation rights.

Of the defendants questioned by the police, 13.2% ($n = 15$) reported that they asserted the right to silence, 30.7% ($n = 35$) reported that they denied the offense, and

55.3% ($n = 63$) reported that they confessed (see Table 1). Defendants who confessed were younger than defendants who remained silent. Of the defendants questioned by the police, only 7.5% of those aged 14 and under remained silent. Also, defendants who confessed were more likely to come from low socioeconomic classes than defendants who remained silent or denied the offense.

Defendants who confessed or remained silent rated the evidence against them as significantly higher than defendants who denied the offense. Given that researchers have hypothesized that evidence may not be as predictive of legal decisions for young defendants (Peterson-Badali & Abramovitch, 1993), this variable was examined separately by age group. Although evidence was found to be a significant predictor of statements to the police among defendants aged 15 to 17, $F(2, 58) = 14.04, p < .001$, it was not a significant predictor among defendants aged 11 to 14, $F(2, 44) = 0.63, p = .540$.

Advice and Statements to the Police

Approximately one-quarter of defendants who were questioned by the police ($n = 30, 26.3\%$) reported that one or both of their parents were present during police questioning. All of these defendants stated that they had *not* specifically requested that their parents be present during police interrogation. Instead, they reported that their parents happened to be present at the time of the arrest. Of the youth with parents present, 53.3% ($n = 16$) indicated that their parents wanted them to confess or tell the truth, 6.7% ($n = 2$) indicated that their parents wanted them to deny the offense, and 40.0% ($n = 12$) indicated that they did not know what their parents wanted them to do. No defendants reported that their parents advised them to remain silent. Defendants

tended to be more likely to confess if their parents were present and advised them to confess, but this finding did not reach significance, $\chi^2(1, 111) = 3.04, p = .082$. Of the defendants advised by parents to confess, 63.4% ($n = 14$) reported that they did confess.

For 30.7% ($n = 35$) of defendants who were questioned by the police, a peer was present during police interrogation. Of the defendants with a peer present, 29.4% ($n = 9$) reported that their peer wanted them to confess or tell the truth, 20.6% ($n = 7$) reported that their peer wanted them to deny the offense, 8.8% ($n = 3$) reported that their peer wanted them to stay silent, and 41.2% ($n = 14$) reported that they did not know what their peer wanted them to do. Peers' advice to admit did not predict statements to the police. However, the cell sizes for these comparisons were small.

Requests for Counsel

Of the defendants who were questioned by the police, 9.6% ($n = 11$) reported that they *requested* an attorney. However, only one defendant indicated that he had a lawyer present during police questioning. In comparison to defendants who asserted the right to counsel, defendants who waived this right were younger, were more likely to come from low socioeconomic classes, scored lower on understanding and appreciation of interrogation warnings, and scored higher on psychomotor excitation (see Table 2). No defendants aged 14 or under requested a lawyer.

False Confessions

Nine defendants (5.9%) reported that they had, at one time, falsely confessed to police. Defendants who reported that they had falsely confessed did not differ from other defendants in demographic and criminological variables, understanding and appreciation

of interrogation warnings, cognitive abilities, or psychopathology. African-American defendants were significantly more likely than non-Hispanic Caucasian defendants to report that they had falsely confessed, Fisher's Exact Test = .026. The majority of the defendants who falsely confessed reported that they did so to protect others (77.8%, $n = 7$).

Pleas

Guilty Pleas

Fifty-two percent of defendants ($n = 79$) reported that they had decided to plead guilty, 31.6% reported that they had decided to plead not guilty ($n = 48$), and 13.8% ($n = 21$) were unsure how to plead. For four defendants, responses were unintelligible. Defendants who were unsure how to plead scored significantly lower on the legal abilities relevant to standing trial than defendants who had reached a plea decision (see Table 3).

Defendants who planned to plead guilty rated the evidence against them as higher than defendants who planned to plead not guilty. However, in follow-up analyses, we found that while evidence was a significant predictor of plea decisions for defendants aged 15 to 17, $F(2, 69) = 9.82, p < .001$, it was not a significant predictor for defendants aged 11 to 14, $F(2, 73) = 2.62, p = .081$.

Advice and Pleas

Half of the defendants reported that they knew how their attorneys (50.0%, $n = 76$) and/or parents (46.7%, $n = 71$) wanted them to plead. A quarter of defendants indicated that they knew how their peers wanted them to plead (26.5%, $n = 40$). Thirty-

two percent of defendants ($n = 13$) advised by peers reported that their peers wanted them to plead guilty, 55.3% ($n = 42$) of those advised by attorneys reported that their attorneys wanted them to plead guilty, and 62.0% ($n = 44$) of those advised by their parents reported that their parents wanted them to plead guilty.

Among defendants advised by their attorneys, defendants who planned to plead guilty were more likely to have been advised to plead guilty by their attorneys than those who planned to plead not guilty, $\chi^2(1, 74) = 39.91, p < .001$. This was true across age groups (11 to 14: $\chi^2(1, 28) = 24.04, p < .001$, 15 to 17: $\chi^2(1, 48) = 17.89, p < .001$). Among defendants advised by their parents, defendants who planned to plead guilty were more likely to have been advised to plead guilty by their parents than those who planned to plead not guilty, $\chi^2(1, 65) = 38.65, p < .001$. This finding held across age groups (11 to 14: $\chi^2(1, 27) = 18.90, p < .001$, 15 to 17: $\chi^2(1, 38) = 20.19, p < .001$). Finally, among defendants advised by their peers, defendants who planned to plead guilty were more likely to have been advised to plead guilty by their peers than those who planned to plead not guilty, $\chi^2(1, 37) = 11.56, p = .001$. When age groups were examined separately, peer advice did not quite reach significance for defendants aged 11 to 14, $\chi^2(1, 15) = 3.762, p = .057$, but it was significant for defendants aged 15 to 17, $\chi^2(1, 22) = 7.77, p = .005$.

Plea Bargains

Sixty-six percent of defendants ($n = 99$) reported that they would accept a plea bargain, 12.8% ($n = 19$) reported that they would not accept a plea bargain, and 20.8% ($n = 31$) were unsure if they would. Defendants who reported that they would not accept a plea bargain rated the evidence against them as lower than defendants who reported

that they would accept a plea bargain (see Table 4). However, in follow-up analyses, we found that while evidence was a significant predictor of plea bargain decisions for defendants aged 15 to 17, $F(2, 69) = 6.83, p = .002$, it was not a significant predictor for defendants aged 11 to 14, $F(2, 61) = 0.40, p = .669$.

Defendants who reported that they would not accept a plea bargain were more likely to be male than other defendants. Also, defendants who reported that they would not accept a plea bargain scored significantly lower on measures of cognitive abilities than defendants who reported that they would accept a plea bargain.

Defendants who were unsure if they would accept a plea bargain were more likely to be from low socioeconomic classes, had spent less time in custody, and had fewer prior arrests than other defendants. In comparison to defendants who reported that they would accept a plea bargain, defendants who were unsure were less likely to have a private lawyer and scored lower on measures of legal abilities and on behavior problems.

Communication with Attorneys

Disclosures to Attorneys

Sixty-nine percent of defendants ($n = 105$) reported that they would disclose what really happened in their case to their attorney, 17.8% ($n = 27$) reported that they would not disclose this information, and 13.2% ($n = 20$) were unsure if they would. Given that there were no significant differences on the predictors between defendants who reported that they would not disclose and those who were unsure, these groups were combined.

In comparison to other defendants, defendants who reported that they would disclose information were more likely to be female and Caucasian (see Table 5). They scored higher on appreciation of legal proceedings, ability to communicate with counsel, and cognitive abilities, and they rated the evidence against them as stronger. In follow-up analyses, we found that while evidence was a significant predictor of disclosure decisions for defendants aged 15 to 17, $F(1, 74) = 5.99, p = .017$, it was not a significant predictor for defendants aged 11 to 14, $F(1, 64) = 2.99, p = .089$.

Given that Pierce and Brodsky (2002) found that the relationship between intelligence and trust in attorneys differed across racial groups, we examined possible racial differences in the relationship between disclosure decisions and general intellectual ability. Among African-American defendants, defendants who reported that they would not disclose information or that they were unsure if they would scored significantly lower on general intellectual ability than defendants who reported that they would disclose, $F(1, 37) = 4.28, p = .048$. Among non-Hispanic Caucasian defendants, general intellectual ability did not predict disclosure decisions, $F(1, 86) = 1.58, p = .213$.

Disagreements with Attorneys

Responses to the question, "what would you do if you had a disagreement with your attorney?" were classified as reflecting assertive, dismissive, and compliant approaches to disagreements. Thirty-nine percent of defendants ($n = 54$) reported that they would talk to and/or instruct a lawyer if they disagreed with them; this was classified as an *assertive* response to disagreements. Seventeen percent of defendants ($n = 26$) reported that they would request a new lawyer and 15.8% ($n = 24$) reported that they would defend themselves or do what they wanted to do; these responses were classified

as *dismissive*, meaning that these defendants indicated that they would dismiss the attorney's opinion. Twelve percent of defendants ($n = 18$) reported that they would go along with what their lawyer wanted, and 5.3% ($n = 8$) stated that they thought they could get in trouble for disagreeing with their lawyer; these responses were classified as *compliant*. Twenty defendants (13.2%) indicated that they were unsure what they would do.

Defendants who reported that they would use a compliant approach to disagreements were younger and more likely to come from low socioeconomic classes than defendants who provided assertive responses (Table 6). Also, they scored higher on psychomotor excitation, and scored lower on measures of legal and cognitive abilities than defendants who provided assertive responses. In comparison to defendants who provided dismissive response, defendants who provided compliant responses were younger, scored higher on psychomotor excitation, and scored lower on understanding of legal proceedings.

Defendants who reported that they were unsure what they would do if they disagreed with their attorney were younger, and scored lower on measures of legal and cognitive abilities than defendants who provided assertive responses. In comparison to defendants who provided dismissive responses, unsure defendants were younger and scored lower on appreciation of legal proceedings.

Defendants who reported that they would use a dismissive approach to disagreements were more likely to be male and come from low socioeconomic classes than defendants who provided assertive responses. In addition, they scored lower on communication with counsel and scored higher on psychomotor excitation than defendants who provided assertive responses.

Appeals

Sixty-three percent of defendants ($n = 95$) reported that they would appeal their case if the prosecutor made a mistake and their attorney advised them to appeal, 20.4% ($n = 31$) reported that they would not appeal, and 17.1% ($n = 26$) were unsure if they would. Given that there were no significant differences on the predictors between defendants who reported that they would not appeal and those who were unsure if they would, these groups were combined. Defendants who reported that they would appeal were older, and scored higher on measures of legal abilities than other defendants (see Table 7).

Discussion

Primary Findings

While there is increasing recognition that developmental differences may exist in legal decision-making (Grisso et al., 2003; Scott, Reppucci, & Woolard, 1995; Steinberg & Cauffman, 1996), little research has examined this. This study investigated a wide range of potential predictors of adolescent defendants' legal decisions, including cognitive development, psychopathology, legal abilities, and others' advice. Results indicated that there were a number of developmental differences in legal judgments.

During police questioning, defendants aged 15 and under were more likely than older defendants to confess and waive the right to counsel. With respect to adjudication, defendants aged 15 and under were less likely to report that they would appeal their case, or talk to their attorneys about disagreements. While Grisso and colleagues (2003) found that adolescents aged 11 to 13 were more likely to accept a plea bargain than

adults, we found no age differences in rates of guilty pleas or in reported decisions to accept plea bargains.

In addition to differences in the types of decisions made, age groups differed significantly in which factors predicted legal decisions. While adolescents aged 15 to 17 were more likely to confess, plead guilty, disclose information to attorneys, and accept a plea bargain if they perceived that there was strong evidence against them, younger defendants' legal decisions were not associated with strength of evidence. Peterson-Badali and Abramovitch (1993), in contrast, found that strength of evidence was correlated with plea decisions even in school children as young as 10 years old. This may stem from methodological differences. In this study, defendants were asked to rate the strength of evidence against them in their case. However, in Peterson-Badali's and Abramovitch's research, participants were informed whether the evidence against characters in vignettes was strong or weak.

Consistent with Pearse, Gudjonsson, Clare, and Rutter (1998), we found that cognitive abilities were not associated with confession decisions. We also found that cognitive abilities were not associated with decisions to assert or waive the right to counsel during police questioning. It is possible that cognitive variables may have less impact on decisions made during police questioning than on decisions made during subsequent legal proceedings because of the stressful nature of interrogation settings and the demand for immediate decisions. Instead, during police questioning, personality and situational variables, such as suggestibility and police interrogation procedures, could be more salient predictors (Gudjonsson, 2003). Also, the failure to find an association between cognitive abilities and interrogation decisions is consistent with

Scott and colleagues' (1995) assertion that legal judgments often arise from sources other than cognitive abilities.

In comparison to cognitive abilities, legal abilities were a much stronger and more consistent predictor of legal decisions. Defendants with poor understanding and appreciation of interrogation rights were more likely than other defendants to report that they waived their right to counsel. Also, defendants with poor legal abilities relevant to adjudication were less likely to report that they would accept plea bargains, tell their attorney confidential information, express disagreements with their attorneys, and appeal their case.

One caution in interpreting these results is that the decisions relevant to adjudication were asked as part of the communication scale on the FIT. It is, therefore, possible that defendants' decisions may have influenced ratings on this measure. However, this did not appear to account for the relationship between legal abilities and legal decisions, as legal decisions were correlated with measures of legal abilities that were unrelated to legal judgments.

Although psychopathology, as measured by the BPRS-C, was not consistently associated with legal decision-making, it did predict decisions regarding consultation with attorneys. Specifically, defendants with attention deficits and hyperactivity were more likely to waive the right to counsel, and less likely to indicate that they would discuss disagreements with and instruct their attorneys. Consistent with this, research has noted that adolescents with this symptom cluster tend to have difficulty initiating relationships and resolving conflicts (Barkley, 1990; Greene et al., 1996; Matthys, Cuperus, & Van Engeland, 1999).

Importantly, defendants from low socioeconomic backgrounds were less likely than other defendants to assert their interrogation rights. It is possible that the tendency of defendants from low socioeconomic backgrounds to waive interrogation rights may reflect social experiences with rights. Melton (1980), for instance, asserted that children from low socioeconomic backgrounds are less likely to grow up believing they are entitled to rights.

Males were less likely to report that they would trust their attorneys enough to disclose information about their case to them. This could be interpreted as consistent with research findings that males' social competence and interpersonal negotiation skills mature at a later age than females' (Margalit & Eysenck, 1990; Murphy & Ross, 1987; Selman, Beardslee, Schultz, Krupa, & Podorefsky, 1986).

Also, defendants from ethnic minority groups were less likely to report that they would trust their attorney enough to disclose information about their case to them. Previous research has similarly found that defendants from ethnic minority groups have lower levels of trust in their attorneys than Caucasian defendants (Boccaccini & Brodsky, 2002; Pierce & Brodsky, 2002). This may reflect justifiable distrust as a result of discrimination in the youth justice system, misperceptions about lawyers' roles, and/or attorneys' limitations in relating to clients (Pierce & Brodsky, 2002). Further research might help to clarify this.

In addition, we found that the predictors of disclosure decisions differed across racial groups. Specifically, among African-American defendants, defendants with high general intellectual ability were more likely to report that they would trust their attorneys enough to disclose confidential information to them. However, among Caucasian defendants, cognitive abilities did not predict disclosure decisions. In comparison, Pierce

and Brodsky (2002) found that among African-American offenders, high intelligence was associated with lower levels of trust in attorneys, while among Caucasian offenders, high intelligence was associated with higher levels of trust in attorneys.

Judgment models have hypothesized that adolescents are likely to be influenced by peers, parents, and authority figures in decision-making (Scott et al., 1995; Steinberg & Cauffman, 1996). Consistent with this, we found that adolescents were more likely to plead guilty if advised to by their parents, attorneys, and/or peers. Although some research has indicated that social conformity peaks at ages 12 to 15 (Scott & Grisso, 1997; Steinberg & Schwartz, 2002), we found that advice was a significant predictor of plea decisions for defendants aged 11 to 14 and those aged 15 to 17.

When defendants disagreed with their attorneys about how to plead, it was fairly common that they wanted to plead guilty while their attorney wanted them to plead not guilty. Specifically, 26.4% of defendants who reported that their attorneys advised them to plead not guilty stated that they planned to plead guilty or that they were not sure how they were going to plead. In contrast, 4.7% of defendants who reported that their attorney advised them to plead guilty stated that they planned to plead not guilty.

The decision to plead guilty despite attorney advice may stem from a tendency to focus on immediate consequences (Nurmi, 1991; Scott et al., 1995; Scott & Grisso, 1998; Steinberg & Cauffman, 1996). Specifically, adolescents may chose to plead guilty in order to get legal proceedings over with. Decisions to plead guilty despite attorney advice may also result from an emphasis on moral accountability versus legal guilt. In our sample, 47.4% of defendants ($n = 72$) defined pleading guilty to mean that one was literally not guilty of a crime, rather than as a statement to the court that one is not guilty or a decision to take a case to trial.

Within our sample, 7% of young defendants reported that they had falsely confessed to the police. African-American defendants were more likely to report that they had falsely confessed than Caucasian defendants. In our opinion, self-reports about false confessions provide a poor estimate of rates of false confessions, especially because they may exclude internalized confessions, in which defendants come to believe that they have committed a crime (Kassin, 1997). However, this finding does suggest that false confessions do occur in young offenders. In a previous survey, Sigurdsson and Gudjonsson (1996) found that none of their sample of 108 young offenders reported having made a false confession.

Limitations and Future Research

In order to extend existing research and provide descriptive information on defendants' decision-making, we chose to examine defendants' decisions about their own case rather than vignettes. Vignettes, although useful in their ability to control for variables, may not adequately capture the complexity of real-life scenarios, such as emotional factors (Millstein & Halpern-Felscher, 2002; Steinberg & Cauffman, 1996). A limitation of examining defendants' decisions about their own case, however, is that it relies on defendants' self-reports, which are vulnerable to inaccuracies and memory loss.

In order to minimize the impact of memory loss about police questioning, defendants were interviewed shortly after they were admitted to the detention facility. Specifically, 86.8% of participants were interviewed within two weeks of being admitted to the pretrial facility. We did not attempt to verify defendants' self-reports about decisions from other sources, such as police reports, because this information was not

consistently available. However, future research would be enhanced by the use of multiple sources of information.

Certain decisions we investigated (e.g., confessions, waiver of counsel) had already been made, whereas other decisions (e.g., plea bargains, appeals) reflected defendants' hypothesis of how they would respond to legal scenarios within the context of their own case. Given that research has widely cited a gap between capacity and performance on reasoning and decision-making tasks, it may be that these hypotheses do not accurately reflect how defendants would respond in real-life (see Klaczynski, 2001a, 2001b; Scott et al., 1995; Steinberg & Cauffman, 1996).

Implications

As hypothesized by judgment models (Scott et al., 1995; Steinberg & Cauffman, 1996), this study found important developmental differences in legal decision-making. Not only were preadolescent and early adolescent defendants more likely to waive legal protections, such as interrogation rights and appeals, they were less likely to be influenced by legally relevant information in making legal decisions, specifically perceived evidence. Historically, models of criminal competencies have focused on legal abilities such as understanding and appreciation, and have not attended to decision-making (Scott et al., 1995).

However, this evidence for developmental differences in legal decision-making, suggests that courts should perhaps pay increased attention to these issues. Furthermore, our results indicate that while legal abilities are related to legal decisions, they do not fully account for decisions. It is unclear how information on legal decision-making could or should be integrated into legal standards. Standards in the area of

competency to consent to treatment have focused on the process of decision-making rather than the ultimate decision (see Kirk & Bersoff, 1996 for a discussion of this issue). This is based on the recognition there is no one absolute right decision, as this depends on an individual's values and beliefs.

In the criminal arena, certain decisions, such as the decision to assert the right to silence and counsel during police questioning, are viewed as being more self-defensive. However, in the criminal arena it may also be appropriate to focus on the process of decision-making rather than the ultimate decision, especially as very little research exists with which to evaluate the consequences and merit of various decisions.

The large majority of defendants in this study waived their interrogation rights. Among defendants aged 11 to 14, only 7.5% of those questioned by the police asserted the right to silence, and none asked to contact a lawyer. These rates of waivers of interrogation rights are much higher than those reported in vignette studies. It is important to note that this study provides information only on the types of legal decisions young defendants made and predictors of these decisions, not on the quality or reasonableness of these decisions. Given that the juvenile justice system is more focused on rehabilitation than the adult system, it is plausible that youth who confess to offenses may be seen as more remorseful and less deserving of punishment (Ruback & Vardaman, 1997). However, contrary to this hypothesis, Ruback and Vardaman (1997) found that youth who confess tend to be sentenced more severely than those who do not confess.

In an attempt to provide youth with increased protections during police questioning, courts in the United States, Canada, the United Kingdom, and Australia have often given young suspects the right or requirement of having a parent or other

adult present during police interrogation (Pearse & Gudjonsson, 1996; Robertson, Pearson, & Gibb, 1996). Our results suggest that parental presence may not necessarily be protective. In this study, no young defendants specifically asserted the right to parental presence during police questioning. Consistent with child-rearing principals and previous research (Grisso & Ring, 1979), most parents who happened to be present during police questioning and offered legal advice reportedly advised their child to confess (88.9%). Another option to further protect youth might be to provide youth, especially preadolescent and early adolescent defendants, with a mandatory lawyer during police questioning and to ensure adequate legal representation in subsequent legal proceedings (see Bailey & Soderling, 1981; Grisso, 1980).

The Juvenile Justice Standards (Institute of Judicial Administration-American Bar Association, 1980; see also United Nations' Convention on the Rights of the Child, 1989) assert that young defendants should be given an opportunity to fully participate in legal proceedings and make legal decisions to the extent that they are competent to do so. However, instead of allowing youth freedom in decision-making, it has been suggested that attorneys may instead attempt to act in their clients' "best interests" at times (Costello, 1980; Federle, 1988; Shepherd & Volenik, 1987).

Furthermore, most adolescents are unlikely to have been in a position, like the attorney-client relationship, in which they have directed or managed an adult employee, and as such, they may tend to comply with attorneys (Buss, 1996; Drury, 2003). As suggested by this study, youth aged 15 and under may be particularly compliant, even if they disagree with attorneys. In order to support youth in their decision-making, it appears important for lawyers to educate their adolescent clients about their mutual

roles in decision-making and provide them with the information necessary to make informed legal decisions.

References

- Abramovitch, R., Higgins-Biss, K. L., & Biss, S. R. (1993). Young persons' comprehension of waivers in criminal proceedings. *Canadian Journal of Criminology*, 35, 309-322.
- Abramovitch, R., Peterson-Badali, M., & Rohan, M. (1995). Young people's understanding and assertion of their rights to silence and legal counsel. *Canadian Journal of Criminology*, 37, 1-18.
- American Bar Association Juvenile Justice Center (1995). *A call for justice: An assessment of access to counsel and quality of representation in delinquency proceedings*. Washington, DC: Author.
- Appelbaum, P. S., & Grisso, T. (2001). *MacArthur competency assessment tool for clinical research (MacCAT-CR)*. Sarasota, FL: Professional Resource Press.
- Bailey, W. S., & Soderling, S. F. (1981). Born to lose—waiver of fifth and sixth amendment rights by juvenile suspects. *Clearinghouse Review*, 15, 127-134.
- Bala, N. (1992). The Young Offenders Act: The legal structure. In R. R. Corrado, N. Bala, R. Linden, and M. LeBlanc (Eds.), *Juvenile justice in Canada: A theoretical and analytical assessment*. Toronto: Butterworths.
- Barkely, R. A. (1998). *Attention deficit hyperactivity disorder: A handbook of diagnosis and treatment* (2nd ed.). New York: Guilford Press.
- Boccaccini, M. T., & Brodsky, S. L. (2002). Attorney-client trust among convicted criminal defendants: Preliminary examination of the Attorney-Client Trust Scale. *Behavioral Sciences and the Law*, 20, 69-87.
- Buss, E. (1996). "You're my what?" The problems of children's misperceptions of their lawyers's roles. *Fordham Law Review*, 64, 1699-1762.
- Catton, K. (1978). Children in the court: A selected empirical review. *Canadian Journal of Family Law*, 1, 329-362.
- Cizek, G. J. (2003). Test review of the Woodcock-Johnson III. From B. S. Plake, J. C. Impara, and R. A. Spies (Eds.), *The fifteenth mental measurements yearbook*. Lincoln, NE: Buros Institute.
- Costello, J. C. (1980). Ethical issues in representing juvenile clients: A review of the IJA/ABA standards on representing private parties. *New Mexico Law Review*, 10, 255-278.
- Drury, J. (2003). Adolescent communication with adults in authority. *Journal of Language and Social Psychology*, 22, 66-72.

- Federle, K. (1988). Overcoming the adult-child dyad: A methodology for interviewing and counseling the juvenile client in delinquency cases. *Journal of Family Law*, 26, 545-578.
- Ferguson, A. B., & Douglas, A. C. (1970). A study of juvenile waiver. *San Diego Law Review*, 7, 39-54.
- Fulero, S. M., & Everington, C. (1995). Assessing competency to waive Miranda rights in defendants with mental retardation. *Law and Human Behavior*, 19, 533-543.
- Goldstein, N. E. S., Condie, L. O., Kalbeitzer, R., Osman, D., & Geier, J. L. (2003). Juvenile offender's Miranda rights comprehension and self-reported likelihood of offering false confessions. *Assessment*, 10, 359-369.
- Greene, R. W., Biederman, H., Faraone, S. V., Ouellette, C. A., Penn, C., & Griffin, S. M. (1996). Toward a new psychometric definition of social disability in children with attention-deficit hyperactivity disorder. *Journal of the American Academy of Child and Adolescent Psychiatry*, 35, 571-578.
- Grisso, T. (1980). Juveniles' capacities to waive Miranda rights: An empirical analysis. *California Law Review*, 68, 1134-1166.
- Grisso, T. (1997). The competence of adolescents as trial defendants. *Psychology, Public Policy, and Law*, 3, 3-32.
- Grisso, T. (1998). *Instruments for assessing understanding and appreciation of Miranda rights*. Sarasota, FL: Professional Resource Press/Professional Resource Exchange.
- Grisso, T., & Pomicter, C. (1977). Interrogation of juveniles: An empirical study of procedures, safeguards, and rights waiver. *Law and Human Behavior*, 1, 321-342.
- Grisso, T., & Ring, M. (1979). Parents' attitudes toward juveniles' rights in interrogation. *Criminal Justice and Behavior*, 6, 211-226.
- Grisso, T., Steinberg, L., Woolard, J., Cauffman, E., Scott, E., Graham, S., Lexcen, F., Reppucci, N. D., & Schwartz, R. (2003). Juveniles' competence to stand trial: A comparison of adolescents' and adults' capacities as trial defendants. *Law and Human Behavior*, 27, 333-363.
- Gudjonsson, G. H. (2003). *The psychology of interrogations and confessions: A handbook*. New York: Wiley.
- Gudjonsson, G. H., & Bownes, I. (1992). The relationship between attribution of blame for criminal offences and the reasons why suspects confess during custodial interrogation. *Journal of Forensic Science Society*, 32, 209-213.

- Gudjonsson, G. H., & Petursson, H. (1991). Custodial interrogation: Why do suspects confess and how does it relate to their crime, attitude, and personality? *Personality and Individual Differences, 12*, 295-306.
- Hoge, S. K., Bonnie, R. J., Poythress, N., & Monahan, J. (1992). Attorney-client decision-making in criminal cases: Client competence and participation as perceived by their attorneys. *Behavioral Sciences and the Law, 10*, 385-394.
- Hollingshead, A. (1975). *Four factor index of social status*. New Haven, CT: Department of Sociology, Yale University.
- Hughes, C. W., Rintelmann, J., Emslie, G. J., Lopez, M., & MacCabe, N. (2001). A revised anchored version of the BPRS-C for childhood psychiatric disorders. *Journal of Child and Adolescent Psychopharmacology, 11*, 77-93.
- Institute of Judicial Administration, American Bar Association (1980). *Juvenile Justice Standards: Standards Relating to Counsel for Private Parties*. Cambridge, MA: Ballinger.
- Kassin, S. M. (1997). The psychology of confession evidence. *American Psychologist, 52*, 221-233.
- Kirk, T., & Bersoff, D. N. (1996). How many procedure safeguards does it take to get a psychiatrist to leave the lightbulb unchanged? A due process analysis of the MacArthur Treatment Competency Study. *Psychology, Public Policy, and Law, 2*, 45-72.
- Klaczynski, P. A. (2001a). Analytic and heuristic processing influences on adolescent reasoning and decision-making. *Child Development, 72*, 844-861.
- Klaczynski, P. A. (2001b). Framing effects on adolescent task representations, analytic and heuristic processing, and decisionmaking: implications for the normative-descriptive gap. *Journal of Applied Developmental Psychology, 22*, 289-309.
- Knitzer, J. & Sobie, M. (1984). *Law guardians in New York state: A study of the legal representation of children*. Albany: New York State Bar Association.
- Lachar, D., Randle, S. L., Harper, R. A., Scott-Gurnell, K. C., Lewis, K. R., Santos, C. W. et al. (2001). The brief psychiatric rating scale for children (BPRS-C): Validity and reliability of an anchored version. *Journal of the American Academy of Child and Adolescent Psychiatry, 40*, 333-340.
- Margalit, M., & Eysenck, S. (1990). Prediction of coherence in adolescence: Gender differences in social skills, personality, and family climate. *Journal of Research in Personality, 24*, 510-521.

- Matthys, W., Cuperus, J. M., & Van Engeland, H. (1999). Deficient social problem-solving in boys with ODD/CD, with ADHD, and with both disorders. *Journal of the American Academy of Child and Adolescent Psychiatry*, 38, 311-321.
- McAllister, H. A., & Bregman, N. J. (1986). Plea bargaining by defendants: A decision theory approach. *Journal of Social Psychology*, 126, 105-110.
- McGrew, K. S., & Woodcock, R. W. (2001). Technical manual. *Woodcock-Johnson III*. Itasca, IL: Riverside.
- Melton, G. B. (1980). Children's concepts of their rights. *Journal of Clinical Child Psychology*, 9, 186-190.
- Millstein, S. G., & Halpern-Felscher, B. L. (2002). Perceptions of risk and vulnerability. *Journal of Adolescent Health*, 31, 10-27.
- Moffit, T. E., & Silva, P. A. (1988b). IQ and delinquency: A direct test of the differential detection hypothesis. *Journal of Abnormal Psychology*, 97, 330-333.
- Murphy, L. O., & Ross, S. M. (1987). Gender differences in the social problem-solving performance of adolescents. *Sex Roles*, 16, 251-264.
- Nurmi, J. E. (1991). How do adolescents see their future? A review of the development of future orientation and planning. *Developmental Review*, 11, 1-59.
- Overton, W. F. (1990). Competence and procedures: constraints on the development of logical reasoning. In W. F. Overton (Eds.), *Reasoning, necessity, and logic: Developmental perspectives* (pp. 1-320). Hillsdale, NJ: Erlbaum.
- Pearse, J., & Gudjonsson, G. (1996). How appropriate are appropriate adults? *Journal of Forensic Psychiatry*, 7, 570-580.
- Pearse, J., Gudjonsson, G. H., Clare, I. C. H., & Rutter, S. (1998). Police interviewing and psychological vulnerabilities: Predicting the likelihood of a confession. *Journal of Community and Applied Social Psychology*, 8, 1-21.
- Pierce, C. S., & Brodsky, S. L. (2002). Trust and understanding in the attorney-juvenile relationship. *Behavioral Sciences and the Law*, 20, 89-107.
- Peterson-Badali, M., & Abramovitch, R. (1992). Children's knowledge of the legal system: Are they competent to instruct legal counsel? *Canadian Journal of Criminology*, 34, 139-160.
- Peterson-Badali, M., & Abramovitch, R. (1993). Grade related changes in young people's reasoning about plea decisions. *Law and Human Behavior*, 17, 537-552.
- Peterson-Badali, M., Abramovitch, R., & Duda, J. (1997). Young children's legal knowledge and reasoning ability. *Canadian Journal of Criminology*, 39, 145-170.

- Peterson-Badali, M., Abramovitch, R., Koegel, C. J., & Ruck, M. D. (1999). Young people's experience of the Canadian youth justice system: Interacting with police and legal counsel. *Behavioral Sciences and the Law, 17*, 455-465.
- Redding, R., & Frost, L. (2002). Adjudicative competence in the modern juvenile court. *Virginia Journal of Social Policy and the Law, 9*, 353-410.
- Robertson, G., Pearson, R., & Gibb, R. (1996). Police interviewing and the use of appropriate adults. *Journal of Forensic Psychiatry, 7*, 297-309.
- Roesch, R., Zapf, P. A., Eaves, D., & Webster, C. D. (1998). *Fitness Interview Test* (rev. ed.). Burnaby, BC: Mental Health, Law and Policy Institute, Simon Fraser University.
- Ruback, R. B., & Vardaman, P. J. (1997). Decision making in delinquency cases: The role of race and juveniles' admission/denial of the crime. *Law and Human Behavior, 21*, 47-69.
- Sandoval, J. (2003). Test review of the Woodcock-Johnson III. From B. S. Plake, J. C. Impara, and R. A. Spies (Eds.), *The fifteenth mental measurements yearbook*. Lincoln, NE: Buros Institute.
- Saunders, L. E. (1981). Ignorance of the law among teenagers: Is it a barrier to the exertion of their rights as citizens? *Adolescence, 16*, 711-726.
- Scott, E. S., & Grisso, T. (1997). The evolution of adolescence: A developmental perspective on juvenile justice reform. *Journal of Criminal Law and Criminology, 88*, 137-189.
- Scott, E. W., Reppucci, N. D., & Woolard, J. L. (1995). Evaluating adolescent decision making in legal contexts. *Law and Human Behavior, 19*, 221-244.
- Selman, R. L., Beardslee, W., Schultz, L., Krupa, M., & Podorefsky, D. (1986). Assessing adolescent interpersonal negotiation strategies: Toward the integration of structural and functional models. *Developmental Psychology, 22*, 450-459.
- Shepherd, R. E., Jr., & Volenik, A. (1987). Juvenile Justice. *Criminal Justice, 2*, 33.
- Sigurdsson, J. F., & Gudjonsson, G. H. (1994). Alcohol and drug intoxication during police interrogation and the reasons why suspects confess to the police. *Addiction, 89*, 985-997.
- Sigurdsson, J. F., & Gudjonsson, G. H. (1996). The psychological characteristics of 'false confessors'. A study among Icelandic inmates and juvenile offenders. *Personality and Individual Differences, 20*, 321-329.
- Stavrakaki, C., Williams, E. C., Walker, S., Roberts, N., & Kotsopoulos, S. (1991). Pilot study of anxiety and depression in prepubertal children. *Canadian Journal of Psychiatry, 36*, 332-338.

- Steinberg, L. (2002). Clinical adolescent psychology: What it is, and what it needs to be. *Journal of Consulting and Clinical Psychology, 70*, 124-128.
- Steinberg, L., & Cauffman, E. (1996). Maturity of judgment in adolescence: Psychosocial factors in adolescent decision making. *Law and Human Behavior, 20*, 249-272.
- Stephenson, G. M., & Moston, S. J. (1993). Attitudes and assumptions of police officers when questioning criminal suspects. *Issues in Criminological and Legal Psychology, 18*, 30-36.
- Teplin, L. A., Abram, K. M., McClelland, G. M., Dulcan, M. K., & Mericle, A. A. (2002). Psychiatric disorders in youth in juvenile detention. *Archives of General Psychiatry, 59*, 1133-1143.
- United Nations General Assembly (1989, November 17). *Adoption of a convention on the rights of the child*. New York: Author.
- Vermeulen, S. C. A. (1997). *Legal knowledge and decision-making in adolescents: Plea decisions and competency to waive Charter cautions*. Unpublished doctoral dissertation, Simon Fraser University, Burnaby, British Columbia, Canada.
- Viljoen, J. L., & Zapf, P. A. (2002). Fitness to stand trial evaluations: A comparison of referred and non-referred defendants. *International Journal of Forensic Mental Health, 1*, 127-138.
- Walker, S. (1971). The lawyer-child relationship: A statistical analysis. *Duquesne Law Review, 9*, 627-650.
- Wash. Rev. Code Ann. § 13.40.010(2) (Supp. 1990)
- Wasserman, G. A., McReynolds, L. S., Lucas, C. P., Fisher, P., & Santos, L. (2002). The voice DISC-IV with incarcerated male youths: Prevalence of disorder. *Journal of the American Academy of Child and Adolescent Psychiatry, 41*, 314-321.
- Woodcock, R., McGrew, K. & Mather, N. (2001). *The Woodcock-Johnson III Cognitive Assessment Battery*. Itasca, IL: Riverside.
- Wundersitz, J., Naffine, N., & Gale, F. (1991). Production of guilt in the juvenile justice system: The pressures to "plead." *Howard Journal of Criminal Justice, 30*, 192-206.
- Youth Criminal Justice Act*, S.C. 2002, c. 1.
- Zapf, P. A., & Roesch, R. (2001). A comparison of the MacCAT-CA and the FIT for making determinations of competency to stand trial. *International Journal of Law and Psychiatry, 24*, 81-92.
- Zapf, P. A., Roesch, R., & Viljoen, J. L. (2001). The utility of the Fitness Interview Test for assessing fitness to stand trial. *Canadian Journal of Psychiatry, 46*, 426-432.

Table 1: Statements to the Police

	Silent (<i>n</i> = 15)	Denied (<i>n</i> = 35)	Confessed (<i>n</i> = 63)	$\chi^2(2, 113)$
<i>Demographic</i>				
14 or under (%)	26.7 ^a	37.1	55.6 ^b	5.68
15 or under (%)	40.0 ^a	60.0	73.0 ^b	6.24*
Male (%)	46.7	60.0	58.7	0.85
Ethnic Minority (%)	40.0	48.6	44.4	0.34
African-American	40.0	43.8	31.4	1.38
Low SES (IV-V) (%)	38.5 ^a	52.9 ^a	73.3 ^b	7.54*
<i>Situational</i>				
Anxious (%)	50.0	65.7	57.1	1.21
Drunk/high (%)	13.3	20.0	19.0	0.33
				<i>F</i> (2, 110)
Offense Severity	3.27 (0.80)	3.06 (1.06)	3.22 (0.96)	0.40
Prior Arrests	1.67 (0.49)	1.51 (0.70)	1.41 (0.71)	0.91
Perceived Evidence	7.07 (3.89) ^a	3.47 (4.19) ^b	6.86 (3.57) ^a	9.32***
<i>Legal Abilities</i>				
CMR	5.53 (2.13)	5.43 (1.97)	5.19 (2.16)	0.24
CMR-R	8.83 (3.11)	9.20 (1.71)	8.79 (1.72)	0.53
CMV	7.93 (2.15)	7.71 (2.38)	7.17 (3.04)	0.71
NI	9.47 (1.19)	9.40 (1.22)	9.03 (1.31)	1.33
RC	7.33 (1.99)	7.86 (2.02)	7.40 (2.20)	0.61
RS	5.47 (3.02)	5.54 (2.38)	4.89 (3.00)	0.70
<i>Cognitive Abilities</i>				
GIA	503.57 (12.38)	503.57 (9.71)	503.28 (10.69)	0.01
Verbal	505.57 (14.18)	504.69 (10.97)	505.81 (12.61)	0.09
Retrieval	497.72 (4.98)	498.49 (4.43)	498.38 (5.02)	0.13
Reasoning	494.93 (13.26)	500.71 (13.04)	497.72 (13.67)	1.07
Attention	509.07 (11.47)	509.57 (9.79)	509.07 (11.29)	0.03
Executive	503.57 (8.22)	505.23 (7.79)	505.16 (10.48)	0.18
<i>Psychopathology</i>				
Depression/Anxiety	10.33 (8.16)	6.60 (5.75)	8.42 (5.99)	2.06
Excitation	3.67 (4.24)	2.77 (3.55)	2.65 (3.31)	0.52
Behavior	11.00 (2.88)	9.77 (3.72)	9.25 (2.71)	1.99

Note: * $p < .10$, ** $p < .05$, *** $p < .01$. % are by column. Superscripts refer to group comparisons using Games-Howell post hoc comparisons. Groups with different superscripts differed significantly from each at $p < .05$.

Table 2: Requests for Counsel

	Asked for Lawyer (n = 11)	Didn't Ask For (n = 102)	$\chi^2(1, 113)$
<i>Demographic</i>			
14 and under (%)	0	100	10.58**
15 and under (%)	36.4	68.0	4.36*
Male (%)	54.5	58.3	0.06
Ethnic Minority (%)	45.5	44.7	0.00
African-American (%)	40.0	36.0	0.06
Low SES (IV-V) (%)	30.0	60.0	5.14*
<i>Situational</i>			
Anxious (%)	81.8	56.9	2.56
Drunk/high (%)	27.3	17.5	0.64
			<i>F(1, 111)</i>
Offense Severity	3.00 (0.89)	3.19 (0.98)	4.54**
Prior Arrests	1.64 (0.50)	1.44 (0.71)	0.74
<i>Legal Abilities</i>			
CMR	6.54 (1.92)	5.13 (2.10)	4.54*
CMR-R	10.10 (2.17)	8.78 (1.88)	4.70*
CMV	8.91 (2.47)	7.23 (2.77)	3.71
NI	9.00 (1.84)	9.21 (1.20)	0.28
RC	8.27 (2.28)	7.40 (2.15)	1.63
RS	6.82 (2.99)	4.96 (2.75)	4.45*
<i>Cognitive Abilities</i>			
GIA	506.45 (10.08)	503.10 (10.51)	1.01
Verbal	510.09 (15.18)	504.94 (11.78)	1.79
Retrieval	499.73 (4.69)	498.13 (4.80)	1.10
Reasoning	498.91 (12.73)	498.36 (13.54)	0.02
Attention	511.64 (9.35)	508.91 (10.86)	0.64
Executive	506.82 (6.26)	504.85 (9.63)	0.44
<i>Psychopathology</i>			
Depression/Anxiety	6.00 (4.53)	8.33 (6.40)	1.38
Excitation	0.91 (1.13)	3.03 (3.59)	3.77*
Behavior	8.36 (4.06)	9.77 (2.97)	2.06

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. % are by column.

Table 3: Guilty Pleas

	Plead Guilty (<i>n</i> = 79)	Not Guilty (<i>n</i> = 48)	Unsure (<i>n</i> = 21)	$\chi^2(2, 148)$
<i>Demographic</i>				
14 or under (%)	45.6	47.9	68.0	3.94
15 or under (%)	64.6	66.7	68.0	0.12
Male (%)	50.6	54.2	52.0	0.15
Ethnic Minority (%)	35.4	47.9	36.0	2.10
African-American (%)	23.9	40.5	30.4	3.37
Low SES (IV-V) (%)	70.7	58.7	69.6	1.94
<i>Situational</i>				
Had Confessed (%)	52.0	46.7	38.1	1.34
Private Lawyer (%)	10.1	14.6	24.0	3.10
				<i>F</i> (2, 145)
Offense Severity	3.22 (0.90)	3.15 (0.95)	3.48 (1.00)	1.10
Prior Arrests	1.49 (0.75)	1.44 (0.65)	1.28 (0.79)	0.82
Perceived Evidence	7.09 (3.78) ^a	3.67 (3.69) ^b	5.87 (3.96)	11.40 ^{***}
Weeks in Custody	1.57 (1.22)	1.73 (1.48)	1.32 (0.75)	0.89
<i>Legal Abilities</i>				
Understanding	7.42 (2.93) ^a	7.33 (2.85) ^a	5.08 (3.48) ^b	6.17 ^{**}
Appreciation	4.27 (1.61) ^a	4.10 (1.69) ^a	2.48 (1.98) ^b	10.85 ^{***}
Communication	9.85 (2.94) ^a	10.06 (3.30) ^a	7.56 (3.57) ^b	5.93 ^{**}
Communication Adj.	6.13 (1.61) ^a	6.31 (1.76) ^a	4.88 (1.92) ^b	6.34 ^{**}
<i>Cognitive Abilities</i>				
GIA	503.49 (11.53)	502.20 (9.77)	501.17 (12.46)	0.47
Verbal	505.14 (11.64)	504.74 (13.33)	503.80 (9.89)	0.12
Retrieval	498.32 (5.20)	497.76 (4.32)	496.46 (7.64)	1.07
Reasoning	498.62 (13.40)	494.80 (14.88)	496.29 (17.89)	1.02
Attention	509.34 (11.55)	507.89 (9.73)	505.25 (12.28)	1.26
Executive	505.84 (9.25)	502.74 (9.21)	503.33 (10.29)	1.77
<i>Psychopathology</i>				
Depression/Anxiety	8.84 (6.87)	7.15 (5.21)	8.13 (6.26)	1.08
Excitation	3.06 (3.42)	2.65 (3.28)	3.75 (4.07)	0.81
Behavior	9.86 (3.21)	9.58 (3.25)	9.56 (3.39)	0.15

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. % are by column. Superscripts refer to group comparisons using Games-Howell post hoc comparisons. Groups with different superscripts differed significantly from each at $p < .05$.

Table 4: Plea Bargains

	Accept Plea Bargain (<i>n</i> = 99)	No (<i>n</i> = 19)	Unsure (<i>n</i> = 31)	$\chi^2(2, 149)$
<i>Demographic</i>				
14 or under (%)	48.5	52.6	51.6	0.17
15 or under (%)	65.7	68.4	64.5	0.08
Male (%)	52.5 ^a	78.9 ^b	38.7 ^a	7.69*
Ethnic Minority (%)	39.4	52.6	35.5	1.53
African-American (%)	30.2	43.8	25.9	1.56
Low SES (IV-V) (%)	62.8 ^a	55.6 ^a	82.8 ^b	4.94
<i>Situational</i>				
Had Confessed (%)	48.9	47.1	50.0	0.04
Private Lawyer (%)	14.1	26.3 ^a	6.5 ^b	3.84
				<i>F</i> (2, 146)
Offense Severity	3.15 (0.91)	3.37 (1.16)	3.32 (0.79)	0.71
Prior Arrests	1.54 (0.64) ^a	1.58 (0.61) ^a	1.06 (0.89) ^b	5.79**
Perceived Evidence	6.26 (3.92) ^a	3.21 (3.87) ^b	5.96 (4.18)	4.30*
Weeks in Custody	1.62 (1.28) ^a	2.26 (1.76) ^a	1.10 (0.30) ^b	5.44**
<i>Legal Abilities</i>				
Understanding	7.66 (2.70) ^a	7.05 (3.66)	5.06 (3.19) ^b	9.20***
Appreciation	4.23 (1.62) ^a	3.53 (2.14)	3.06 (1.97) ^b	5.66**
Communication	10.16 (2.91) ^a	8.53 (3.85)	8.06 (3.46) ^b	6.27**
Communication Adj.	6.20 (1.66)	5.53 (2.17)	5.45 (1.80)	2.81
<i>Cognitive Abilities</i>				
GIA	504.72 (11.37) ^a	493.56 (8.58) ^b	501.53 (9.11) ^a	8.58***
Verbal	506.72 (11.36)	498.50 (14.38)	502.27 (10.42)	4.74*
Retrieval	498.42 (4.95) ^a	495.39 (4.62) ^b	497.33 (7.03)	2.55
Reasoning	499.02 (14.79) ^a	486.89 (16.07) ^b	496.47 (11.35)	5.48**
Attention	510.08 (11.77) ^a	501.61 (8.94) ^b	505.77 (8.61)	5.50**
Executive	505.41 (9.79) ^a	498.67 (9.04) ^b	504.70 (7.80)	3.99*
<i>Psychopathology</i>				
Depression/Anxiety	8.51 (6.25)	6.63 (6.40)	7.94 (6.49)	0.73
Excitation	2.89 (3.43)	4.21 (4.26)	2.87 (3.23)	1.19
Behavior	10.14 (3.26) ^a	9.16 (3.61)	8.68 (2.77) ^b	2.77

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. % are by column. Superscripts refer to group comparisons using Games-Howell post hoc comparisons. Groups with different superscripts differed significantly from each at $p < .05$.

Table 5: Disclosures to Attorneys

	Disclosure (<i>n</i> = 105)	No or Unsure (<i>n</i> = 47)	$\chi^2(2, 152)$
<i>Demographic</i>			
14 or under (%)	51.4	46.8	0.28
15 or under (%)	68.6	59.6	1.17
Male (%)	45.7	66.0	5.33*
Ethnic Minority (%)	29.5	61.7	14.07***
African-American (%)	22.1	51.4	10.78**
Low SES (IV-V) (%)	69.0	61.4	0.80
<i>Situational</i>			
Had Confessed (%)	53.6	36.4	3.61
Plead Guilty (%)	54.3	53.2	0.73
Met with Lawyer (%)	67.6	59.6	0.93
			<i>F</i> (1, 150)
Offense Severity	3.20 (0.96)	3.32 (0.86)	0.53
Prior Arrests	1.39 (0.74)	1.55 (0.69)	1.64
Perceived Evidence	6.52 (3.88)	4.38 (4.06)	8.85**
Weeks in Custody	1.56 (1.26)	1.62 (1.23)	0.06
<i>Legal Abilities</i>			
Understanding	7.13 (3.19)	6.72 (2.92)	0.57
Appreciation	4.11 (1.77)	3.49 (1.85)	3.94*
Communication	10.45 (2.66)	7.51 (3.59)	31.64***
Communication Adj.	6.44 (1.41)	4.96 (2.07)	26.44***
<i>Cognitive Abilities</i>			
GIA	504.28 (10.98)	499.26 (10.76)	6.67*
Verbal	506.66 (11.99)	500.61 (10.53)	8.71**
Retrieval	498.60 (5.25)	496.15 (5.49)	6.70*
Reasoning	498.41 (14.68)	494.07 (14.34)	2.80
Attention	509.20 (11.09)	506.07 (11.13)	2.52
Executive	505.60 (9.37)	501.96 (9.29)	4.82*
<i>Psychopathology</i>			
Depression/Anxiety	8.18 (5.98)	8.19 (7.01)	<0.01
Excitation	2.74 (3.20)	3.70 (3.99)	2.49
Behavior	9.29 (3.24)	10.70 (3.02)	6.47*

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. % are by column.

Table 6: Disagreements with Attorney

	Assertive (n = 54)	Dismissive (n = 50)	Compliant (n = 26)	Unsure (n = 20)	χ^2 (3, 150)
<i>Demographic</i>					
14 or under (%)	35.2 ^a	40.0 ^a	76.9 ^b	80.0 ^b	21.48***
15 or under (%)	48.1 ^a	64.0 ^{a,c}	84.6 ^{b,c}	90.0 ^b	16.72**
Male (%)	38.9 ^a	62.0 ^b	53.8	60.0	6.27
Ethnic Minority (%)	27.8	46.0	46.2	50.0	5.36
African-American (%)	22.0	34.1	36.4	41.2	3.21
Low SES (IV-V) (%)	46.0 ^a	77.6 ^b	80.0 ^b	77.8 ^b	15.27**
<i>Situational</i>					
Met with Lawyer (%)	72.2	64.0	61.5	50.0	3.35
					<i>F</i> (3, 147)
Offense Severity	3.11 (0.90)	3.18 (0.94)	3.35 (0.94)	3.55 (0.89)	1.29
Prior Arrests	1.41 (0.71)	1.42 (0.78)	1.62 (0.64)	1.40 (0.75)	0.56
Perceived Evidence	6.05 (4.09)	6.08 (3.95)	4.65 (4.31)	6.25 (3.86)	0.84
Weeks in Custody	1.44 (1.02)	1.60 (0.93)	1.92 (2.10)	1.35 (0.93)	1.11
<i>Legal Abilities</i>					
Understanding	8.26 (2.40) ^a	7.38 (2.86) ^{a,b}	5.38 (2.55) ^c	4.75 (4.10) ^{b,c}	10.73***
Appreciation	4.70 (1.41) ^a	4.10 (1.69) ^{a,b}	3.12 (1.66) ^{b,c}	2.30 (1.95) ^c	13.10***
Communication	11.65 (2.04) ^a	9.28 (3.27) ^b	7.50 (2.39) ^c	7.25 (3.68) ^{b,c}	19.41***
Communication Adj.	6.91 (1.19) ^a	5.88 (1.73) ^b	5.19 (1.83) ^b	4.90 (1.97) ^b	11.07***
<i>Cognitive Abilities</i>					
GIA	507.25 (10.31) ^a	502.37 (9.32)	499.68 (11.82) ^b	495.60 (11.27) ^b	7.08***
Verbal	510.08 (11.98) ^a	504.08 (9.54) ^b	499.52 (12.39) ^b	499.60 (11.11) ^b	7.26***
Retrieval	499.82 (4.44) ^a	497.71 (5.15)	496.52 (4.95) ^b	494.70 (7.11) ^b	5.46**
Reasoning	500.14 (13.80)	497.78 (13.13)	495.00 (13.82)	489.35 (18.15)	2.96*
Attention	513.06 (9.83) ^a	508.61 (9.96)	505.16 (11.61) ^b	498.95 (10.42) ^b	9.96***
Executive	507.16 (9.58) ^a	505.37 (8.14)	501.04 (9.63)	499.65 (9.32) ^b	4.71**
<i>Psychopathology</i>					
Depression/Anxiety	7.44 (5.81)	8.86 (7.39)	7.69 (5.56)	8.65 (5.65)	0.52
Excitation	1.76 (1.72) ^a	3.41 (3.68) ^b	5.27 (4.94) ^b	2.55 (2.87)	7.04***
Behavior	9.35 (2.95)	10.40 (3.34)	9.96 (3.13)	9.00 (3.73)	1.35

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. % are by column. Superscripts refer to group comparisons using Games-Howell post hoc comparisons. Groups with different superscripts differed significantly from each at $p < .05$.

Table 7: Appeals

	Yes (n = 95)	No or Unsure (n = 57)	$\chi^2(1, 152)$
<i>Demographic</i>			
14 or under (%)	43.2	61.4	4.74*
15 or under (%)	58.9	77.2	5.27*
Male (%)	47.4	59.6	2.15
Ethnic Minority (%)	37.9	42.1	0.26
African-American (%)	28.0	34.0	0.52
Low SES (IV-V) (%)	62.4	74.5	2.19
<i>Situational</i>			
Had Confessed (%)	45.5	52.8	0.72
Met with Lawyer (%)	70.5	56.1	3.25
			<i>F(1, 150)</i>
Offense Severity	3.28 (0.99)	3.16 (0.84)	0.65
Prior Arrests	1.48 (0.70)	1.37 (0.77)	0.91
Perceived Evidence	5.90 (4.17)	5.72 (3.88)	0.06
Weeks in Custody	1.68 (1.38)	1.40 (0.98)	1.81
<i>Legal Abilities</i>			
Understanding	7.42 (2.79)	6.32 (3.49)	4.63*
Appreciation	4.36 (1.55)	3.19 (1.99)	16.23***
Communication	10.38 (2.86)	8.14 (3.44)	18.85***
Communication Adj.	6.38 (1.63)	5.32 (1.82)	13.90***
<i>Cognitive Abilities</i>			
GIA	503.56 (11.24)	501.24 (10.87)	1.49
Verbal	505.77 (11.72)	503.16 (12.02)	1.71
Retrieval	498.23 (4.97)	497.17 (6.13)	1.30
Reasoning	497.86 (13.85)	495.65 (16.01)	0.78
Attention	509.52 (10.92)	505.96 (11.32)	3.49
Executive	504.70 (8.97)	504.06 (10.33)	0.16
<i>Psychopathology</i>			
Depression/Anxiety	7.66 (5.87)	9.07 (6.92)	1.77
Excitation	2.89 (3.33)	3.29 (3.75)	0.44
Behavior	9.75 (3.08)	9.68 (3.49)	0.01

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. % are by column.

CHAPTER 6: CONCLUSIONS

Young defendants' legal capacities and decisions have become increasingly important, as the juvenile justice system has become more punitive in nature (Grisso, 1998; Grisso, Miller, & Sales, 1987; *In re Gault*, 1967; Redding & Frost, 2002). This dissertation examined the psychometric properties of the Fitness Interview Test as a tool for assessing competency, predictors of youths' legal capacities and decisions, and rates of impairment under various legal standards. The relevant results and conclusions were discussed in detail in each chapter. In this section, the major findings are summarized and the key areas for future research are outlined.

Competency Assessment

As a result of changing legal standards, clinicians are likely to be increasingly faced with the task of assessing interrogative and adjudicative competency in adolescents. Such evaluations may be difficult due to the ambiguity of legal standards, and the lack of research on the appropriateness of competency assessment instruments with adolescents. This study examined the psychometric properties of the Fitness Interview Test (FIT; Roesch, Zapf, Eaves, & Webster, 1998) as a tool for assessing adjudicative competency. The interrater reliability of sections on the FIT was found to be good, with ICCs falling in the .80s and .90s. Consistent with the design of the FIT and current legal standards, confirmatory factor analysis yielded a pattern of three factors.

Future research could compare the factor structure of the FIT for particular age groups of defendants, and item response theory could be used to investigate possible age-related test bias (see Vincent, 2002). Finally, given that the assessment of

adolescents' competency requires a consideration of unique developmental issues, such as cognitive and emotional maturity, the development of tools specifically for adolescents should be considered (see Grisso, 2003).

Legal Abilities

This study found that performance on measures of legal abilities increased with age. These developmental differences were partially mediated or explained by cognitive development. Of the specific cognitive abilities examined (general intellectual ability, verbal ability, reasoning, long-term retrieval, attention, and executive functioning), verbal ability was a particularly strong predictor of performance on competency measures. Also, defendants obtained lower scores on competency measures if they showed evidence of attention deficits or hyperactivity, came from below average socioeconomic classes, and had spent limited time with their attorneys.

Future research could examine the relationship of increasingly specific variables to legal abilities, such as subtypes of attention-deficit/hyperactivity disorder and aspects of verbal abilities (i.e., receptive and expressive language abilities). Given that this was the first study to examine the possible impact of attorneys on client's legal abilities, further research on this relationship is warranted. Finally, in light of our finding that cognitive development partially but did not entirely account for developmental differences in legal abilities, further research could test a model of competence that incorporated psychosocial factors, which have been hypothesized to be important to adolescents' capacities (Scott, Reppucci, & Woolard, 1995; Steinberg & Cauffman, 1996), in addition to cognitive development.

Legal Standards

Currently, there is debate as to appropriate legal standards for adolescents. Specifically, courts appear undecided as to whether adolescents' adjudicative competency should be judged based on comparisons to adults or to other adolescents (Redding & Frost, 2001). This research indicated that over half of young defendants showed impairment on one or more adjudicative abilities when adult norms were applied, whereas the use of adolescent norms resulted in extremely low requirements for adjudicative abilities. When only understanding of interrogation rights was required, substantially fewer young defendants were classified as impaired in interrogative abilities than when both understanding and appreciation was required. Defendants did not consistently show patterns of agreement across abilities.

Although this study provides evidence regarding who could be considered impaired under various legal standards, research is needed on who is, in practice, found incompetent under various legal standards. Also, to gain further understanding of differences in views regarding youths' legal abilities, and to help attain consistency and consensus in standards, future research could survey legal and mental health professionals to examine their views as to which and what level of legal abilities should be expected of adolescents.

Legal Decisions

Recently, researchers and legal theorists have hypothesized that there may be developmental differences not only in legal abilities, but also in legal decision-making (Grisso et al., 2003; Scott et al., 1995; Steinberg & Cauffman, 1996). Consistent with this

hypothesis, this study indicated that young adolescents were more likely than older adolescents to confess and waive their right to counsel, and less likely to report that they would appeal their cases or discuss disagreements with their attorneys. Also, while adolescents aged 16 to 17 were more likely to confess, plead guilty, accept a plea bargain, and disclose information to attorneys if they perceived that there was strong evidence against them, younger defendants' legal decisions were not associated with strength of evidence.

At this point, the implications of various legal decisions in young defendants are largely unknown. For instance, it is unclear if decisions to confess and waive the right to counsel have an adverse impact on court outcomes. This would be a valuable topic for future research. Also, while we investigated legal decisions about defendants' own cases, future research could combine this approach with hypothetical vignettes, which are useful in their ability to control for variables. Finally, studies could examine other types of legal decisions, such as decisions to falsely confess.

Final Conclusions

Within the period of a century, assumptions regarding the maturity and competency of adolescents as trial defendants have undergone dramatic revision. It is unlikely that the actual characteristics of adolescents have changed, but only our beliefs about them. Whereas in the past, youth were regarded as less mature and competent than adults, youth and adults are now viewed similarly. This matter is far from resolved, and there remains considerable uncertainty and upheaval in these beliefs.

For researchers, this uncertainty and upheaval make this a landscape through which it is difficult to negotiate. However, for these same reasons, it is an area that

holds enormous potential for researchers to contribute to legal policy and thought. In 1995, Scott, Reppucci, and Woolard made a call for research in this area, noting that legal policies about adolescent competencies “are more usefully based on data than on intuition and ideology” (p. 240). Recently, researchers have started to respond to this call (e.g., Grisso et al., 2003). To extend existing research, this study examined the psychometric properties of the Fitness Interview Test as a tool for assessing competency, predictors of youths’ legal abilities and decisions, and rates of impairment under various legal standards. There is a significant need for additional research on adolescent competency in the interests of elucidating the correlates and possible sources of legal deficits, developing appropriate legal policies, and producing strategies to assess and improve legal abilities.

References

- Grisso, T. (1998). *Instruments for assessing understanding and appreciation of Miranda rights*. Sarasota, FL: Professional Resource Press/Professional Resource Exchange.
- Grisso, T. (2003). *Evaluating competencies: Forensic assessments and instruments* (2nd ed.). New York: Kluwer Academic/Plenum Press.
- Grisso, T., Miller, M. O., & Sales, B. (1987). Competency to stand trial in juvenile court. *International Journal of Law and Psychiatry*, 10, 1-20.
- In re Gault, 387 U. S. 1 (1967).
- Redding, R., & Frost, L. (2001). Adjudicative competence in the modern juvenile court. *Virginia Journal of Social Policy and the Law*, 9, 353-410.
- Roesch, R., Zapf, P. A., Eaves, D., & Webster, C. D. (1998). *Fitness Interview Test* (rev. ed.). Burnaby, BC: Mental Health, Law and Policy Institute, Simon Fraser University.
- Scott, E. W., Reppucci, N. D., & Woolard, J. L. (1995). Evaluating adolescent decision making in legal contexts. *Law and Human Behavior*, 19, 221-244.
- Steinberg, L., & Cauffman, E. (1996). Maturity of judgment in adolescence: Psychosocial factors in adolescent decision making. *Law and Human Behavior*, 20, 249-272.
- Vincent, G. M. (2003). *Investigating the legitimacy of adolescent psychopathy assessments: Contributions of item response theory*. Unpublished doctoral dissertation, Simon Fraser, Burnaby, British Columbia, Canada.

Appendix A: Ethics Approval

SIMON FRASER UNIVERSITY

OFFICE OF RESEARCH ETHICS



BURNABY, BRITISH COLUMBIA
CANADA V5A 1S6
Telephone: 604-291-3447
FAX: 604-268-6785

October 24, 2002

Ms. Jodi Viljoen
Graduate Student
Department of Psychology
Simon Fraser University

Dear Ms. Viljoen:

**Re: The Criminal Competencies of Young Offenders:
The contribution of cognitive Abilities**
"Competency to Stand Trial in Young Offenders"
SSHRC
American Psychology-Law Society

I am pleased to inform you that the above referenced Request for Ethical Approval of Research has been approved on behalf of the Research Ethics Board. The approval for this project is for the term of the period of the grant, as defined by the funding agency. If this project does not receive grant support, the term of the approval is twenty-four months from the above date.

Any changes in the procedures affecting interaction with human subjects should be reported to the Research Ethics Board. Significant changes will require the submission of a revised Request for Ethical Approval of Research. This approval is in effect only while you are a registered SFU student.

Your application has been categorized as 'minimal risk' and approved by the Director, Office of Research Ethics, on behalf of the Research Ethics Board in accordance with University policy R20.0, <http://www.sfu.ca/policies/research/r20-01.htm>. The Board reviews and may amend decisions made independently by the Director, Chair or Deputy Chair at its regular monthly meetings

"Minimal risk" occurs when potential subjects can reasonably be expected to regard the probability and magnitude of possible harms incurred by participating in the research to be no greater than those encountered by the subject in those aspects of his or her everyday life that relate to the research.

Best wishes for success in this research.

Sincerely,

Dr. Hal Weinberg, Director
Office of Research Ethics

c: R. Roesch, Supervisor