

2017

Evaluating Factors Used by Mental Health Professionals to Access Juvenile Adjudicative Competency

Heidi M. Wennesheimer
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Walden University

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Heidi Wennesheimer

has been found to be complete and satisfactory in all respects,
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the review committee have been made.

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Walden University
2017

Abstract

Evaluating Factors Used by Mental Health Professionals to Assess Juvenile Adjudicative
Competency

by

Heidi M. Wennesheimer

MBA, Concordia University, 2012

BA, Concordia University, 2004

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Forensic Psychology

Walden University

April 2017

Abstract

Mental health professionals (MHPs) evaluate juveniles' competency to stand trial (JAC) for the courts more than any other psychological issue, but little research has been done about JAC. Only 2 previous studies have examined assessment procedures and tools used by MHPs to evaluate JAC. This quantitative nonexperimental study examined ratings by 44 MHPs in Wisconsin and Illinois for the importance of considering 6 different research-based factors linked to lifespan developmental theory and the usefulness of 3 assessment tools that have all been recommended previously by professional best practice guidelines to evaluate JAC. This study examined 2 levels of an independent variable, type of court, and how this affected ratings for importance of factors and usefulness of tools. When ratings were compared using paired *t* tests, the developmental factor that pertains to understanding court proceedings and working with one's attorney achieved statistical significance as more important for juvenile court than for adult court. Repeated measures ANOVA evaluated differences in ratings within groups for juvenile and adult court. The cognitive developmental factor was rated as statistically more important than other developmental factors for adult court. The results imply that, MHPs consider cognitive development and ability to understand and discuss court proceedings as critical to consider during JAC. Regarding ratings for usefulness of tools, there was not a statistically significant difference between the ratings for the 3 tools either between groups or within groups. These results could contribute to positive social change by increasing consistency in how JAC is evaluated and as a result, juveniles could be treated more fairly and in an equitable way during court proceedings.

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Dedication

There are people in everyone's lives who make success both possible and rewarding. My success would not be possible without a loving and supporting family and amazing friends.

To my husband JD, thank you for your practical and emotional support as you often had to fill the role of "mom" while I was writing. Thank you for believing in me and not letting me give up on my goals. To my children, Damian, Connor, Alexis, and Brayden who finally have an answer to the question that was asked so frequently, "Are you done yet?" Too often they had to forgive me for the occasions that I missed soccer, cross country and track practices, games, and sometimes tournaments, realizing that mom was pursuing her dream. Many sacrifices were made along the way by everyone, but in the end, we share this accomplishment.

To Damian, who often asked about my dissertation and what "stage" I was in and for always being intrigued with what I was working on. To Connor (Nonnor), thank you for always seeing the light at the end of the tunnel by reminding me that "once you're finished we can go on a long vacation." To my princess Alexis, thank you for the times that you massaged my shoulders while I wrote. To my little Brayden (peanut), thank you for all your hugs and kisses while I worked on my paper.

To my brother Jim, thank you for your unfaltering support, encouragement, and for standing by me all these years. To the Wennesheimer and Fiala family, thank you for your encouraging words and reassurance. You stood by me since the beginning of my

studies and always provided inspiration to achieve more. To Becky and Kelly, thank you for being a great source of motivation and for celebrating each milestone with me.

This dissertation is also dedicated to my grandma who received her angel wings while I was writing the final chapters. Thank you for always listening to my hopes, ideas, and dreams. You are my inspiration.

It is pure splendor to come to the end of a long hard road, and I am blessed to have such a wonderful group of family and friends who have joined me in this journey. Without them I would not have reached my destination.

Acknowledgments

I wish to thank my committee members who were more than generous with their expertise and valuable time. I would like to first express my gratitude to my chair, Dr. Laurie Westlake, for all of the guidance, valuable ideas, and support she provided during my dissertation. I would also like to thank my committee members, Dr. Twila Wingrove for her contribution at the proposal stage and Dr. Carl Valdez with his support with data analysis. You have been great mentors. It has been a pleasure to work with you on this project.

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Chapter 1

Introduction

The purpose of this research was to determine if the purpose of the evaluation (i.e., type of court, juvenile or adult) was associated with mental health professional (MHP) ratings of the importance factors taken into account during evaluation of juvenile adjudicative competency (JAC). These factors can include mental health diagnoses, intellectual disabilities, neuropsychological, cognitive, emotional, psychosocial functioning, and *Dusky* criteria/knowledge of the legal system. MHPs are called on to address the issue of competency more than any other criminal law issue (Stafford & Sellbom, 2012). In addition, I explored whether the purpose of the evaluation (i.e., type of court, juvenile or adult) was associated with MHPs' ratings of usefulness for each of the three most commonly recommended tools for JAC evaluations: (a) the Juvenile Adjudicative Competence Inventory (JACI; Grisso, 2005), (b) MacArthur Competence Assessment Tool-Criminal Adjudication (MacCAT-CA; Hoge, Bonnie, Poythress, & Monahan, 1999), and (c) the Fitness Interview Test-Revised (FIT-R; Roesch, Zapf, & Eaves, 2006).

This study may lead to positive social change by contributing to the knowledge base regarding what MHPs consider when conducting juvenile competency evaluations. This positive social change may result in more consistent methods when evaluating JAC. As a result, juveniles convicted of crimes may be treated in a more fair and equitable

way. This chapter includes the background of juvenile adjudicative competency, lifespan developmental theory (the theoretical framework for this study), the assumptions or statements that are accepted as true by the researcher and peers, limitations, and the significance of the study.

Background

The competency standard was created to protect the rights of adults and juveniles criminally charged. Competency in the U.S. legal system serves to protect individuals from facing a legal trial if they do not have sufficient capacities or abilities to function appropriately in legal proceedings (Kruh & Grisso, 2009). The U.S. Supreme Court provided the definition of competency to stand trial for adults in the landmark case, *Dusky v. United States* (1960). The *Dusky* standard states that a defendant must have both “sufficient present ability to consult with his lawyer with a reasonable degree of rational understanding and have a rational as well as factual understanding of the proceedings” (*Dusky v. United States*, 1960). Some juveniles who face legal proceedings may lack competency-related abilities that pertain to the legal system such as factual and rational understanding of the court’s process, legal decision making, and assisting legal counsel as these abilities may be impaired by mental disorders or may develop at a slower rate (Kruh & Grisso, 2009).

Within the past 14 years, researchers have seen an increase in the number of studies that have identified factors believed to be related to JAC. These factors have included: whether the juvenile is developmentally disabled or meets criteria for a mental

disorder (Cauffman & Steinberg, 2012; Grisso, 2005); the juvenile's developmental functioning in neurological, cognitive, and psychosocial domains (Giedd et al., 1999; Grisso, 2005; Sowell, Thompson, Tessner, & Toga, 2001); and the juvenile's understanding of how the criminal court process works and how to communicate with his/her defense attorney during the trial (Scott & Grisso, 2005).

Despite the amount of research regarding factors believed to be related to JAC, few assessment tools have been developed to assess JAC. Prior researchers of JAC have indicated that adult assessment tools have been primarily used with juveniles such as the MacCAT-CA (Hoge et al., 1999). Some researchers have questioned the validity of the Mac-CAT-CA with juveniles (Ficke, Hart, & Deardorff, 2006; Zapf & Viljoen, 2003). Another assessment tool that has included a modified version for use with juvenile defendants is the Georgia Court Competency Test – Juvenile Revision (GCCT-JR; Cooper, 1997). There were problems with using this assessment to assess JAC including difficulty developing a screening measure suitable to use with the juvenile population (Cooper, 1997). The FIT-R was originally designed for use with adults in Canada; however, researchers believed it could be used as a guide in other jurisdictions that share similar legal precedence and clinical practice.

In response to the lack of tools to assess JAC, Grisso (2005) developed the JACI. The JACI was designed to assess factors supported by previous research as related to competency-related problems and abilities. The protocol includes a structured interview that assists MHPs in reviewing previous psychological test findings supplemented by

testing. This interview assesses the juvenile's understanding, appreciation, and reasoning abilities in 12 content areas related to juvenile legal proceedings. The JACI protocol takes into consideration different ages, developmental issues, and psychosocial functioning. The JACI does not produce standardized scores. The mental health professional evaluates the quality of a juvenile's responses and analyzes the clinical data in order to develop an opinion about the juvenile's level of adjudicative competency.

Based on research findings about factors believed to be related to JAC, the American Academy of Forensic Psychology recommended best practice guidelines for evaluation of JAC (Grisso, 2005; Kruh & Grisso, 2009). These guidelines have provided MHPs with an assessment protocol that includes either the JACI or comparable measures that assess the same factors as the JACI.

Two recent studies have evaluated procedures used to assess JAC. Lexcen and Heavin (2010) evaluated whether the JACI would yield valid findings regarding JAC similar to previous findings that did not use the JACI. Researchers used the JACI to help form opinions regarding whether juveniles met the two prongs in the *Dusky* standard (capacity to understand and capacity to assist counsel). Researchers hypothesized that impairments in either capacity to understand or capacity to assist counsel would be linked to younger age, mental health problems, and lower intelligence. Results revealed that 58% of juveniles in the 8-12 year-old group had moderate to severe problems with the capacity to understand, compared to 47% of the 13-14 year-olds, 37% of the 15-16 year-olds, and 46% of the 17-18 year-olds. The results further indicated that 60% of the 8-12

year-olds had moderate to severe problems with the capacity to assist counsel, compared to 54% of the 13-14 year-olds, 47% of the 15-16 year-olds, and 48% of the 17-18 year-olds. Lexcen and Heavin (2010) confirmed that the JAC evaluation results produced by the JACI were consistent with previous findings in studies in which the JACI was not used. The results indicated that intelligence and psychopathology impacted juveniles' capacity to understand, capacity to assist counsel, and meet criteria for adjudicated competency. The type of court was not identified in the summary of the study.

Another study evaluated the usefulness of the JACI protocol by focusing on how well it informed the evaluator's opinion on JAC (Tomei & Panza, 2014). Researchers were interested in understanding whether MHPs used the JACI and whether the JACI would yield valid findings that could inform an opinion about JAC (Tomei & Panza, 2014). The evaluations were conducted for juvenile court. The results of the study indicated that the overall structured JACI interview score was strongly related to an opinion of competency, and these findings were statistically significant. Further, the structured JACI interview compared to an unstructured clinical interview appeared to assess more competency-related abilities that resulted in an opinion of incompetency. The researchers concluded that the JACI is a strong predictor of final competency recommendations and is a valuable tool for MHPs in conducting juvenile competency assessments (Tomei & Panza, 2014).

In sum, this researcher found only two studies that evaluated procedures, designed specifically to assess JAC (Lexcen & Heavin, 2010; Tomei & Panza, 2014). There is a

gap in the literature regarding studies that have evaluated assessment procedures for JAC. No studies were found regarding the perceptions of MHPs regarding the usefulness or importance of considering research-based factors and assessment tools during evaluations for JAC or the court for which the evaluation is being conducted. The intent of this study was to determine if the purpose of the evaluation (i.e., type of court, juvenile or adult) was associated with MHPs' ratings of the research-based factors such as mental health diagnoses, intellectual disabilities, neuropsychological, cognitive, emotional, psychosocial functioning, and *Dusky* criteria/knowledge of the legal system when evaluating juveniles and offering an opinion about adjudicative competency. In addition, the research reviewed if the purpose of the evaluation was associated with MHPs' ratings of the perceived usefulness of the most commonly used tools to evaluate JAC, the JACI, MacCAT-CA, and the FIT-R.

Problem Statement

In the past decade, there have been numerous studies in general regarding JAC; however, only two studies have evaluated the usefulness, importance, or effectiveness of research-based factors and assessment tools during evaluations for JAC (Lexcen & Heavin, 2010; Tomei & Panza, 2014). It is unclear what, if any, research based factors or assessment tools MHPs in Wisconsin use when assessing JAC. Kruh and Grisso (2009) stated that clinical problems such as mental health and intellectual disabilities have contributed to deficits in legal decisional ability. Developmental factors such as age-related neuropsychological, cognitive, and psychosocial maturation have also been shown

to impact juvenile competency. An understanding that would greatly contribute to social change is that of the perceptions of MHPs regarding clinical, developmental, and legal decisional factors that are important to assess in order to arrive at opinions about JAC. This quantitative nonexperimental research design examined if the purpose of the evaluation was associated with the perceptions of research-based factors and assessment tools MHPs in Wisconsin use when assessing juvenile competency.

Purpose of the Study

The intent of this quantitative study was to determine the importance MHPs in Wisconsin place on the purpose of the evaluation and research-based clinical and developmental factors and how they rate existing assessment tools when evaluating juveniles and offering an opinion on adjudicative competency. There are two levels of one independent variable (juvenile court and adult court) in this study and includes whether the purpose of the evaluation is for juvenile court adjudication or for adult criminal court. The dependent variables include ratings for importance of factors typically taken into account during competency evaluations such as mental health diagnoses, intellectual disabilities, neuropsychological, cognitive, emotional, psychosocial functioning, *Dusky* criteria/knowledge of the legal system, and ratings for usefulness for each of the assessment tools, the JACI, MacCAT-CA, and FIT-R.

Research Questions and Hypotheses

To resolve the study problem as stated above, two research questions were posed:

Research Question 1: Does the purpose of the evaluation (i.e., type of court, juvenile or adult) affect MHPs' ratings of the importance of each of the factors typically taken into account during an evaluation of JAC (i.e., mental health diagnoses, intellectual disabilities, neuropsychological, cognitive, psychosocial functioning, and "Dusky" criteria/knowledge of the legal system)?

H_01 : There will be no differences based on the purpose of the evaluation (i.e., type of court, juvenile or adult) in how MHPs' rate of the importance of each of the factors typically taken into account during an evaluation of JAC (i.e., mental health diagnoses, intellectual disabilities, neuropsychological, cognitive, psychosocial functioning, and "Dusky" criteria/knowledge of the legal system).

H_11 : There will be differences based on the purpose of the evaluation (i.e., type of court, juvenile or adult) in how MHPs' rate the importance of each of the factors typically taken into account during an evaluation of JAC (i.e., mental health diagnoses, intellectual disabilities, neuropsychological, cognitive, psychosocial functioning, and "Dusky" criteria/knowledge of the legal system).

Research Question 2: Does the purpose of the evaluation (i.e., type of court, juvenile or adult) affect MHPs' ratings of usefulness for each of the three instruments, JACI, MacCAT-CA, and the FIT-R?

H_02 : There will be no differences based on the purpose of the evaluation (i.e., type of court, juvenile or adult) in how MHPs rate the usefulness of each of the three instruments, JACI, MacCAT-CA, and the FIT-R.

*H*₁₂: There will be differences based on the purpose of the evaluation (i.e., type of court, juvenile or adult) in how MHPs rate the usefulness of each of the three instruments, JACI, MacCAT-CA, and the FIT-R.

The independent variable contained two levels and included whether the purpose of the evaluation was for juvenile court adjudication or for adult criminal court. The dependent variables included ratings for importance of factors typically taken into account during competency evaluations, (e.g., mental health diagnoses, intellectual disabilities, neuropsychological, cognitive, emotional, psychosocial functioning, *Dusky* criteria/knowledge of the legal system, and ratings for usefulness for each of the assessment tools, the JACI, MacCAT-CA, and FIT-R).

Theoretical Framework for the Study

The lifespan development theory provides a theoretical framework for understanding how people develop physically and psychologically from infants through adulthood in an attempt to provide a context for defining and explaining transformations that occur over time (Baltes, 1987, 1997, 2005). The lifespan development theory offers an organized account of: (a) the structure and sequence of development across an individual's lifespan; (b) the interconnections between earlier and later developmental events; (c) the biological, psychological, and social, developmental milestones by providing a central structure for organizing research findings; and (d) the biological and environmental opportunities that shape lifespan development (Baltes, Lindenberger, & Staudinger, 2006). This theory generates knowledge regarding commonalities in

development, interindividual differences in development, and intraindividual plasticity in development.

Lifespan development theory provides MHPs with a model that summarizes research findings in domains relevant to JAC. Researchers expect that each age-relevant period in the lifespan (e.g., infancy, childhood, adolescence, and adulthood) has its own developmental schedule that makes an impact to the past, present, and future in an individual's development (Baltes, Staudinger, & Lindenberger, 1999). Juveniles progressively develop in different areas including physical, cognitive, emotional, and social until they reach the mature level that is required for middle adulthood (Grisso, 2005). Achievement of developmental milestones in these areas assists juveniles in adapting to demands such as those required for JAC.

Nature of the study

A quantitative research design was used to answer the research questions. This study contained a nonexperimental research design using a self-report survey. The purpose of a nonexperimental survey research is to provide a credible answer to research questions (Creswell, 2014). A survey is the preferred type of data collection for this research study because of the nature of the research questions and the fast turnaround time in collecting the data.

Quantitative research is focused on collecting and interpreting numerical data collected during the study (Creswell, 2014). Quantitative research involves asking participants for their opinion in a structured way to obtain facts and statistics (Frankfort-

Nachmias & Nachmias, 2008). Gowensmith, Murrie, and Boccaccini (2012) utilized a survey to examine the reliability of competency to stand trial evaluations among forensic evaluators in practice. The researchers utilized a survey to identify characteristics of a large population from a small group of forensic evaluators. When conducting quantitative research, utilizing a self-report survey method for collecting data is appropriate. The researcher can cover a wide geographic area in a short amount of time (Frankfort-Nachmias & Nachmias, 2008).

In addition, a self-report survey can reduce bias errors that may result from personal characteristics involved with an interview (Creswell, 2014). Gowensmith, Murrie, and Boccaccini (2012) reported problems associated with survey research designs including low response rates and no control over who completes the survey. A low response rate to the survey can jeopardize effective statistical analyses. The data was analyzed in order to establish if there were any similarities amongst the participants in this study and to determine if there were any trends. Different statistical tests were used, such as descriptive statistics, Cronbach's alpha, and multivariate analysis of variance. A quantitative analysis of the data provided a better understanding of the potential factors MHPs utilize when evaluating juveniles for competency.

Definitions

The terminology used when discussing JAC deserves consideration and clarification. This section clarifies the general terms that may potentially have different meanings.

Cognitive development: Kruh and Grisso (2009) defined cognitive development as the construction of thought processes such as remembering, decision making, and problem solving from childhood through adolescence and into adulthood.

Defendant: The term defendant refers to an individual that is defending or denying the accusation of committing a crime (Otto, 2006).

Dusky Standard: The standard of competency established by the U.S. Supreme Court decision in *Dusky v. United States* (1960) which stated that a defendant must be able to understand the court proceedings and be able to assist defense counsel.

Intellectual Disability: The *Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-5)* defines intellectual disability as “impairments of general mental abilities that impact adaptive functioning in three domains or areas, conceptual, social, and practical” (American Psychiatric Association, 2013, p. 31).

Juvenile: The Wisconsin Statutes refers to a juvenile as “a person who is less than 18 years of age, except that for purposes of investigating or prosecuting a person who is alleged to have violated a state or federal criminal law or any civil law or municipal ordinance, “juvenile” does not include a person who has attained 17 years of age” (Wis. Stat § 938.02). Wisconsin is one of nine states that may prosecute 17 year-olds in adult courts if the crime is severe enough. For example, a 17-year-old that commits a homicide will be tried as an adult.

Juvenile Adjudicative Competency: Juvenile adjudicative competency refers to the defendant’s ability to understand and participate in legal proceedings and is a legal

concept not psychological. However, qualified MHPs collect, summarize, and analyze a juvenile's clinical and developmental data in order to inform the legal decision of competency (Grisso, 2005).

Mental Health Diagnosis/Disorder: According to the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)*, a mental disorder “is a syndrome characterized by clinically significant disturbance in an individual's cognition, emotion regulation, or behavior that reflects a dysfunction in the psychological, biological, or developmental processes underlying mental functioning” (American Psychiatric Association (APA), 2013, p. 20).

Mental Health Professionals: Mental health professionals, as used in this research study, refer to psychologists who are qualified to conduct competency evaluations and who are licensed by the state of Wisconsin.

Neuropsychological Development: The relationship between the nervous system and mental functions including emotion, language, and memory between childhood through adolescence and into adulthood (Kruh & Grisso, 2009).

Psychosocial Development: Larson and Grisso (2011) have defined psychosocial development as the development of an individual's personality, including the acquisition of social attitudes and skills from infancy through maturity.

Assumptions

Research studies often contain assumptions or statements that are accepted as true by the researcher and peers. I assumed that: (a) MHPs were interested in providing a

completed survey to the researcher and answered the questions truthfully; (b) research participants were able to read and comprehend the questions; (c) this instrument provided MHPs the opportunity to reveal their opinions on JAC; (d) all participants who completed the survey had experience with JAC evaluations; (e) participants represent MHPs with varying levels of education and experience; (f) participants were motivated to accurately report their opinions regarding JAC evaluations in terms of their professional competencies; and (g) even if the other assumptions were not completely true, the assumptions along with other associated questions of generalizability would be less important. This is because the purpose was to determine if the purpose of the evaluation was associated with how MHPs rate the importance of mental health diagnoses, intellectual disabilities, neuropsychological, cognitive, emotional, psychosocial functioning, and *Dusky* criteria/knowledge of the legal system when evaluating JAC.

Scope and Delimitations

In this study, I focused on whether the purpose of the evaluation was associated with MHPs' ratings of the importance of each of the factors typically taken into account when evaluating JAC. Specifically, these are mental health diagnoses, intellectual disabilities, neuropsychological, cognitive, emotional, psychosocial functioning, and *Dusky* criteria of the legal system. In addition, I focused on if the purpose of the evaluation was associated with the ratings of usefulness for each of the three assessment tools in assessing JAC. The focus was chosen due to the limited number of primary studies conducted to examine what evaluators used to assess JAC. The population for this

study included MHPs who are members, associates, or fellows of the American Psychological Association (APA) who conducted JAC evaluations within the past three years. A type of purposive sampling called total population sample was used to examine the entire population of MHPs.

The results of this study may be generalized only to the state of Wisconsin regarding MHPs' opinions about factors involved with assessing JAC. Although not directly applicable to this study, a number of variables may interfere with the internal validity of research including: (a) history effects: events that happen prior to or during the study that change the conditions of the study and impact the outcome, (b) maturation: physical or psychological changes in the participants, (c) instrumental bias: results when the survey changes over a period of time, and (d) experimental mortality: participants may drop out of the study (Creswell, 2014). To minimize selection bias, I ensured that an adequate proportion of the sample partook in this study. This involved the researcher recontacting participants or reaching out to new participants. Threats to external validity in this research study are minimal when compared to studies that require participation over a long period of time.

Limitations

This study was limited to the MHPs in Wisconsin who are members of the APA, have their contact information including email addresses on file, and have experience with JAC evaluations. The study contained an online survey, which was limited to the fact that it rarely can be independently verified. This means that it is difficult to ensure

that the survey meets all the requirements and fulfills its intended purpose. The researcher must take the participants' information at face value. Frankfort-Nachmias and Nachmias (2008) stated that self-reported surveys often contain sources of bias that include embellishments and selective memory.

There are also several weaknesses in using a nonexperimental research design. Although not directly related to this study, a nonexperimental research design does not allow for the gathering of data post treatment. The primary limitation of a nonexperimental design is that a researcher cannot determine causal relationships among the variables. This is due to a lack of randomization. Nonexperimental research designs can fail to produce enough data to make a convincing argument for correlation let alone causation (Creswell, 2012). Obtaining data post treatment can result in a number of new areas for researchers to consider (Stangor, 2011). Without the inclusion of experimentation, the research can become one dimensional or focused on a small number of variables. This research study investigated an area that had limited research.

Significance

The study was important because it surveyed the type of clinical data and processes that MHPs consider during an evaluation of JAC in a currently under-researched population in the state of Wisconsin. The results of this study are intended to provide MHPs with an evaluation of the perceived importance of the factors and tools recommended by the American Academy of Forensic Psychology as best practices when evaluating JAC. This approach may lead to positive social change by contributing to the

knowledge base regarding what MHPs consider when conducting JAC evaluations. This positive social change may result in more consistent methods when evaluating JAC. As a result, juveniles convicted of crimes may be treated in a more fair and equitable way.

Summary

JAC is becoming a topic of increased interest because of the need to examine juveniles' capacities as trial defendants. There is an abundance of research on JAC; however, only two studies have evaluated the usefulness, importance, or effectiveness of research-based factors and assessment tools used during evaluations for JAC (Lexcen & Heavin, 2010; Tomei & Panza, 2014). Chapter 2 provides a literary framework for understanding the ideas referenced in this study and provides an overview of the studies that have been conducted related to JAC. This literature review is intended to determine if the purpose of the evaluation was associated with MHPs ratings of the importance of research based factors and the usefulness of existing assessment tools.

Chapter 2

Introduction

The purpose of the research was to determine if the purpose of the evaluation (i.e., type of court, juvenile or adult) was associated with MHPs ratings of the importance of factors typically taken into account during an evaluation of JAC including mental health diagnoses, intellectual disabilities, neuropsychological, cognitive, emotional, psychosocial functioning, and Dusky criteria/knowledge of the legal system. In addition, the research reviewed if the purpose of the evaluation (i.e., type of court, juvenile or adult) was associated with MHPs' ratings of usefulness for each of the three most commonly recommended tools for JAC evaluations: (a) the Juvenile Adjudicative Competence Inventory (JACI; Grisso, 2005), (b) MacArthur Competence Assessment Tool- Criminal Adjudication (MacCAT-CA; Hoge, Bonnie, Poythress, & Monahan, 1999), and (c) the Fitness Interview Test-Revised (FIT-R; Roesch, Zapf, & Eaves, 2006).

Relevance of the Problem

There has been an increase in the number of articles pertaining to JAC in the past 14 years due to an increase in juveniles being referred to adult court for serious, violent felonies (Fogel, Schiffman, Mumley, Tillbrook, & Grisso, 2013). This has occurred because public opinion has tended to support the referral of juveniles to the punishment-oriented adult criminal court for serious violent felonies rather than the more rehabilitative-focused juvenile court. In the mid-1990s researchers began to raise concerns regarding juveniles' abilities to be competent to stand trial in adult criminal

court (Fogel et al., 2013). Courts are required by previous court decisions to order a competency evaluation when the judge or attorneys request it if the defendant shows difficulties understanding the court's process. The U.S. Supreme Court set the legal criteria for adult competency in *Dusky v. United States* (1960) by stating that a "defendant must have sufficient ability to consult with an attorney about his/her defense and a reasonable degree of rational understanding of the court proceedings." In *Tate v. State of Florida* (2003), the Florida Court of Appeals affirmed that juvenile defendants must also meet these same legal criteria for competency before facing trial. While this case may not be influential among legal professionals outside of Florida, this case has influenced forensic psychologists to apply the same criteria used for adults to juvenile defendants (Scott & Grisso, 2005).

The definition of competency in Wisconsin states "no person who lacks substantial mental capacity to understand the proceedings or assist in his or her own defense may be tried, convicted, or sentenced for the commission of an offense so long as the incapacity endures" (Wis. Stat. § 971.13(1)). In Wisconsin, MHPs may evaluate JAC in either juvenile court or adult court. MHPs in Wisconsin are required to adhere to the statutes regardless of the fact that the juvenile is tried in either juvenile or adult court.

As a result of numerous research findings during the previous decade about JAC, best practice guidelines have been recommended by the American Academy of Forensic Psychology for evaluation of JAC (Grisso, 2005; Kruh & Grisso, 2009). Some juveniles may lack competency-related abilities that pertain to the legal system such as factual and

rational understanding, decision-making, and assisting their legal counsel as these abilities may be impaired by mental disorders or may develop at a slower rate compared to other juveniles (Kruh & Grisso, 2009). Therefore, the best practice guidelines focus on assessment of whether the juvenile meets criteria for a mental disorder, the juvenile's developmental functioning in cognitive and psychosocial domains, and the juvenile's understanding of how criminal court works and how to communicate with his/her defense attorney during the trial.

Although there have been numerous studies in general about JAC, there is a gap in the literature regarding what factors MHPs consider when evaluating juveniles for adjudicative competency. The intent of this study was to determine if the purpose of the evaluation (i.e., type of court, juvenile or adult) was associated with MHPs' ratings of the research-based factors including mental health diagnoses, cognitive, neurological, emotional, psychosocial functioning, and *Dusky* criteria/knowledge of the legal system when evaluating juveniles and offering an opinion about adjudicative competency. In addition, the research reviewed if the purpose of the evaluation was associated with MHPs' ratings of usefulness of the most commonly used tools to evaluate JAC, the JACI, MacCAT-CA, and the FIT-R.

This chapter begins with a brief summary of the literature review strategy used for this study and is followed by a discussion of the theoretical foundation provided by the lifespan development theory. The lifespan development theory provides a theoretical framework for understanding psychological and physical maturation in an attempt to

provide a context for defining and explaining the transformations that occur with time (Baltes, 1987, 1997, 2005). The applications, assumptions, and criticisms of the lifespan development theory are further discussed. The discussion continues with JAC including the legal foundation for assessment, factors that influence JAC, competency-related abilities in assessment of JAC, best practices in assessment of JAC, assessment tools for JAC, and policy and practice issues in Wisconsin.

Literature Search Strategy

The literature review relied on articles from the following Walden University Psychology databases: PsycINFO, PsycARTICLES, PsycEXTRA, A Sage Full Text-Collection, PsycCritiques, PsycTests and SAGE Premier. In addition to the Walden University psychology databases, a review of Google Scholar produced additional articles for the literature review. Professional subscriptions to Westlaw and LexisNexis databases provided additional articles, statutes, and case law. For topics related to competency to stand trial, the search included the following terms: *competency*, *competency to stand trial*, *juvenile*, *capacity to stand trial*, *adjudicative competency*, *juvenile waiver*, *delinquency*, and *juvenile court*. Due to the limited amount of literature on JAC, this literature review explored all available literature from the 1990s forward, with a focus on JAC. In addition, the tools within Walden University's database, Google Scholar, and professional subscriptions allowed the researcher to find articles that cited an author who has extensive knowledge in juvenile competency, Thomas Grisso. For topics related to the lifespan development theory as used in this dissertation, the search

included variations of the following terms: *Life-Span Development Theory*, *Ontogenesis*, *Life Span Theory*, *Life Span Psychology*, and *Life Span Development*.

Theoretical Foundation

The study of individual development from an individual's conception to death is known as the lifespan developmental theory and is the theoretical framework for this study (Baltes, Lindenberger, & Staudinger, 2006). This theory provides a theoretical framework for understanding how people develop physically and psychologically from infants through adulthood in an attempt to provide a context for defining and explaining transformations that occur over time (Baltes, 1987, 1997, 2005). It is applicable to juvenile competency as it reflects neurological, intellectual, emotional, and psychosocial developmental issues that contribute to the legal construct of immaturity (Baltes, Staudinger, & Lindenberger, 1999). The lifespan developmental theory provides MHPs with the framework to understand the development of competency-related skills and abilities in juveniles. In this sense, the functional abilities that contribute to competency form a category of behavior that is subject to development and maturation (Baltes, Lindenberger, & Staudinger, 2006). This discussion continues by examining assumptions and application of the lifespan developmental theory.

Research about lifespan development examines patterns of growth, stability, and change in behavior that occurs throughout a person's entire life (Feldman, 2010). Developmental psychologists expand our knowledge on how development advances over a person's lifespan, thereby creating knowledge of the general principles of development

and the comparisons and differences in development between individuals. By understanding and studying the types of behavior and changes an individual experiences, developmental psychologists can provide a better understanding of behavior through an individual's lifespan. Butterworth (2014) explained that development can occur in different areas at different rates including biological, cognitive, and emotional.

Baltes (1987) provided the foundation for lifespan development theory by creating a set of principles that helped guide developmental research. Baltes believed that these principles helped form a family of beliefs that specify the nature of development. The first of these principles is the belief that development is life-long. This belief is separated into two parts. The first part, states that the potential for development extends across a person's entire lifespan. There is no assumption that lifespan must reach a particular peak or decline during infancy, childhood, adolescence, and adulthood. The second part states that development may include processes that were not present at birth but emerge later in the lifespan. Baltes (1987) described development as being multidimensional and multidirectional. Multidimensionality states that development cannot be described by a single factor whereas multi-directionality states that there is no single path that development must take (Baltes, 1987).

Lifespan development theory offers the following purposes: 1) an organized account of the structure and sequence of development across an individual's lifespan, 2) identifies the interconnections between earlier and later developmental events, 3) delineates biological, psychological, and social, developmental milestones by providing a

central structure for organizing research findings, and 4) specifies the biological and environmental opportunities that shape lifespan development (Baltes, Lindenberger, & Staudinger, 2006). This theory generates knowledge regarding commonalities in development, inter-individual differences in development, and intra-individual plasticity in development.

Lifespan development includes research about topical areas such as physical, cognitive, personality, and social development at specified age ranges that include: prenatal (conception to birth), infancy and toddlerhood (birth to age 3 years), preschool (ages 3-6 years), middle childhood (ages 6-12 years), adolescence (ages 12-20 years), young adulthood (ages 20-40 years), middle adulthood (ages 40-60 years), and late adulthood (age 60 to death) (Baltes, Reese, & Nesselroade, 1977; Lerner, 1984). For purposes of the current study, the critical age ranges are middle childhood (6-12 years of age) and adolescence (12-20 years of age). Each topical area contributes significantly to overall development throughout an individual's lifespan.

Conceptual Framework

Since lifespan developmental theory examines growth, stability, and change in behavior that occurs throughout a person's lifespan, it provides MHPs with a model that summarizes research findings in topical areas relevant to JAC. Juveniles progressively develop in different areas including physical, cognitive, emotional, and social development until they reach the "mature" level that is required for middle adulthood

(Grisso, 2005). Achievement of developmental milestones in these areas assists juveniles in adapting to demands such as those required for JAC.

Seminal Lifespan Development Research Applicable to the Current Study

Cognitive and intellectual capacities are assessed as part of JAC. Flavell (1985) saw a trend in the field of lifespan development as researchers highlighted the cognitive competencies in children, the cognitive shortcomings of adults, and the cognitive inconsistencies of both children and adults. Children, in particular, experience extensive and diverse cognitive growth from birth through adulthood. Certain aspects of cognitive development are interesting and surprising as some studies show that children of a certain age have not yet attained a skill that researchers expected them to have learned at that age (Flavell, 1985). Children are likely to have a target competency in a number of degrees, forms, ways, and at different ages. Trying to characterize each child presents itself with its own problems. Competencies change with a person's age and may be enhanced in the course of development by being more universal in its use across responsibilities, becoming more reliably invoked and used on any one task, more dominant over competing, more adapted with other competencies, and more accessible to conscious reflection and verbal expression (Flavell, 1985).

Researchers in the fields of child development and aging have identified developmental elements that control the rate of age-based changes in cognitive and intellectual functioning (Flavell, 1992). Three constructs as regulators of development in the cognitive process include: (a) information processing rate (Fry & Hale, 1996), the

speed at which elementary processing operations can be executed, (b) working memory, the ability to preserve information in short term memory while transforming the same or other information, and (c) fluid intelligence, the ability to automatically suppress the processing of irrelevant information (Bjorklund & Harnishfeger, 1995).

Fry and Hale (1996) assessed processing speed, working memory capacity, and fluid intelligence in a sample of 214 children, adolescents, and young adults (ages 7 to 19 years) using computerized tasks. As children mature, they process information faster, hold more items in working memory, and perform better on tests of fluid intelligence. Fry and Hale (1996) discovered that the information processing rate, if measured with psychometric tests of perceptual speed, are the strongest measures of age differences in the cognition of children. The illustrative power of working memory is hard to judge. Age based changes in working memory are reported as indicating changes in processing speed or inhibition (Brainerd, 1995). Working memory contains goal-directed control of thought and action (Duncan, Emsile, Williams, Johnson, & Freer, 1996). This elevates working memory to a central position in intellectual functioning.

Application of Previous Research to the Focus of this Study

Biological, cognitive, and psychosocial development and maturation interact to lay the groundwork for a juvenile's abilities to meet the legal criteria for competency. In this sense, the functional abilities that contribute to competency form a category of behavior that is subject to development and maturation (Baltes et al., 2006). If the results

of lifespan developmental research are not applied during an evaluation to assess JAC, many juveniles may be erroneously identified as either incompetent or competent.

Physical, cognitive, emotional, and social development are key predictors in determining whether juveniles are competent to stand trial (Poythress, Lexcen, Grisso, & Steinberg, 2006; Borum & Grisso, 2007). During an evaluation for JAC, these key predictors are the factors that are assessed. Juveniles who have serious weaknesses in competency related abilities might appear this way due to the fact that they simply have not matured sufficiently to develop those capacities (Kruh & Grisso, 2009). Developmental factors may be significant to adjudicative competency because of the juvenile's age and slower development of competency related abilities. When juveniles' cognitive reasoning is at an immature level, they may be more likely to engage in socially unacceptable behaviors.

Application of the Lifespan Development Theory to the Current Study

This quantitative study involves an analysis regarding the importance MHPs in Wisconsin place on mental health diagnoses, intellectual disabilities, neuropsychological, cognitive, emotional, psychosocial functioning, and *Dusky* criteria/knowledge of the legal system when evaluating JAC. Lifespan developmental theory provides this study with a model that summarizes research findings in domains relevant to JAC. Researchers expect that each age-relevant period in the lifespan (e.g., infancy, childhood, adolescence, and adulthood) has its own developmental schedule that unfolds during the lifespan (Baltes et al., 2006). Juveniles progressively develop in different areas including

physical, cognitive, emotional, and psychosocial until they reach the mature level that is required for middle adulthood (Grisso, 2005). Achievements of developmental milestones in these areas assist juveniles in adapting to demands such as those required for JAC.

Literature Review: Key Variables and Concepts

This literature review discusses: (a) the legal foundation for assessment of JAC; (b) factors that influence JAC from research findings about clinical disorders, developmental issues and competency related abilities pertaining to the legal system; (c) best practices in assessment of JAC; (d) research findings about the most frequently used tools to evaluate JAC; and (e) and policy and current practice issues in Wisconsin related to JAC. This literature review establishes the need for continued research regarding what MHPs consider the most important and useful factors when evaluating JAC.

Legal Foundation for Assessment of Juvenile Adjudicative Competency

Two legal cases that respectively established defendants' rights to be competent during a trial first for adults then for juveniles are presented as a means to illustrate the role of the courts in establishing JAC.

Dusky v. United States (1960). In 1960, the United States Supreme Court created specific criteria for determining competency in adults facing trial in *Dusky v. United States*. Prior to 1960, the defendant's orientation to current time and place was enough to establish competency to stand trial (Miller, Chamberlain, & Wingrove, 2014, p. 40-41). Here is the chronology of this frequently cited case: Police charged 33-year-old Milton

Dusky with the kidnapping and rape of a 15-year-old-female (*Dusky v. United States*, 1960). Upon arrest, Dusky displayed signs of schizophrenia, and the United States District Court referred Dusky for a mental health examination to determine if he was competent to stand trial. In a brief evaluation, the psychiatrist determined that Dusky, the defendant, knew the current date and time, referred to as orientation, and was aware of some facts about the case, the judge deemed Dusky competent to stand trial. Dusky was sentenced to a 45-year prison sentence. Dusky appealed the decision to the United States Court of Appeals (8th Circuit) who upheld the lower court's decision. The case was further appealed by referring it to the United States Supreme Court who reviewed the evidence and remanded the case to the trial court for a new competency assessment. Subsequently, the trial court concluded that a brief psychological evaluation was not sufficient, and the court reduced Dusky's sentence to 20 years. The United States Supreme Court ruled in Dusky's favor by stating:

...it is not enough for the district judge to find that the defendant is oriented to time and place and has some recollection of events, but that the test must be whether he has sufficient present ability to consult with his lawyer with a reasonable degree of rational understanding and whether he has a rational as well as factual understanding of the proceedings against him. (*Dusky v. United States*, 1960)

The Dusky case set the standard for determining competency in adults (hereinafter referred to as the *Dusky* standard for competency (Miller, Chamberlain, &

Wingrove, 2014). This standard contained the following two components: the defendant must be able to understand the court proceedings, and second, the defendant must be able to assist defense counsel (Felthous, 2011).

Tate v. State of Florida (2003). In *Tate v. State of Florida* (2003), the Florida Court of Appeals affirmed that juvenile defendants must also meet legal criteria for competency before facing trial. Here is the chronology for this case: At the age of twelve, Lionel Tate murdered a six-year-old girl who suffered at least thirty-five injuries including brain contusions, a rib fracture, a fractured skull, twenty plus bruises, injuries to her kidneys, pancreas, and liver (*Tate v. State of Florida*, 2003). Tate's charges were handled by an adult criminal court, and during the trial, Tate's counsel requested a competency evaluation and hearing based on the fact that Tate did not seem to understand the consequences of proceeding to trial and could not assist counsel.

Tate's attorney argued:

[a]nd as [sic] officer of the court I'm standing next to Lionel drawing pictures, hasn't listened to one word [sic] and had no idea what's going on. Tate was not assist[ing] us in assisting him, and there's no interaction that's going on. It's someone [Tate] sitting here playing with pencil, pen and drawing pictures in what's probably the most important proceeding of his life, and it is something that every [sic] needs to stop and step back. (*Tate v. State of Florida*, 2003)

The Circuit Court denied the request for a competency evaluation, and Tate was found guilty of first-degree murder and sentenced to life in prison without parole.

Tate's attorney appealed the Circuit Court's decision, and the Florida Court of Appeals reversed Tate's mandatory life sentence due to the trial court's error in not ordering a competency evaluation. The Court of Appeals stated:

At a minimum, under the circumstances of this case, the court had an obligation to ensure that the juvenile defendant, who was less than the age of fourteen, with known disabilities raised in his defense and who faced mandatory life imprisonment, was competent to understand the plea offer and the ramifications thereof, and understood the defense being raised and the state's evidence to refute the defense position. (*Tate v. State of Florida*, 2003)

This court case set a noteworthy precedent for forensic psychologists who conduct JAC evaluations. Juveniles, like adults, must meet legal criteria for competency in order to face trial. Prior to the court's ruling, the competency of a juvenile to face trial had not been considered relevant, because juveniles, more frequently, had been referred to juvenile court, not adult criminal court, when they broke the law. The role of juvenile court had been to provide rehabilitation, whereas the role of adult criminal court had been to provide negative consequences such as punishment. During the years leading up to Tate's trial in 2003, juveniles had been engaging in progressively more serious crimes, including murder, and this resulted in a shift in the legal handling of juveniles by referring them to adult criminal court (Scott & Grisso, 2005). *Tate v. Florida* (2003) set

the precedent for juveniles facing charges in adult court to be treated in a manner similar to adults, and this included the legal requirement of meeting criteria for competency to stand trial. Numerous researchers, however, have questioned whether juveniles are clinically and developmentally competent to stand trial (Grisso, 2005; Scott & Grisso, 2005; Steinberg & Schwartz, 2000; Teplin, Abram, Washburn, Welty, Hershfield, & Dulcan, 2013; Kruh & Grisso, 2009; Viljoen & Roesch, 2005 and Larson & Grisso, 2011). Some of these specific research findings will be discussed in the next section.

Factors that Influence Juvenile Adjudicative Competency

The factors that seem to affect JAC the most are clinical problems such as the presence of intellectual disabilities and/or mental health diagnoses (Grisso, 2005; Scott & Grisso, 2005), developmental issues, and whether the juvenile has competencies related to the *Dusky* criteria. Research related to these factors will be summarized here.

Intellectual Disabilities/Mental Health Diagnoses

In this section, studies that establish the prevalence of clinical disorders among juveniles were reviewed followed by studies that examined the effects of clinical disorders on adjudicative competency evaluations in juveniles. Merikangas et al. (2010) established how widespread mental disorders are among juveniles by evaluating the lifetime prevalence of mental disorders in juveniles. Lifetime prevalence was described as the proportion of juveniles who had a lifetime mental disorder at the time of the research. Lifetime mental disorders included mood disorders and episodes, anxiety disorders, posttraumatic stress disorder, behavior disorders, conduct disorders, substance

use disorders, eating disorders, and oppositional defiant disorder. The National Comorbidity Survey-Adolescent Supplement (NCS-A) is a face-to-face survey of 10,123 parents of juveniles from the general population between the ages of 13-18. Parents were asked to complete a self-administered questionnaire regarding their son/daughter's mental health, developmental background, and socio-demographic characteristics. Researchers received 6,491 completed questionnaires (Merikangas et al., 2010). The Composite International Diagnostic Interview (CIDI; Kessler & Ustin, 2004), a fully structured interview, was administered to juveniles to generate a diagnosis based on the *Diagnostic and Statistical Manual of Mental Disorders, 4th Edition, Text Revision* (DSM-IV-TR, APA, 2000, p. 3).

As a result of the study, researchers noted that the prevalence of all mood disorders increased consistently with age, with nearly a two-fold increase from the 13-14 year-old age group to the 17-18 year-old age group. Nearly one in every three juveniles met the criteria for an anxiety disorder. The occurrence of Attention Deficit/Hyperactivity Disorder (ADHD) in the study was 8.7% while oppositional defiant disorder was present in 12.6% of the sample. Researchers stated that 49.5% of the total sample was impacted by at least one mental disorder but less than half of the sample had disorders with severe impairment (27.6%). Among the juveniles affected, 50% of the disorders had an onset by the age of six for anxiety disorders, by the age of 11 for behavioral disorders, by the age of 13 for mood disorders, and the age of 15 for substance use disorders (Merikangas et al., 2010). Based on this study, researchers concluded that

one in every four or five juveniles meet the criteria for a lifetime mental disorder that is linked with severe role impairment and/or distress. Psychiatric disorders that emerged in severity during late childhood to early adolescence may impact an individual's competency by limiting their legal functional abilities.

In another study, researchers similarly established how widespread mental health disorders were among incarcerated youth (Teplin, Abram, Washburn, Welty, Hershfield, & Dulcan, 2013). The participants were 1,172 males and 657 females, between the ages of 10-18 years old in the Cook County juvenile justice system in Chicago, IL. The goal was to assess the occurrence, development, and persistence of psychiatric disorders as youths in the juvenile justice system became adults. Based on face to face interviews and records obtained from correctional and service agencies to cross validate the participants' information, the study revealed that 66% of males and 74% of females met the criteria for having at least one mental disorder. Based on follow up interviews spanning 16 years, the researchers concluded that 46% of males and 57% of females still had two or more mental disorders. As Teplin et al. (2003) research revealed, mental disorders are quite prevalent in juveniles. MHPs need to consider the severity of the mental disorder to determine if the juvenile meets *Dusky* criteria for competency.

Baerger, Griffin, Lyons, and Simmons (2003) evaluated whether age, special education, and prior mental health treatment predicted adjudicative incompetency in 605 pre-adjudicated juveniles. Researchers compared case file data for 132 juveniles deemed incompetent to stand trial by MHPs to a sample of 473 delinquent juveniles deemed

competent. Juveniles were grouped into categories based on their age: 12 years and younger, 13-and 14-year-olds, and 15-and 16-year-olds.

Researchers performed a logistic regression analysis to determine what factors influenced the determination of incompetency of juveniles (Baerger et al., 2003). The analysis indicated that age, a history of special education, and prior mental health treatment had a predictive effect on the determination of trial incompetency. Juveniles that were 12 years of age or younger, had a history of special education, and received prior inpatient or outpatient mental health treatment, were more likely to be declared incompetent to stand trial. A major limitation of the Baerger et al. (2003) study was that it was based on file reviews. Due to the Health Insurance Portability and Accountability Act (HIPAA), researchers were limited to the amount and type of information that had been recorded in the files. In sum, the results indicated that the younger the juvenile defendant, the less likely the juvenile would be able to manifest the type of cognitive understanding necessary to satisfy the requirements of the *Dusky* standard of rational understanding and capacity to consult with counsel.

Warren, Aaron, Ryan, Chauhan, and DuVal (2003) examined the effects of intelligence, psychiatric symptomatology, and diagnoses as they impacted competency-capabilities in juveniles. The researchers also evaluated whether an adult test to assess competency to stand trial would yield valid results for juveniles. The study included 120 psychiatrically hospitalized male juveniles between the ages of 10 and 17. The researchers included only males in their study as they represented 85-90% of the

juveniles adjudicated as delinquent. The juveniles were hospitalized for psychiatric treatment. Sixty-seven juveniles reported a previous history with the juvenile justice system. The researchers hoped to gain awareness into the functioning of juveniles on a standardized and normed measure of adult competency, the MacCAT-CA, and to provide a foundation for understanding psychiatric, cognitive, and developmental factors in legal decision-making capacity throughout adolescence. The researchers utilized the Brief Psychiatric Rating Scale-Anchored (BPRS-A; Overall & Gorham, 1962), the Massachusetts Youth Screening Instrument (MAYSI; Grisso, 2002), the Kaufman Brief Intelligence Test (K-BIT; Kaufman & Kaufman, 1990), and discharge diagnoses from the file review.

In sum, the MacCAT-CA measured the competency-related abilities of the juveniles (understanding, reasoning, and appreciation) while the K-BIT estimated the juveniles' intelligence. Researchers defined understanding as the ability to comprehend information associated to the adjudicative process and law. Researchers defined reasoning as the ability to separate the legal significance of information and the capability to apply reason to choices that impact the defendant during criminal adjudication. Appreciation was defined as the defendant's rational knowledge of the meaning and consequences of the legal proceedings. The MAYSI screened juveniles for serious mental or emotional disorders while the BPRS-A measured different aspects of psychiatric disturbance in juveniles (Warren et al., 2003).

Researchers sampled participants' performance on the K-BIT, MAYSI, BPRS-A and the number of mental health diagnoses (as defined by the DSM-IV) for the entire sample, a comparison group of juveniles under the age of 14, and juveniles that were 14 years of age and older (Warren et al., 2003). Researchers analyzed the data with multiple and logistic regression analyses. The subtest scores of the K-BIT, BPRS-A, MAYSI, and age (continuous variables) were measured to determine which of the variables correlated with the continuous scores of the juveniles on the understanding, reasoning, and appreciation scales on the MacCAT-CA. The independent variables included the intellectual variables, psychiatric variables, and age. The dependent variables included impairment and no impairment. The multiple and logistic regression analyses were created to determine the amount of variance on the variables. Variance was defined as age over and above the effects of the mental status and cognitive variables. Mental status and cognitive variables are usually associated with a finding of incompetency.

The variance on the understanding subscale of the MacCAT-CA was significant and explained 31% of the variance. The cognitive variables explained 17% of the variance, the psychiatric 15%, and age 4%. The variance on the reasoning subscale was significant and explained 33% of the variance. The cognitive variables explained 25% of the variance, the psychiatric 7%, and age 7%. The variance on the appreciation subscale was significant but explained only 19% of the variance. Age did not improve the fit of the model with the cognitive variables explaining 14% of the variance and the psychiatric 11%. Item analyses revealed that juveniles between the ages of 10-13 have difficulty

understanding the elements of a more or less serious offense, the plea bargain process, and the rights waived by pleading guilty. Results showed a significant age-related difference on both the intellectual and psychiatric measures. The younger juveniles performed better than the older juveniles on both the verbal and matrices subtests of the K-BIT. This study revealed that intellectual and psychiatric factors contribute significantly to deficits in juveniles' legal decisional ability, which may impact their ability to stand trial.

In a study by Viljoen and Roesch (2005) to determine if psychological symptoms predicted legal capacities, the mean scores on the BPRS-C were 8.19 for depression anxiety, 9.72 for behavior problems, and 3.04 for psychomotor excitation. The detention center classified 34 defendants as having a psychological or emotional disturbance. The researchers entered depression-anxiety, behavior problems, psychomotor excitation, and institutional classification in regression equations. However, the results indicated that the researchers failed to find an association between adjudicative competency and depression, behavior problems, and anxiety. Symptoms of ADHD were linked with deficits on the capacity to communicate with counsel.

Ficke, Hart, and Deardorff (2006) examined 247 juvenile offenders between the ages of 9-18 who were incarcerated at a detention center to determine relationships among the understanding, reasoning, and appreciation scales on the MacCAT-CA and other factors such as age, achievement level, psychopathology, IQ, and experience with the juvenile court system. The mean IQ for the participants was approximately 76.

Participants were placed into groups according to age (9-12, 13-14, 15-16, and 17-18 years of age). Researchers examined participants utilizing the *MacCAT-CA* (Hoge, Bonnie, Poythress, & Monahan, 1999), Vocabulary and Block Design subtests of the Wechsler Intelligence Scale for Children – Third Edition (WISC-III; Wechsler, 1991), the Wide Range Achievement Test- 3 (WRAT-3; Wilkinson, 1993), and the Brief Psychiatric Rating Scale for Children (BPRS-C; Overall & Pfefferbaum, 1982). The *MacCAT-CA*, WISC-III, and WRAT-3 were presented in counterbalanced order to reduce order effects of the tests. After the testing, researchers conducted a brief interview with each participant and completed the BPRS-C based on the interview and any behavioral observations made during the testing.

Researchers used three ANOVA's with the understanding, reasoning, and appreciation scores as the dependent variables to compare the performance of boys and girls on the *MacCAT-CA*. There were no significant differences between the boys and the girls. Reviewing the correlations between variables, researchers found a small but significant relationship between estimated IQ and age (Ficke, Hart, & Deardorff, 2006). Estimated IQ correlated significantly with academic skills, understanding, appreciation, and reasoning. The externalizing factor score of the BPRS-C correlated negatively with age and IQ, which indicated that older juveniles or those with higher IQ scores were less likely to manifest behaviors such as over-activity and impulsivity (Ficke et al., 2006).

The results also indicated a strong relationship between achievement skills and competency to stand trial. Researchers believed that the academic screening measures

provided an indication of the benefits juveniles derived from traditional instruction. Ficke et al. (2006) identified that juveniles 12 years of age and younger were not fully developed regarding their ability to understand court proceedings, they demonstrated poor reasoning skills related to court proceedings, and they did not fully appreciate their cases in the context of the court system compared to the other three groups of juveniles. The researchers proposed that MHPs consider several variables when examining juveniles for competency to stand trial including age, mental health conditions, academic skills, and IQ. Hyperactivity and behavior problems such as Attention Deficit Hyperactivity Disorder and Conduct Disorder played a significant role in reducing the juveniles' ability to participate in court proceedings (Ficke et al., 2006). This study indicated that mental disorders may be related to a finding of incompetency to stand trial if the mental disorder impairs the juveniles' ability to understand court proceedings and assist in his/her defense. In addition, lower intelligence scores were associated with a poorer performance on legal abilities linked to competency to stand trial.

Kruh, Sullivan, Ellis, Lexcen, and McClellan (2006) evaluated whether mental health diagnoses/intellectual disabilities were more likely to negatively affect juveniles' adjudicative competency compared to juveniles without these disorders. Researchers examined clinical diagnoses and identified factors differentiating juveniles opined to be competent or incompetent by MHPs, rates of competent/incompetent opinions, and the level of agreement between MHPs and judges.

The results indicated a higher rate of mental illness in juveniles determined to be incompetent. These results were believed to be related to the use of more structured strategies for reaching diagnostic conclusions in the evaluations (Kruh et al., 2006). Psychosis, intellectual limitations, mood disorder, and substance abuse were consistent with those found in adult studies. Younger juveniles were more likely to be found incompetent than older juveniles, providing evidence that developmental factors influence competency functioning. The results showed 58% of 9-12 year olds and 52% of 13-14 year olds were incompetent. Juveniles between the ages of 17-19 demonstrated similar rates of incompetency as the 13-14 year olds. Researchers explained this by the higher rate of psychosis and mental retardation in the group of older juveniles. Researchers concluded that the older juveniles were more likely to be referred for a competency evaluation for reasons similar to adults (major mental illness and intellectual limitations). Additionally, the results indicated a high rate of agreement regarding competency opinions between MHPs and judges. A finding of incompetent by the court was linked to being younger, having a diagnosis of psychosis, intellectual impairments, and special education placement.

Warren, DuVal, Komarovskaya, Chauhan, Vollum, and Ryan (2009) reviewed data collected on 563 individuals between the ages of 8 and 20 who were court-ordered to receive competency restoration services (while restoration services are outside the scope of this research, it is important to note which factors researchers reviewed in determining JAC). Researchers were interested in reviewing the data to determine the cognitive,

psychiatric, and developmental factors linked to a finding of incompetency. Competency restoration services included educational restoration techniques (role playing the court process, talking to the juvenile, role playing the relationship with an attorney, and talking to the juvenile's family), home based services, support services, medication management, mental health counseling, substance abuse services, residential treatment, and inpatient hospitalization. The participants varied in age, psychiatric impairments, and combinations of clinical characteristics and challenges. The researchers also explored the impact restoration techniques had on the juveniles' legal abilities.

Researchers used Chi-square Automated Interaction Detector analyses to create decision trees of the restoration pathways on four different groups of juveniles: mental illness only, mental retardation only, mental illness and mental retardation, and no mental illness and no mental retardation (Warren et al., 2009). The analyses contained individual variables including age, minority status, living situation, gender, type of criminal charge, restoration specific educational tools, school status, psychiatric care, placement in a secure setting, and case management services.

The results indicated that the highest rate of restoration was achieved by youth in the no mental illness and no mental retardation group (91%) and the lowest rate among youth in the mental retardation only group (47%; Warren et al., 2009). There was a significant interaction between age, mental illness, and restoration of competency. Juveniles ten years of age and older with a psychiatric diagnosis were restored to competency 89% of the time and juveniles ten years of age and younger with a

psychiatric diagnosis were restored to competency only 58% of the time. This difference may indicate the development interactions between age and psychopathology and the influence it has on competency related abilities. Most juveniles who suffered from a mental illness could be restored to competency through the use of medication and additional mental health services combined with educational learning and mentorship.

The findings also indicated a significant interaction among age, mental retardation, and restoration of competency (Warren et al., 2009). In a group of 152 juveniles who suffered from both mental retardation and mental illness, only 50% were restored to competency. Many of these juveniles suffered from moderate levels of mental retardation.

In sum, the results of the previous studies regarding the effects of intellectual disabilities/mental health disorders on juvenile adjudicated competency were summarized here. Psychiatric problems that emerged or increased in severity during late childhood into early adolescence may limit the individual's legal functional abilities. Merikangas et al. (2010) found that 1 in every 4 or 5 juveniles meet the criteria for a lifetime mental disorder causing severe role impairment and distress. Warren et al. (2003) found that juveniles between the ages of 10-13 have a greater difficulty understanding the elements of a serious offense, the plea bargain process, and the rights waived by pleading guilty. Mental disorders interact with normal development and limit functioning and coping resources (Teplin et al., 2013). Kruh and colleagues (2006) findings were similar to other

researchers in finding that over half of the juveniles between the ages of 9-14 were found incompetent based on their intellectual disabilities or mental health diagnosis.

Developmental Factors

In this section, research findings are discussed regarding neuropsychological, cognitive, and psychosocial developmental issues that MHPs should consider during an assessment of JAC. The research findings summarized included developmental studies in general and adjudicative competency-related abilities in particular (Grisso, 2005). When making well-informed legal decisions regarding JAC, MHPs, judges, lawyers, and policymakers need to be aware of the developmental changes that occur during childhood and adolescence (Cauffman & Steinberg, 2012). As influential as neuropsychological, cognitive, and psychosocial factors are to development, they should never be examined in isolation as they all interrelate to some extent or another.

Neuropsychological development. Studies of brain development have indicated that the brain continues to grow throughout childhood and adolescence. Researchers examined magnetic resonance brain imaging data in healthy boys and girls that were participating in a longitudinal pediatric brain Magnetic Resonance Imaging (MRI) project (Giedd et al., 1999). The goal of the study was to determine if there was significant change with age, if developmental curves differed by sex, and if developmental curves were linear or quadratic in brain development during childhood and adolescence. Researchers recruited participants from the community using phone screening, questionnaires mailed to parents and teachers, and face-to-face psychological testing.

Researchers obtained one scan from each of the 145 healthy participants between the ages of 4 and 21 years. Cognitive neuroimaging data indicated that white matter density and volume increased during childhood, adolescence, and early adulthood. Giedd et al. (1999) confirmed linear increases in white matter and demonstrated nonlinear changes in cortical gray matter, with a preadolescent increase followed by a postadolescent decrease. These findings have suggested that the brain continues to develop during childhood and into adolescence.

Luna et al. (2001) tested individuals between the ages of 8-30 years in an attempt to investigate brain maturation and the cognitive ability to voluntarily suppress context inappropriate behavior. Brain maturation and functioning may be applicable to the maturation necessary for competency related abilities such as understanding the court proceedings and assisting defense counsel. The participants were divided into three groups: 11 participants between the ages of 8-13 years, 15 participants between the ages of 14 and 17 years, and 10 participants between the ages of 18 and 30 years (Luna et al., 2001). Researchers conducted Functional Magnetic Resonance Imaging (fMRI) on participants while they performed a “pro saccade versus a fixation task to characterize basic sensorimotor control and an antisaccade versus pro saccade task to probe voluntary response suppression” (Luna et al., 2001; p. 787). The antisaccade task required the participants to voluntarily stop a reflexive eye movement to a pre-potent visual stimulus and move their gaze to the target or the mirror location (pro saccade). The antisaccade

task was previously used to characterize development of the ability to voluntarily suppress pre-potent responses throughout late childhood and adolescence.

The results of the Luna et al. (2001) study revealed that children showed increased activation in the supramarginal gyrus (part of the parietal lobe involved with language perception and processing), reflecting a reliance on visuospatial processing to compensate for immature access to widely distributed regions required to maintain appropriate response sets. Adolescents demonstrated greater activation compared to children and adults in the dorsolateral prefrontal cortex indicating their reliance on executive prefrontal behavior control systems (Luna et al., 2001). The difficulty of the antisaccade task may preclude the efficient use of the dorsolateral prefrontal cortex in the youngest participants who often made many errors performing the task. Researchers concluded that the immature functional connectivity of the juveniles' brain could make it difficult to integrate the function of many distant brain regions, thus hindering the ability to maintain states of preparedness that facilitate the voluntary suppression of reflexive behavior and the generation of adaptive context appropriate voluntary responses (Luna et al., 2001). The results indicated that reflexive acts may not be fully developed until an individual reaches adulthood. These findings have informed assessment of JAC as incomplete brain development may impair the cognitive ability to execute tasks necessary to assist counsel and to understand the court proceedings.

Sowell, Thompson, Tessner, and Toga (2001) showed that between childhood and adolescence, gray matter density in the brain in the dorsal aspects of the frontal and

parietal lobes decrease between adolescence and adulthood, with the loss of gray matter accelerating further in the frontal cortex. The participants included 14 children between the ages of 7 and 11 years, 11 adolescents between the age of 12 and 16 years, and 10 young adults between the ages of 23 and 30 years (Sowell et al., 2001). Researchers studied each participant with an MRI. The age ranges for the child and adolescent groups were chosen because they corresponded to pre-pubertal and pubertal status. Researchers screened each child and adolescent for neurological impairments and learning disabilities/developmental delays (Sowell et al., 2001). The results indicated a strong negative correlation between brain growth and gray matter density, particularly in the frontal and parietal lobes when all participants were examined. Decreased gray matter density, especially in the frontal cortex, was inversely correlated with brain growth (Sowell et al., 2001). Incomplete brain development could impair the ability of juveniles to assist counsel and to understand the court proceedings.

Cognitive Development. Cognitive development and capacities in childhood and adolescence are believed to parallel the development of the brain. Cognitive capacities that need to be taken into account during an evaluation of JAC include the ability to reason, process information, shape the decision-making process (Grisso, 2005) and includes short and long term memory, deductive and inductive reasoning (Steinberg, 2008).

Luciana and Nelson (2002) evaluated age-related cognitive executive brain function in 4-12 year olds using the Computerized Neuropsychological Testing Battery

(CANTAB; Robbins, & Sahakian, 1994). The primary focus of these measures is to infer functions of the human brain's temporal and frontal lobes believed to be related to executive functioning such as emotional control, working memory, planning/organization, self-monitoring, and initiation. The battery consisted of several subtests that measured psychological functions across three cognitive domains: working memory/planning, visual memory, and visual attention.

Researchers determined that some executive functions were present in rudimentary forms during middle childhood but did not fully mature until the post-pubertal period (Luciana & Nelson, 2002). To reach these conclusions, data were divided by age, and the children's performance scores were compared to a small sample of young adults independently tested. The researchers used a one-way analysis of variance with age as the independent variable on all task variables. The results showed significant effects of age for 13 of the 14 dependent variables. The only variable for which a significant effect of age was not found was the number of errors obtained during the spatial working memory task. Post hoc comparisons of adult performance data with that of each age group using Bonferroni correction were examined to determine the point in development where adult levels of performance were reached on each task. Researchers discovered that memory capacity, working memory for spatial locations, and efficiency of planning did not reach functional maturity by the age of 12 years. The researchers also noted that children reached adult levels of performance on the visual memory task at age six, but failed to reach adult levels of performance on a four-move version of the task

until after age 12 years. Children can solve planning/working memory problems at adult levels by age eight but have not reached adult levels of performance on more difficult task problems by age 12 years. These findings may be helpful in evaluating JAC related cognitive abilities as executive functions help direct and organize behavior. Juveniles are learning to make decisions for themselves when previously others have done the tasks for them or assisted in the tasks. These findings applied to adjudicative competency have suggested that younger juveniles might recognize and be able to name key individuals and processes in the legal system, but will not likely understand how these work together in order to make complex decisions until they further develop during adolescence and reach adulthood.

In a complex study, Viljoen and Roesch (2005) evaluated relationships among juveniles' cognitive abilities, psychological symptoms, and court-related legal reasoning capabilities. Participants included 152 pretrial defendants, between the ages of 11 and 17 years who were held in a detention facility. To measure cognitive abilities, researchers used the Woodcock-Johnson III Cognitive Assessment Battery (WJ III; Woodcock, McGrew, & Mather, 2001). The researchers examined general intelligence, verbal ability, comprehension-knowledge, fluid reasoning, long-term retrieval, attention, and executive processing in participants. To measure psychopathology, the researchers used the Brief Psychiatric Rating Scale for Children (BPRS-C; Hughes, Rintelmann, Emslie, Lopez, & MacCabe, 2001). Researchers also conducted standardized mental status interviews and reviewed institutional records of psychological disturbances and psychiatric medication.

Researchers tested participants using an adapted version of the MacArthur Competence Assessment Tool for Clinical Research (MacCAT-CR; Appelbaum & Grisso, 2001). The MacCAT-CR measures the four generally accepted components of decision-making competency: understanding, reasoning, appreciation, and the ability to express a choice. This assessment tool helps MHPs screen individual participants, conduct research on the characteristics of subject populations, and assess the effectiveness of interventions designed to increase the participants' capacities.

To determine if there were developmental differences in cognitive abilities, researchers examined the data from the WJ III with a multiple analysis of variance (MANOVA; Viljoen & Roesch, 2005). Age groups positively predicted the performance on general intellectual ability, attention, verbal abilities, and executive ability. Defendants between the ages of 11 and 13 years and those between the ages of 14 and 15 years scored significantly lower on general intellectual ability than defendants aged 16 and 17 years. Defendants aged 11 through 13 years scored significantly lower than defendants aged 16 and 17 years on verbal and executive abilities.

To evaluate whether cognitive abilities predicted court-related legal reasoning capabilities, scores were entered into regression equations (Viljoen & Roesch, 2005). Cognitive abilities consisted of scores for verbal ability, long-term retrieval, attention, executive functioning, and fluid reasoning. Verbal abilities significantly predicted performance on all the court-related legal reasoning measures except for the nature of interrogation. The results indicated that performance on measures of court-related legal

reasoning continued to improve during adolescence. Juveniles' verbal ability, intellectual ability, attention, and executive functioning increased with age. In sum, these results implied that juveniles may not have achieved the cognitive abilities essential to effectively understand and participate in legal proceedings

Conklin, Luciana, Hooper, and Yarger (2007) investigated the performance of developing children and adolescents on a number of working memory tasks. The researchers hypothesized that performance across several working memory tasks would improve with a person's age. Working memory is responsible for holding and processing new and already stored information (Conklin et al., 2007). The specific task could be as simple as presenting a participant with random, but specific sequences of letters or numbers that the participant repeats back in order. The University of Minnesota's Institute of Child Development maintained a database that contained birth announcements. From this database, children and adolescents between the ages of 9 and 17 years were randomly selected and invited to participate in the study. Researchers grouped the 117 participants into four categories based on age: 9-10, 11-12, 13-15, and 16-17 years.

The participants, along with their legal guardians, visited the University of Minnesota's Center for Neurobehavioral Development to complete a series of experimental cognitive and neuropsychological tasks that lasted five hours (Conklin et al., 2007). These tests included span tasks, self-ordered search tasks, recognition tasks, assessment of general cognitive ability, and task order. The participants' parents

completed a structured questionnaire that contained questions regarding family demographic characteristics and developmental and medical information regarding the participant. Participants worked individually with an examiner to complete the above-mentioned experimental cognitive and neuropsychological tasks.

The researchers first reviewed age group differences using univariate analyses for each independent task (Conklin et al., 2007). The results showed a significant difference from one another on the Digit Span Forward Task with 9 and 10 year olds demonstrating a shorter forward span than the 13 and 15 year olds and 16 and 17 year old groups. The researchers used a repeated measure ANOVA with Age and Domain (verbal and face) as the factors. Domain had a better performance on verbal than face recognition tasks. The results indicated the Age X Domain interaction was not significant. To assess shared variance among working memory tasks, researchers used a Principal Components Factor analysis. The study revealed an improvement in performance on working memory tasks across the adolescent years. Performance on multiple measures improved after the age of 12, including span and self-ordered search tasks that reached both spatial and verbal domains. However, researchers noted that no improvement occurred on the recognition task. This research implied that children between the ages of 9-17 years vary in their abilities to handle complex decision-making and problem solving tasks commonly required for competency to stand trial.

In sum, the maintenance and manipulation of multiple verbal units of information in working memory stabilized after 13-15 years of age (Conklin et al., 2007). On tasks

that contained a forward and backward condition (digit span and spatial span), the forward condition stabilized earlier (11-12 and 13-15 years of age) compared to the backward condition (13-15 and 16-17 years of age). These findings have significant implications for other researchers when considered in the context of imaging findings that revealed specific brain regions associated with task performance (Conklin et al., 2007). Recognition tasks were traditionally thought to rely on temporal lobe memory (Nelson, 1995). However recently, positron emission tomography showed that individuals performed a delayed match to sample recognition memory task (Petrides, 1995) which is similar to the verbal and face recognition tasks used by Conklin and associates in this study. MHPs are routinely required to form opinions about juveniles based on their development of problem solving abilities, ability to assist counsel, and ability to understand the court proceedings. Understanding the development of specific frontally mediated cognitive processes such as those mentioned by Conklin et al. (2007) would help MHPs form an opinion on JAC.

Psychosocial Development. Psychosocial development signifies maturation in a juvenile's emotional and social development (Larson & Grisso, 2011). Psychosocial developmental research findings were summarized here regarding such constructs as perception of risk, temperance, and abstract thinking. This section also summarized how these constructs impact cognitive capacities that juveniles use in the decision-making process. For example, when a juvenile is accused of a crime a police officer may question the juvenile. The police officer may state that if the juvenile confesses to

committing the crime that his/her sentence may be reduced. Juveniles are more accustomed to their parents making decisions on their behalf and are more vulnerable to the influence of pressure from authority figures such as police officers. The juvenile may falsely agree to committing the crime due to the authority figure's pressure and influence.

Perception of Risk. Gardner and Steinberg (2005) studied risk preference, risk-taking, and risky decision-making among 306 individuals in three age groups: adolescents (13-16 year olds), youths (18-22 year olds), and adults (24 and older). The researchers had three hypotheses. The first hypothesis stated that risk-taking, risk preference, and risky decision-making would decrease with age. The second hypothesis implied that individuals would demonstrate more risk-taking, greater risk preference, and more risky decision-making when their peers were present compared to when alone. The final hypothesis was that group effects on risk orientation would be greater between adolescents than among youths, and greater among youths than adults. The participants completed two questionnaire measures assessing their risk preference, risky decision-making skills, and one behavioral task measuring risk-taking.

Researchers measured risk preference using a modified version of the Bentlin Risk Perception Measure (BRPM; Bentlin, Slovic, & Severson, 1993). The measure assessed participants' risk perception and risk preference. Participants were presented with five hypothetical dilemmas involving risk behavior. Participants were also assessed using the Youth Decision-Making Questionnaire (YDMQ; Ford, Wentzel, Wood, Stevens, & Siesfeld, 1989). Participants in each age group were randomly assigned to

complete the measures either alone or with two same aged participants. Researchers assessed participants' risk-taking abilities using a video game called "Chicken" (Sheldrick, 2004). The game was played on a laptop computer and required participants to make decisions about whether to stop a car that was moving across the screen once a traffic light changed from green to yellow. The yellow light signaled the impending appearance of a red traffic light as well as a potential crash if the car was still moving when the light turned red (Gardner & Steinberg, 2005). The game consisted of 15 trials. Participants were instructed that the object of the game was to move the car as far as possible without crashing into the wall. Participants were able to control whether the car was moving or stopped but not the speed. Participants acquired more points the further the car moved without crashing into the wall, but lost points that were accumulated if they crashed the car.

Researchers analyzed the data using a linear mixed model in SPSS. The linear mixed model analysis allowed for correlated variability among the observations (Gardner & Steinberg, 2005). The results of the study indicated that the effect of age on risk-taking and risk decision-making was significant. During the risk-taking game, younger juveniles allowed the car to move forward for longer periods of time after the yellow light appeared and were more likely to restart the car after stopping it. In addition, the younger juveniles were more likely than the older participants to select the risky course on the decision-making questionnaire. These findings supported the researchers' hypotheses that adolescents were more inclined toward risky behavior and risky decision-making

compared to adults and that peer influence played a critical role in explaining risky behavior during adolescence (Gardner & Steinberg, 2005). The implications of these findings suggested that younger juveniles might not be able to conduct a risks/benefits analysis necessary during risky legal decision-making such as making confessions, pleas, or plea-bargaining.

Juvenile risk taking differs from that of adults in its social context as well as its occurrence. Chein, Albert, O'Brien, Uckert, and Steinberg (2011) measured brain activity using a functional magnetic resonance imaging (fMRI) in adolescent, young adults, and adult participants as they made a number of decisions in a simulated driving game. The researchers hypothesized that when peers were present, the participant would take additional risks thereby sensitizing the incentive processing system (system in the brain which biases decision-making based on the value and prediction of potential rewards and possible punishment) to respond to cues that signaled the potential rewards to engaging in risky behavior. Participants made decisions regarding whether to stop at an intersection or run through the intersection and chance a collision with another vehicle. Researchers obtained information from 40 participants (14 adolescents between 14 and 18 years of age, 14 young adults between 19 and 22 years of age, and 12 adults between 24 and 29 years of age). The goal of the simulation was to reach the end of a track as quickly as possible to maximize a monetary award. Risky decisions offered a possible payoff of experiencing no delay at the intersection but had the possibility of crashing, which added to the delay.

The researchers analyzed the data using voxel-wise parameter estimates (beta coefficients) from individual participants. This data was entered into a group of random effects analyses to pinpoint regions displaying main and interactive effects for age and social context. A two-way repeated measures ANOVA was conducted using age group as a between subjects factor and social context as a within subjects factor. Researchers found that adolescents, but not adults, exhibited increased risk taking when observed by their peers (Chein et al., 2011). FMRI results indicated that adolescents demonstrated greater activation of their ventral striatum and mid-orbitofrontal (regions known to be involved in reward prediction and valuation) as they made decisions regarding risk, but only when they were aware that their friends were watching (Chein et al., 2011). Adults showed no differences in the activation of these regions. Teenagers are influenced by their friends to engage in compromising behavior by enhancing sensitivity to the reward value of risky decisions (Chein et al., 2011).

Steinberg, Graham, O'Brien, Woolard, Cauffman, and Banich (2009) examined the age differences in future orientation that involved the deferment of gratification (e.g., future consequences, planning ahead, and thinking about the future) using a self-report measure and the delay-discounting model in which the participant was asked to choose between an immediate reward of less value and delayed rewards of more value. This type of task parallels decision-making in the legal system where a defendant must be able to weigh the benefits of an immediate reward for pleading guilty to a crime and ending the legal procedures versus the delayed reward that could come from maintaining one's

innocence until the end of a trial and being acquitted. In the study, the outcome of interest is whether the tendency to prefer the delayed and more valuable reward compared to the immediately available but lesser value option was age-related.

Researchers sampled 935 participants between the ages of 10-30 years in five states (Colorado, California, Los Angeles, Philadelphia, and Washington, DC; Steinberg et al., 2009). Participants were recruited to yield an age distribution designed to compare adolescents of different ages (10-11, 12-13, 14-15, 16-17, 18-21, 22-25, and 26-30-year-olds). Researchers used three Likert-type scales to assess risk perception, sensation seeking, and impulsivity. Researchers assessed risk perception using a modified version of a measure developed by Benthin, Slovic, and Severson (1993). Participants were presented with eight dangerous activities and asked to state how risky the activity was. Sensation seeking was assessed using six item subscales of the Barratt Impulsiveness Scale (Patton, Stanford, & Barratt, 1995). The analysis of age differences in psychosocial maturity indicated a significant age effect. Results indicated that age differences did not emerge until mid-adolescence, however, were present throughout late adolescence and early adulthood. Researchers used a Bonferroni correction, which revealed no significant differences in psychosocial maturity between four different age groups (10-11, 12-13, 14-15, and 16-17 year olds). When analyzing the age differences in cognitive capacity the research showed a different pattern. Researchers used a Bonferroni correction that showed a significant difference in general cognitive capacity between the 10-11, 12-13, and 14-15 year olds, however showed no age differences after the age of 16 years.

The results of this study indicated that the differences between juveniles and adults were limited to those aged 13 years and younger compared to those aged 16 and older (Steinberg et al., 2009). The period between 13 and 16 years of age is critical for the development of specific capacities that underlie discounting behavior and affect individual's relative preference for longer term versus immediate rewards. By the age of 16 years, adolescents' general cognitive abilities are indistinguishable from adults, but adolescents psychosocial functioning even at the age of 18 is less mature than that of individuals in their mid-20s. Psychosocial functioning can adversely impact juveniles' factual understanding of the trial process, decisional competency, and their ability to assist legal counsel.

Temperance. Cauffman and Steinberg (2000) evaluated whether three psychosocial components of maturity (responsibility, temperance, and perspective) were age-related on a judgment task in 1,000 participants between the ages of 12 and 48 years. The researchers defined responsibility as a characteristic of self-reliance, clarity of identity, and independence. A participant that exhibited characteristics of temperance displayed tendencies to limit impulsivity and to evaluate a situation before acting. Perspective referred to the participant's likelihood of considering situations from different viewpoints and placing them in broader contexts. The researchers were also interested in determining whether there were predictable age-related patterns of change in people's antisocial judgments between adolescence and adulthood and if so, if these changes were linked to different parts of maturity.

Researchers assessed the participants' level of responsibility utilizing the personal responsibility scale of the Psychosocial Maturity Inventory (PSMI Form D; Greenberger, Josselson, Knerr, & Knerr, 1975). The scale contained 30 items that the participants responded to using a four-point Likert-type scale. Higher scores indicated more responsible behavior. Researchers assessed participants on two aspects of perspective. The first aspect was the ability to see short and long-term consequences measured by the Consideration of Future Consequences Scale (Strathman, Gleicher, Boninger, & Edwards, 1994). Participants were asked to indicate how characteristic the statement was of them. The second aspect was the Consideration of Others subscale from the Weinberger Adjustment Inventory (Weinberger & Schwartz, 1990). The scale was used to assess how often participants took other individuals' perspectives into consideration. Participants responded to items measuring temperance such as impulse control and self-restraint from aggressive behavior using subscales of the Weinberger Adjustment Inventory. Participants completed self-report questionnaires on their psychosocial maturity in the three domains and responded to a series of hypothetical decision-making dilemmas regarding antisocial or risky behavior.

The results of the study indicated that socially responsible decision-making was more common in young adults than adolescents but does not increase substantially after 19 years of age (Cauuffman & Steinberg, 2000). Socially responsible decision-making in the study was behavior that was socially acceptable and measured by responses to the hypothetical dilemmas. Participants who exhibited higher levels of responsibility,

temperance, and perspective displayed more mature decision-making in the hypothetical dilemmas than the participants with lower scores on the psychosocial factors regardless of age. On average, adolescents scored substantially worse than adults but individual differences in psychosocial factors within each adolescent age group were substantial. The present study indicated that psychosocial characteristics continue to develop during late adolescence and result in a significant decline in antisocial decision-making. Important progress in the development of perspective, temperance, and responsibility occurs during late adolescence. These changes can have a significant effect on the ability to make mature decisions. These findings may inform assessment of JAC in areas pertaining to legal decision-making.

Perspective-Taking. Choudhury, Blakemore, and Charman, (2006) evaluated whether age was related to the development of the ability to understand others' viewpoints and take others' feelings into account. They hypothesized that during adolescence, individuals begin to attend to others' viewpoints and how others feel when communicating with them. This perspective taking was a prerequisite for productive and empathic communication. Participants included 112 males and females, between the ages of 8 and 36 years, who performed a computerized task to answer questions taking an emotional perspective about social situations either from the participants' own viewpoint (e.g., "You are not allowed to go to your best friend's party, how do you feel?") or from another person's viewpoint (e.g., "Your friend is not allowed to go to his/her best friend's party, how does he/she feel?"). The participants were asked to choose as quickly as they

could between one or two emotional faces in answer to social questions. The emotional faces were cartoon faces representing one of five possible emotions: happy, neutral, sad, afraid, and angry. The researchers calculated and analyzed the participants' reaction time to test the effects of age on perspective-taking, hypothesizing that shorter reaction times would correspond to the ability to readily understand the others' feelings.

The participants' non-directional reaction time difference between the first person perspective and the third person perspective was calculated and analyzed using a one-way ANOVA to test the effects of age and gender on the participants' reaction times. The results indicated no significant effects due to gender; however, there was a significant effect of age showing that the participants' reaction time decreased with age. *Post hoc* Bonferroni tests revealed that the participants' mean reaction time was significantly longer in pre-adolescents ($p < .001$) somewhat briefer in adolescents and the shortest in adults ($p < .005$).

The researchers confirmed their hypothesis that perspective taking develops during adolescence (Choudhury et al., 2006). Prior to adolescence, social communication is impaired by the inability to readily understand another's viewpoint and feelings. The implications for evaluation of JAC is that a juvenile who has not yet developed the capacity for perspective-taking is unlikely to attend to or understand his or her attorney's viewpoints when discussing the legal process and legal options that are available.

Age. In Viljoen and Roesch's (2005) study, cognitive development briefly explained the age-based differences in legal capacities. With age, legal capacities may

become more ingrained and consolidated, therefore less related to juveniles' cognitive ability. In Ficke, Hart, and Deardorff's (2006) study, age was correlated with achievement skills and the number of charges. Age was also correlated with all three of the MacCAT-CA scores. Subsequent regression analyses indicated that the relationship between age and MacCAT-CA performance was curvilinear – the strongest relationship occurred at younger ages (9-12 year olds), with the relationship leveling off at the older three age groups. These findings have suggested that as juveniles age they are able to process more complex bits of information and make increasingly more complex decisions (Luciana & Nelson, 2002).

In sum, developmental research findings have revealed that neuropsychological development, cognitive, and psychosocial developmental issues are important for MHPs to consider during an assessment of JAC. Sowell et al. (2001) found that incomplete brain development impairs the ability for juveniles to meet *Dusky* criteria. Viljoen and Roesch (2005) concluded that younger juveniles might not have achieved the cognitive abilities essential to effectively understand and participate in legal proceedings. MHPs are routinely required to provide opinions on juveniles based on their development of problem solving abilities, ability to assist counsel, and understand legal proceedings. Conklin et al. (2007) believed that understanding the development of cognitive processes would help MHPs form an opinion regarding JAC. Gardner and Steinberg (2005) discovered that juveniles were more inclined to partake in risky behavior and risky decision-making compared to adults. Choudhury et al. (2006) further stated that peer

interactions and societal influences may impact juvenile social behavior. MHPs conducting JAC evaluations need to be aware of the developmental changes that occur in childhood and adolescence (Cauffman & Steinberg, 2012).

Competency-Related Abilities in Assessment of Juvenile Adjudicative Competency

In review of the legal precedent, three requirements are implicated by the *Dusky* standard for competency to stand trial including: 1) a factual understanding of the proceedings, 2) a rational understanding of the proceedings, and 3) the ability to assist counsel (*Dusky v. United States*, 1960). MHPs have identified these components as legal system competencies that are assessed as part of an evaluation of competency (Scott & Grisso, 2004). These competency-related abilities have been divided into three categories: 1) factual understanding of the legal system - focuses on the defendant's understanding and awareness of the charges, available pleas, possible penalties, general steps in the adjudication process, role of participants in the court proceedings, and the defendants' rights (Scott & Grisso, 2004, p. 2) rational understanding of the legal proceedings - means that a defendant must comprehend the implications and significance of what the defendant understands factually regarding the court proceedings (Scott & Grisso, 2004), and 3) assisting defense counsel and decision-making.

Factual understanding. Most courts treat factual and rational understanding as one element. The factual understanding requirement of the *Dusky* standard has been comprehensively defined and analyzed by researchers (Grisso, 2003). When judges assess factual understanding, they may be concerned with capacity instead of

understanding that it can be distinguished. Defendant's insufficiencies in this area will seldom be the determination of incompetency as long as the defendant has the capacity to learn from instruction (Scott & Grisso, 2004). Juveniles may be at a disadvantage compared to adults in their knowledge of the trial process. Intellectual immaturity in juveniles may reduce their understanding of this capacity especially because of their limited experience with the juvenile justice system (Scott & Grisso, 2004).

In a seminal study that examined juveniles' understanding of legal terms, Savitsky and Karras (1984) evaluated age and juvenile competency to stand trial. Researchers administered the Competency Screening Test (Lipsett, Lelos, & McGarry, 1971) to three groups of individuals: 12 non-delinquent 12 year olds, 80 individuals 15-17 years old (half of the individuals were incarcerated), and 19 adults. The Competency Screening Test gauges a person's knowledge of legal items. The researchers found that the mean scores on the test improved with each age group. Additionally, the results indicated that 12 year olds were not competent to stand trial and 15-17 year olds were less competent to stand trial compared to adults based on their understanding of legal terms. Savtisky and Karras (1984) concluded that understanding of legal terms increased as juveniles' aged.

Rational Understanding. A defendant may be able to factually define something but fail to understand the rational implications when applying it (Grisso, 2005). In addition, defendants may be able to define something, but have an "irrational" belief about something when applied to their own situation. This belief may distort the juvenile's perspective in a way that impacts the juvenile's participation (Grisso, 2005).

Defendants with deficits in rational understanding may have inaccurate beliefs that nullify the significance of their factual understanding (Scott & Grisso, 2004). Limitations seen in a juvenile's rational understanding may be related to a number of factors including visual and auditory processing problems. Immaturity may also impair juveniles' ability to perceive risks of their decisions realistically or to weigh the long-term consequences of their actions (Grisso, 2009). Mental disorders may also impair the juveniles' rational understanding. MHPs have suggested that competent defendants are capable of communicating effectively with their attorney, identifying and conveying important facts, identifying any inaccuracies in the testimony or evidence, and making informed decisions with the assistance of their attorney (Viljoen & Wingrove, 2007). Scott and Grisso (2004) implied that immaturity in the intellectual, psychosocial, and emotional areas may challenge the ability of some to obtain the importance of matters that they appear to comprehend factually.

Assisting Counsel and Decision-Making. The last requirement in the *Dusky* standard is the ability to assist counsel in a criminal proceeding. This function is associated with three abilities. The first ability is related to the defendant's capacity to obtain and communicate information effectively to allow counsel to prepare a proper defense (Scott & Grisso, 2004). A defendant that is unable to pay attention or concentrate may impede the defendant's ability to respond to questions or instructions. Secondly, the defendant must be able to assist counsel with a rational perspective on the role of the attorney and the role of the defendant. The defendant must be able to endure the stress of

the trial, maintain demeanor, and provide relevant testimony (Grisso, 2009). The last ability relates to the defendant having the capacity to make decisions regarding pleas, penalties, and waiver of rights. These decisions involve factual and rational understanding, but also the ability to consider alternatives and the ability to make a choice in the decision-making process. Juveniles' abilities may be compromised by mental illness, emotional, intellectual, and psychosocial immaturity. Juveniles may lack adequate capacities to process information and reason in court proceedings, especially when the options are often complex (Scott & Grisso, 2004).

Schmidt, Reppucci, and Woolard (2003) used a hypothetical attorney-client vignette to examine age-related psychosocial factors reflected in decision-making processes, decision outcomes, and effective participation within the attorney-client relationship. The participants included 101 male juveniles between the ages of 12 and 15 years, 102 male juveniles between the ages of 16 and 17 years held in juvenile detention centers, and 110 adult males between the ages of 19 and 35 years held in a regional jail (Schmidt, Reppucci, & Woolard, 2003). Researchers assessed each participant with a two-hour individual interview. The MacCAT-CA was administered to measure the participants' understanding, reasoning, and appreciation of the legal process followed by the Kaufman Brief Intelligence Test (K-Bit; Kaufman & Kaufman, 1990) to measure the participants' intellectual functioning. To measure judgment and decision-making abilities, researchers assessed participants using an attorney-client vignette. The vignette described

a male who committed robbery and was in his first meeting with his attorney and needed to decide whether or not to confess to his attorney (Woolard, 2002).

The researchers first hypothesized that adolescents would be more likely than adults to select options such as refusing to talk to an attorney and denying involvement in the crime (Schmidt, Reppucci, & Woolard, 2003). A chi-square analysis was used to test for the differences in the number of participants' decision options and decision choices. The results indicated that a greater proportion of juveniles 16-17 years old (31.4%) compared to juveniles 12-15 years old (26.7%) and adults (16.8%) refused to talk as one of their options in the attorney-client relationship. Juveniles compared to adults were also inclined to recommend that the character in the vignette deny any involvement in the crime.

The second hypothesis stated that developmental psychosocial factors would be reflected in the decision-making process (Schmidt, Reppucci, & Woolard, 2003). Specifically, that juveniles between the ages of 12 and 15 years would focus more on short-term consequences and consequences linked with short-term gains compared to adults. A multivariate analyses of variance (MANOVA) was used to review the decision consequences based on three primary decision options (talk and admit to the crime, deny the crime, or refuse to talk). The results indicated that older and younger juveniles were more likely to think of short-term consequences compared to adults. This implied that juveniles focused on the immediate consequences instead of the long-term consequences when making decisions. The younger juveniles mentioned more consequences categorized

as questioning pursued, freedom, and disposition compared to older juveniles. However, adults mentioned “plea agreements” more frequently compared to the older and younger juveniles. Race, detention history, committing an offense, and IQ were related to the decision outcomes and decision-making process. African-Americans and juveniles of other minority statuses were less likely than Caucasians to recommend that the vignette character talk and admit wrongdoing to their attorney. These findings reflected the awareness of the unequal treatment of minorities in the juvenile justice system.

Committing an offense and detention history was predictive of how the juvenile responded to the vignette character. A less serious offense was predictive of the juveniles recommending that the vignette character be honest with his/her attorney. A detention history lessened this likelihood as well as the juveniles’ self-reported chance of talking and admitting to their attorneys. IQ was related to the content and temporal perspective of the consequences produced by juveniles during the decision-making process. The results of the study emphasized the need for researchers to continue exploring potential deficits in juveniles’ abilities to function as effective defendants, focusing less on the cognitively based definition of competency and more on factors that impede juveniles’ participation in the trial process (Schmidt, Reppucci, & Woolard, 2003).

Viljoen, Klaver, and Roesch (2005) evaluated predictors of types of legal decisions made by juveniles according to age, psychopathology, cognitive performance, and legal abilities related to competency to stand trial. The participants included 152 juvenile defendants between the ages of 11-17 years detained in juvenile facilities

throughout Washington State. The researchers separated the participants by age (11-13, 14-15, and 16-17years) to evaluate whether age was a predictor and to ensure that the younger participants were sufficiently represented. Researchers used the Fitness Interview Test, Revised (FIT-R; Roesch, Zapf, Eaves, & Webster, 1998) to assess the participants' legal abilities related to adjudication and standing trial (specifically understanding legal proceedings, appreciation of legal proceedings, and the ability to communicate with counsel). Legal abilities related to police interrogation were examined with Grisso's Instruments for Assessing Understanding and Appreciation of Miranda Rights (Grisso, 1988). The Woodcock-Johnson III Cognitive Assessment Battery (WJ III; Woodcock, McGrew, & Mather, 2001) was administered to measure cognitive performance. Psychopathology was measured by the Brief Psychiatric Rating Scale for Children (BPRS-C; Hughes, Rintelmann, Emslie, Lopez, & MacCabe, 2001).

Focusing on types of legal decisions, researchers examined predictors such as demographic variables including age, socioeconomic status, situational variables including strength/absence of evidence, cognitive abilities, criminological variables including arrest history, legal abilities related to competency, and psychopathology (Viljoen, Klaver, & Roesch, 2005). The types of decisions made by the juveniles consisted of confessions to police, waiving rights to counsel, amount of information shared with counsel, and plea-bargaining. Data were analyzed with chi-square tests and one-way analyses of variance.

This complex study produced a plethora of findings, and only the most noteworthy are summarized here (Viljoen et al., 2005). Regardless of other variables, the extent of legal abilities predicted ability to make legal decisions. Cognitive abilities were not associated with decisions to confess or waive counsel during police interrogations. Juveniles were more likely to plead guilty if advised to do so by their parents, peers, or attorneys. Regarding age, juveniles 15 years of age and younger were more likely than older juveniles to confess, waive their right to counsel, and were less likely to report that they would appeal their case or discuss any disputes with their attorney. There were no age differences in rates of guilty pleas or decisions to accept a plea bargain. Juveniles between the ages of 15-17 years were more likely to confess, accept a plea bargain, or plead guilty if they noticed that there was strong evidence against them. Psychological symptoms measured by the BPRS-C were not consistently related to legal decision-making. However, participants with attention deficits and hyperactivity were more likely to waive their right to counsel and less likely to discuss disagreements with their counsel. Juveniles from lower socioeconomic groups were less likely to assert interrogation rights. Males and juveniles from ethnic minorities were less likely to disclose information about their case to their attorney.

In sum, research regarding juvenile competency related abilities is relatively new in psychology literature. Some research findings are noteworthy. Juveniles may have deficits in their factual and rational understandings of the legal proceedings. Using the MacCAT-CA, Grisso et al. (2003) discovered that juveniles exhibited significant age-

related differences on the understanding scale. This scale assesses a defendant's comprehension of courtroom procedures, the role of court personnel, and an understanding of his/her legal rights. Research showed that juveniles under the age of 16 years were more likely to demonstrate a certain degree of impairment in the functional capacities that were relevant to adjudicative competency (Scott & Grisso, 2004). Juveniles have significant deficits in their ability to effectively assist their legal counsel. Schmidt et al. (2003) research indicated that juveniles have significant deficits in their understanding of their attorney's role and the nature of the attorney-client relationship.

Best Practices in Assessment of Juvenile Adjudicative Competency

MHPs consider many factors while assessing juveniles for adjudicative competency. These factors include determining whether clinical issues such as intellectual disability (mental retardation) or mental health diagnoses might interfere with the juvenile's capability to understand court proceedings and assist legal counsel; determining whether developmental levels in neurocognitive and psychosocial domains are sufficient to understand court proceedings and assist legal counsel; and determining the juvenile's competency-related abilities (Grisso, 2009). Grisso (2005) has recommended that MHPs assess JAC while utilizing best practices guidelines supported by the American Academy of Forensic Psychology that have attempted to integrate and apply research findings regarding the clinical and developmental factors that are associated with adjudicative competency. These guidelines are summarized here.

The referral for a competency evaluation typically comes as a court order from a judge or as a request from the juvenile's counsel (Grisso, 2005). When MHPs receive a referral for a competency evaluation they need to determine: 1) if the question calls for a competency evaluation, 2) what specific deficits the referral source observed that warranted a competency evaluation, and 3) whether there are other questions to address in addition to competency. This may require the mental health professional to clarify the question by contacting legal professionals involved with the case such as the probation officer or the defense attorney (Grisso, 2005).

MHPs approach each referral with the idea that each case might require its own variation in design. Each case may vary based on the juvenile's gender, age, disabilities, and cultural backgrounds. Initial background information on the juvenile may be limited, disordered, or unattainable. To determine the scope of the evaluation, MHPs start with the referral question. By understanding the question of competency, the mental health professional can determine what information will be needed to assess the juveniles' functional abilities associated with adjudicative competency (Grisso, 2005).

When the competency evaluation is court ordered, MHPs notify the defense attorney, as the defense attorney may not know that a competency evaluation is transpiring (Grisso, 2005). Defense attorneys may provide information to the mental health professional regarding their client (the juvenile) that other professionals cannot provide. They may have historical information on the juvenile, especially if the attorney provided representation before. In addition to notifying the defense attorney of the

pending competency evaluation, the mental health professional may also learn if the defense attorney plans to be present during the competency evaluation (Grisso, 2005).

Once the mental health professional determines the appropriate methods for the competency evaluation, the mental health professional facilitates the legal parent's participation in the evaluation. While there is no legal obligation to contact the juvenile's parents, MHPs honor ethical obligations to do so as part of obtaining informed "assent" for the evaluation (AP-LS, 2011). When contacting the parents, the mental health professional will identify who they are, how they received the referral for the competency evaluation, and describe briefly the purpose of the evaluation (Grisso, 2005). The mental health professional extends an invitation to the legal parent(s) to attend the evaluation interview of the juvenile. The juvenile's parents are one of the best sources of information. An introductory session is conducted with the juvenile and the legal parent(s) to inform them of the nature of the evaluation, the mental health professional and juvenile relationship, and limitations of confidentiality. Typically, the mental health professional then interviews the juvenile and the legal parent(s) separately to conduct a clinical interview and obtain a developmental history from each.

After the mental health professional obtains information from the parents and the juvenile, the mental health professional obtains relevant records. These may include, but are not limited to, educational records, medical records, mental health records, juvenile justice records, and social service records. Educational records provide a record of the juvenile's academic performance and cognitive strengths and deficits relevant to the

competency assessment. Educational records may also provide the mental health professional with attendance records and Individual Educational Plans (Grisso, 2005). The juvenile's medical records may provide a picture of any physical developmental delays or abnormalities in addition to any head traumas, illnesses, and injuries the juvenile suffered that could impact cognitive functioning. If there is a history of mental illness, the mental health records will be invaluable to the mental health professional (Grisso, 2005). This provides the mental health professional with previous treatments and medications. Social service and juvenile justice records provide a history of past abuse, neglect, and contact with the court system. When obtaining data, MHPs obtain relevant information that fits the structure of the competency concept and satisfies the court's need for essential data.

MHPs focus on the juveniles' current developmental and clinical status during the evaluation to determine the juveniles' current level of intellectual and cognitive functioning, and whether current emotions, perceptions, thoughts, motivations, and potential mental disorders may impede competency-related abilities (Grisso, 2005). The juveniles' behavior is observed at the beginning of the interview in order to provide an inference about the juveniles' mental status. The mental health professional may supplement clinical data from a records review by conducting additional psychological testing. Grisso (2005) listed five categories of psychological testing for JAC evaluations including: (a) cognitive testing, (b) competency instruments, (c) personality and psychopathology testing, (d) measures of psychosocial maturity, and (e) response style.

Adjudicative competency evaluations assess the juveniles' functional abilities to understand court proceedings and assist legal counsel. These include factual and rational understanding of how courts operate, and the ability to communicate with defense counsel to prepare their defense. The mental health professional determines if the juvenile understands the pending charges, the potential legal consequences of the charges, the roles and functions of the participants in court, and the trial process (Kruh & Grisso, 2009). If juveniles have a poor understanding, they may be provided with instruction as part of the evaluation. The mental health professional then re-assesses the juveniles' understanding after they have received instruction.

The mental health professional's conclusions must be formed in the context of the legal concept of competency. Grisso (2005) recommended that the results of the evaluation are presented according to five categories: 1) functional question – what the juvenile actually knows, understands, and believes is relevant to the court process and to completely participate in his/her defense, 2) causal question – if there are no deficits in the juvenile's functional abilities related to competency, there may be no need to address the causal question. However, if there are significant deficits, the mental health professional should provide the best explanation for them and include what mental, developmental, or clinical condition explains the reason for the juveniles' deficits, 3) context question – identify what external factors make the juvenile's deficits more or less significant when addressing the final competency question; external factors include parental influence and specific demands of the juveniles own adjudicative process, 4)

conclusory question – in light of all the information, summarize whether the juvenile appears to possess sufficient cognitive and developmental capabilities to meet legal criteria for competency and/or whether clinical, developmental, or functional issues impede the juvenile’s capability to meet legal criteria for competency, and 5) remediation question – if the juvenile appears to fall short of legal criteria for competency, summarize whether remediation might be effective in order for the juvenile to meet legal criteria and resume the trial proceedings.

Assessment Tools for Juvenile Adjudicative Competency

Assessment tools have been used by MHPs to support adjudicative competency evaluations in juveniles. These most frequently used tools are discussed here, the MacCAT-CA (Hoge, Bonnie, Poythress, & Monahan, 1999), JACI (Grisso, 2005), and the FIT-R (Roesch, Zapf, & Eaves, 2006).

MacArthur Competence Assessment Tool – Criminal Adjudication (*MacCAT-CA*)

An important research initiative of the MacArthur Foundation Research Network on Mental Health and the Law was the creation of a standardized research instrument for adults for evaluating criminal defendants’ psycholegal abilities related to competency to stand trial (Otto et al., 1998). The first assessment tool developed was the MacArthur Structured Assessment of Competencies of Criminal Defendants (MacSAC-CD; Hoge, Poythress, Bonnie, Monahan, Eisenberg, & Feucht-Haviar, 1997), which contained measures of discrete competency-related abilities. Each measure involved standardized administration and criterion-based scoring. The value of the MacSAC-CD for assessing

competency-related abilities was pilot tested, refined, and an extensive field study was conducted (Bonnie et al., 1997). The MacCAT-CA is the next generation and revised edition of the MacSAC-CD. It is a 22-item test that utilizes a hypothetical narrative to measure a defendant's factual knowledge of legal concepts ("understanding"), rational thinking ability ("reasoning"), and the influence of psychopathology on decision-making, potential outcomes, and appreciation for the situation ("appreciation") based on the vignette (Hoge, Bonnie, Poythress, & Monahan, 1999). The vignette is read by the examiner and sets the foundation for the first 16 questions. For the remaining six items, defendants are asked to make comparative judgments about their own cases and explain their reasoning.

The MacCAT-CA is based on a theoretical approach and measures the theoretical concepts of adjudicative competency first introduced by Bonnie (1992). Bonnie argued that the concepts of competency were covered in two separate components: the ability to assist counsel and a concept of decisional competency (Zapf & Viljoen, 2003). Bonnie's model was converted into three-prong discrete abilities to operationalize and measure competency. These three subscales have shown good internal consistency and excellent inter-rater reliability when used with adults (Otto et al., 1998).

MacCAT-CA Applied to Juveniles

Poythress et al. (1999) published the MacCAT-CA manual using adult norms, and their applicability to juveniles is questionable. Grisso and colleagues (2003) were the first researchers to assess juvenile competency by using the MacCAT-CA. The

participants included 453 detained juveniles, 233 detained adults, 474 community juveniles, and 233 community adults. The researchers designed the study to determine if juveniles differed from adults in their performance on the MacCAT-CA, and if so, what kinds of deficits did the juveniles show.

The results proved that age was linked to performance on the MacCAT-CA (Grisso et al., 2003). Juveniles under the age of 16 years were significantly more likely to score in the impaired range than older participants. Individuals between the ages of 11-13 years performed worse than one older group on all three subtests, and 14-15 year olds scored worse than at least one of the two older age groups on all three subtests. In addition, juveniles with lower intelligence were more likely to have impaired understanding, reasoning, and appreciation.

The results of the study raised several important issues. The MacCAT-CA does not assess defendant's abilities to assist counsel, reconstruct events at the time of the offense, or manage their behavior in the courtroom. The MacCAT-CA assesses capacities that are relevant for the competency question, but does not assess legal competency itself. MHPs must be careful not to interpret juveniles' serious impairments on the MacCAT-CA as an accurate indicator that they are actually incompetent to stand trial.

Burnett, Noblin, and Prosser (2004) examined the MacCAT-CA scores of 110 juveniles between the ages of 10 and 17 years for relationships between age, gender, intelligence, prior delinquency, race, education level, socioeconomic status, and family history of criminal activity. Seventy of the participants were awaiting adjudication in

juvenile court while the other 40 juveniles were recruited from the community (control group). The participants were divided into four age groups (10-12, 13-14, 15-16, and 17 year olds). In order to participate in the study, participants had to speak English, obtain IQ scores of 60 or above on the Wechsler Intelligence Scale for Adults – Revised (WAIS-R; Wechsler, 1981), and have no mental health diagnoses. Researchers provided participants with a self-report data sheet that assessed participants' background, age, gender, education levels, race, delinquency, and offense history. In addition to the self-report data sheet, participants were examined using the Four Factor Index of Social Status (determines estimated social status), Wechsler Intelligence Scale for Children – Third Edition (WISC-III; Wechsler, 1991) and the MacCAT-CA. The scores on the MacCAT-CA were compared to those earned by adult jailed inmates who were deemed competent to stand trial in Otto et al.'s (1998) study.

Burnett et al. (2004) discovered that the juveniles' scores on the MacCAT-CA were similar to those of adults as age increased. But, the scores by juveniles in the 10-12, 13-14, and 15-16 year old bracket were lower than scores for adults on the understanding and reasoning scales. Juveniles in the 17 year old bracket scored similar to adults on the understanding and reasoning scales. Juveniles in the 15-16 and 17 year old brackets scored similar to adults on the appreciation scale. As the juveniles increased with age, their scores became similar to those of adults on the MacCAT-CA. The overall results of the study indicated that based on their MacCAT-CA scores, juveniles below the ages of 15 to 16 years cannot be assumed to be competent, as adults with the same scores are.

Other researchers have questioned whether the MacCAT-CA is age-appropriate for juveniles. Viljoen, Slaney, and Grisso (2009) conducted a study that tested for age-related measurement bias. The researchers hypothesized that item scores on the MacCAT-CA would be similar for juveniles between the ages of 16-17 years and adults, but would be different for juveniles aged 11-15 years compared to adults. The second hypothesis predicted that items on the appreciation scale would show Differential Item Functioning and the final hypothesis predicted that the vignette based format of the MacCAT-CA understanding and reasoning scales would underestimate the juveniles' cognitive abilities, thus underestimating young adolescent's adjudicative capacities. Researchers administered the MacCAT-CA to 1,393 participants, 11-24 in age, divided into three age groups: 535 young adolescents 11-15 years in age, 392 adolescents 16-17 years in age, and 466 young adults 18-24 years in age.

To test for age-related measurement bias on the MacCAT-CA, researchers used an Item Response Theory (IRT) framework (Viljoen et al., 2009). IRT allowed researchers to examine whether items had different measurement properties for individuals in different groups (Embretson & Reise, 2000). When the measurement properties differed by group, the item showed Differential Item Functioning (DIF), which indicated a measurement bias. In this study, a presence of DIF indicated that an adolescent or an adult with equivalent levels of legal capacity would receive different scores on that item leading to a biased estimate of legal capacity.

The likelihood ratio statistic was used to investigate the presence of DIF in the items on the MacCAT-CA (Viljoen et al., 2009). A Mantel chi-square analysis was conducted to examine item functioning in juveniles 16-17 years of age compared to adults. The results indicated that relatively few items functioned differently for adolescents between the ages of 16-17 years compared to adults. The number of items that showed DIF was higher in adolescents between the ages of 11-15 years, with five of the 22 items on the MacCAT-CA showing DIF. The items which showed DIF for adolescents between the ages of 11-15 years included: role of defense attorney and prosecutor, role of the jury, role of the judge at a jury trial, likelihood of punishment if convicted, and seeking information. None of the items on the appreciation scale performed differently for adolescents between the ages of 16-17 years compared to adults. The researchers also discovered that several items on the scales were more difficult for adolescents between the ages of 11-15 years than for adults who were matched with the same level of understanding. These items included role of the jury, role of the judge, and seeking information regarding a plea bargain choice. Warren et al. (2003) study revealed that the MacCAT-CA showed promise methodologically for use with juveniles. The vignette format combined with educational efforts on queries elicited less than complete answers, captured the differences in abilities that were attributable to psychopathology, cognitive limitations, and developmental factors (Warren et al., 2003).

Viljoen, Slaney, and Grisso (2009) concluded that several challenges arise when applying the MacCAT-CA and other adult assessment tools to juveniles. Adult

competency assessment tools are designed to measure legal capacities relevant to competency in criminal court, not juvenile court and different legal standards may apply in these settings. Adult competency tools also do not examine developmental constructs such as risk perception, autonomy, cognitive development, or future orientation, which are important to juvenile competency. Researchers also concluded that if MHPs use the MacCAT-CA in juvenile competency evaluations that it would be wise not to rely strictly on this assessment tool, but instead use it in combination with other clinical information.

Other criticisms of using the MacCAT-CA included that it was not created to be developmentally appropriate for juveniles, as the vignettes and questions were not worded for juvenile comprehension. Grisso (2005) stated that it does not assess issues that are unique decision-making approaches of juveniles or developmentally-based problems linked with appreciation. Because of these limitations, Grisso (2005) recommended that MHPs that use the MacCAT-CA for JAC use it with caution. Grisso believed that the MacCAT-CA is better suited for older adolescents that present with issues other than cognitive limitations. In particular, Grisso and colleagues (2003) stated that the appreciation scale raises concern for use with juveniles. Besides focusing on psychosis based appreciation weaknesses, the scoring criteria do not distinguish between juveniles distorted beliefs and the “I do not know” responses that may be common among juveniles faced with complex questions.

Due to the concerns regarding the use of the MacCAT-CA on juveniles, it is not well supported for use with developmentally disabled or delayed juveniles. The

MacCAT-CA has not been authenticated for use with intellectually disabled adults (Poythress et al., 1999) let alone with intellectually disabled juveniles.

Juvenile Adjudicative Competency Inventory (JACI)

Thomas Grisso (2005) developed the Juvenile Adjudicative Competence Inventory (JACI) as a result of a larger project by the MacArthur Research Network on Adolescent Development and Juvenile Justice. Due to the JACI's comprehensiveness, Grisso (2005) has recommended that MHPs use the JACI as a standard for assessing juveniles for competency. The JACI protocol includes a review of previous psychological test findings supplemented by testing deemed necessary by the psychologist, (e.g., intellectual, personality, clinical symptomology, neuropsychological, and a structured interview) to assess the juveniles' understanding of court proceedings and capacity to communicate with counsel. The JACI protocol also includes an interview that assesses the juveniles' understanding, appreciation, and reasoning abilities in 12 content areas related to juvenile proceedings. The 12 content areas include: nature and seriousness of offense, nature and purpose of the juvenile court trial, possible pleas, guilt and punishment/penalties, role of the prosecutor, role of the juvenile defense lawyer, role of the probation officer, role of the juvenile court judge, assisting the defense attorney, plea bargains/agreements, reasoning and decision-making, and participating in juvenile court hearings. The interview begins with questions regarding the juveniles' past experiences with legal proceedings and continues with questions regarding the purpose and nature of the juvenile court, possible pleas, and the roles of the participants (Grisso, 2005). Within

each topic, the mental health professional assesses the juveniles' understanding and appreciation through discrete questions. The interview contains several capacity checks that guide individuals to information that was taught to them during the interview (Grisso, 2005). This allows the mental health professional to assess both immediate and long-term retention in juveniles. A third section of questions titled "assisting counsel and decision-making" assesses juveniles' understanding and appreciation of relevant concepts as well as hypothetical decisional scenarios that allow the mental health professional to observe whether cognitive or psychosocial immaturity impacts the juveniles' decision-making (Grisso, 2005). The final section helps MHPs structure their observations of the juvenile during the evaluation interview on attentional abilities, capacity to testify, and self-control.

The JACI protocol takes into consideration different ages, developmental issues, and psychosocial functioning. The JACI does not produce standardized scores. The mental health professional evaluates the quality of a juvenile's response and analyzes the clinical data in order to develop an opinion about the juvenile's level of adjudicative competency (Grisso, 2005).

Lexcen and Heavin (2010) evaluated whether the JACI would yield findings about incompetency similar to previous findings that did not use the JACI. In this study, researchers used the JACI to help form opinions about whether juveniles met the two prongs in the Dusky standard, capacity to understand and capacity to assist counsel. The researchers hypothesized that impairments to either capacity to understand or capacity to

assist counsel would be linked to younger age, mental health problems, and lower intelligence. Participants included 280 youth between the ages of 8-18 years who had been referred to a forensic clinic from juvenile courts during two calendar years, 2005 and 2008. The participants were categorized into four groups based on age: those under 13 years ($n = 60$), 13-14 years, ($n = 79$), 15-16 years ($n = 97$), and 17-18 years ($n = 44$). Licensed psychologists administered a clinical assessment and interviewed juveniles using the JACI. The type of court was not identified in the summary of the study.

Researchers used a multiple analysis of covariance (MANCOVA) using capacity to understand and capacity to assist counsel as the dependent variables (Lexcen & Heavin, 2010). Independent variables included diagnostic categories and history of previous charges with covariates for age, ethnicity, gender, and intelligence. There were no significant multivariate effects for gender, ethnicity, or previous charges. Results showed that 58% of juveniles in the 8-12-year-old group had moderate to severe problems with the capacity to understand, compared to 47% of the 13-14 year olds, 37% of the 15-16 year olds, and 46% of the 17-18 year olds. The results further indicated that 60% of the 8-12 year olds had moderate to severe problems with the capacity to assist counsel, compared to 54% of 13-14 year olds, 47% of the 15-16 year olds, and 48% of the 17-18 year olds. Follow-up analyses indicated that increasing intellectual abilities were linked to fewer problems on both capacities.

The opinions on capacity to understand and capacity to assist counsel were derived from the interview using the JACI (Lexcen & Heavin, 2010). Out of the 280

cases, 53% were not competent to stand trial based on deficits in either their capacity to understand or the capacity to assist counsel. Most of the impaired juveniles ($n=123$) had problems with both capacities, three juveniles had problems with the capacity to understand and 21 juveniles had problems with the capacity to assist counsel. Lexcen and Heavin's (2010) results confirmed that the evaluation results produced by the JACI were consistent with previous findings in studies in which the JACI was not used, that intelligence and psychopathology impacted juveniles' capacity to understand and capacity to assist counsel and meet criteria for adjudicative competency.

Tomei and Panza (2014) evaluated the usefulness of the JACI protocol by focusing on how well it informed the evaluator's opinion about the juveniles' adjudicative competency. The purpose of Tomei and Panza's study was to explore the use of the JACI and to assess its usefulness in assisting MHPs to form an opinion of JAC. The JACI is currently the only measure developed specifically for use in juvenile competency assessments. Researchers were interested in understanding when MHPs used the JACI if other psychological tests and forensic tests were used less frequently than in juvenile competency evaluations without the JACI. Researchers obtained data from 110 competency evaluations that one psychologist had conducted, 55 in which the JACI protocol was used and 55 evaluations in which the JACI structured interview was not used. The evaluations were conducted for juvenile court. The individuals were between the ages of 11-18 years. For the evaluations in which the JACI structured interview was not used, the psychologist conducted an unstructured interview in its place but completed

the same review of previous test findings and further testing deemed necessary that was conducted with participants receiving the JACI protocol. Although the actual structured JACI interview used in clinical settings does not yield scores, a method of scoring was used in the study for research purposes (Tomei & Panza, 2014).

The researchers ran biserial correlation and logistic regression analyses to determine which components of the JACI were related to the mental health professional's opinions of competency (Tomei & Panza, 2014). Chi-square analyses were used to determine whether mental illness, mental retardation, and age were suggestive of differences in opinions of competent or incompetent. Chi-square analyses were used to show the frequency of test use. The results indicated that the most frequent test use in the JACI group was intelligence testing followed by personality testing, adaptive behavior scales, behavior checklists, and neuropsychological testing (Tomei & Panza, 2014). In the non-JACI group, intellectual and personality tests were used most frequently followed by adaptive behavior scales, behavior checklists, and other unclassified tests.

The results of the study indicated that the overall structured JACI interview score was strongly related to an opinion of competency, and these findings were statistically significant. Further, the structured JACI interview compared to the unstructured clinical interview appeared to assess more competency-related abilities that resulted in an opinion of incompetency. In the JACI group, 67% of the juveniles were opined to be competent, and 18% opined to be incompetent compared to 89% competent and 10% incompetent in the non-JACI group. These differences were found to be statistically significant. Finally,

while mental retardation was found to be a strong predictor of competency in both groups, the structured JACI interview score was found to be stronger than mental retardation in predicting an opinion about competency. The researchers concluded that the JACI is a strong predictor of final competency recommendations and is a valuable tool for MHPs in conducting juvenile competency assessments (Tomei & Panzi, 2014).

Fitness Interview Test – Revised (FIT-R)

The Fitness Interview Test (FIT; Roesch, Webster, & Eaves, 1984) was originally created in 1984 for use with adults in Canadian evaluations of fitness to stand trial. The FIT is a semi-structured clinical interview that assesses abilities related to navigating court and legal procedures including understanding, appreciation, and the ability to communicate with legal counsel. The FIT-R was revised in 1998 to reflect changes in Canadian law (Viljoen, Vincent, & Roesch, 2006). When the FIT-R was revised, researchers designed it for use with adults in Canada; however, they believed that it could be used as a guide in other jurisdictions that share similar legal precedence and clinical practice.

Viljoen, Vincent, and Roesch (2006) evaluated age-related appropriateness of the FIT-R with juveniles by examining the psychometric properties of the FIT-R when used with juvenile defendants. The participants included 152 pretrial defendants between the ages of 11-17 years held in a detention center. The sample was divided by age (11-13, 14-15, and 16-17 years) to ensure that the younger juveniles were sufficiently represented. The average IQ of the participants was 82.57.

The researchers hypothesized that numerical summary scores would be more reliable compared to structured clinical ratings (Viljoen et al., 2006). The FIT-R is a semi-structured interview that contains 16 sections designed to assist MHPs in assessing adjudicative competency. It includes questions that focus on the defendant's understanding of pleas, waiver of rights, legal defenses, ability to relate to their lawyer, to plan a legal strategy, and to participate in their defense (Roesch, Zapf, & Eaves, 2006). The study examined interrater reliability for items, sections, and determinations of competency and compared the interrater reliability of structured clinical ratings to numerical summary scores.

In the same study, researchers administered an adapted version of the MacCAT-CR (Appelbaum & Grisso, 2001) to determine if the participants understood and appreciated the study procedures and were able to make a choice regarding participation in the study (Viljoen et al., 2006). After completion of the MacCAT-CR, researchers administered the FIT-R to all study participants. Researchers used confirmatory factor analysis to determine the FIT-R's factor structure. Interrater reliability of the FIT-R was reviewed for item scores, total test scores and ranges, section summary scores, and structured clinical ratings using intraclass correlation coefficients.

The study results indicated that the interrater reliability of the FIT-R was adequate and the factor structure was consistent with its rationale when used with juveniles (Viljoen et al., 2006). These findings provided empirical support for the psychometric properties of the FIT-R when it is used with juveniles. The researchers did state that

MHPs should determine whether the FIT-R is consistent with the legal standards for JAC in their jurisdiction as the FIT-R was designed to measure legal abilities relevant to adjudicative competency in adults in Canada.

In sum, there are several assessment tools developed for assessing competency to stand trial among adult defendants, however, few have been developed specifically for juveniles, and there has been little research to evaluate the usefulness of these tools or how widespread their use is. The assessment tools used by MHPs to evaluate JAC evaluations have included the MacCAT-CA, the JACI, and the FIT-R. Grisso et al. (2003) were the first researchers to assess juvenile competency by utilizing the MacCAT-CA. They concluded that the MacCAT-CA did not assess juveniles' abilities to assist counsel, reconstruct events at the time of the offense, or manage their behavior in the courtroom. Viljoen, Slaney, and Grisso (2009) stated that if MHPs use the MacCAT-CA in juvenile competency evaluations that they should use other assessment tools as well. Grisso (2005) has recommended that MHPs use the JACI as it considers different ages, developmental issues, and psychosocial functioning. Tomei and Panza (2014) concluded that the JACI is a strong predictor of final competency recommendations and is a valuable tool for MHPs.

Policy and Practice Issues: Juvenile Adjudicative Competency Requirements in Wisconsin

The statute for competency in Wisconsin states: "no person who lacks substantial mental capacity to understand the proceedings or assist in his or her own defense may be

tried, convicted, or sentenced for the commission of an offense so long as the incapacity endures” (Wis. Stat. § 971.13(1)). This standard is similar to the *Dusky* standard. The competency standard applies to both juveniles and adults. Wis. Stat. § 938.295 (2)a states: “If there is probable cause to believe that the juvenile has committed the alleged offense and if there is reason to doubt the juvenile’s competency to proceed, or upon entry of a plea under § 938.30 (4) (c), the court shall order the juvenile to be examined by a psychiatrist or licensed psychologist.” If the defendant is found competent, the proceedings resume (Wis. Stat. §938.30(5)(bm)). If the defendant is found incompetent, the court suspends the proceedings under Wis. Stat. §938.30(5)(d). If there is reason to believe that the defendant may regain competency within 12 months, the court may order periodic examinations every three months to determine whether the defendant is competent, remains incompetent, or if there is any progress towards regaining competency.

In Wisconsin, the Department of Health Services (DHS) assigns the responsibility for conducting criminal justice competency evaluations to the Wisconsin Forensic Unit (WFU) for juveniles and adults. If the court orders a competency evaluation, the Clerk of Circuit Courts contacts the WFU. The WFU normally conducts competency evaluations on an outpatient basis unless a situation arises (e.g. a defendant suffers a mental health situation and cannot be managed safely in jail) where the WFU requires conducting the competency evaluation in an inpatient setting (Wis. Stats. § 971.14). This applies to both adults and juveniles. The court shall order a competency evaluation to be completed by

one or more examiners that have specialized knowledge as determined by the court to be appropriate to examine and report the conditions of the defendant (Wis. Stat. § 971.14(2)). However, the statutes do not define what “specialized knowledge as determined by the court” means.

Competency Evaluations Conducted

The Wisconsin Department of Health Services (DHS) has provided annual summaries of the number of competency evaluations conducted, number of competent and incompetent defendants, and demographics based on gender, ethnicity, and age. The DHS age bracket consists of 70+, 61-70, 51-60, 41-50, 31-40, 21-30, and under the age of 21 (Wisconsin Department of Health Services, 2011). Table 1 summarizes the total competency evaluations completed for each fiscal year, and is further broken down into the number of competency evaluations conducted on individuals 21 and younger.

Table 1

Competency Evaluations

| Fiscal Year | Total Competency Evaluations | Individuals 21 and Younger |
|--|------------------------------|----------------------------|
| July 1, 2010-June 30, 2011 (FY 2011) | 1,084 | 184 |
| July 1, 2011 –June 30, 2012 (FY 2012) | 1,206 | 159 |
| July 1, 2012 – June 30, 2013 (FY 2013) | 1,312 | 141 |
| July 1, 2013 –June 30, 2014 (FY 2014) | 1,292 | 130 |
| <i>Total</i> | 4,894 | 614 |

Note. Wisconsin Department of Health Services, 2011, 2012, 2013, 2014,

However, no data was available on whether the juvenile or criminal court ordered the competency evaluations. There was also no data available regarding why the competency evaluation was ordered. This information may not be available, as each county would need to report their information to a central location.

Requirements for Adjudicative Competency Examiners

Wis. Stat. § 938.295 (4)c has stipulated that an evaluation to determine whether a juvenile is competent may be conducted by a psychiatrist or licensed psychologist. Chapter 455 of the Wisconsin Statutes and Chapter Psy2 of the Wisconsin Administrative Code govern licensing of psychologists. Wisconsin does not recognize the specialization of forensic psychology. A person interested in becoming a licensed psychologist must meet certain educational and experience requirements. A doctoral degree in psychology from an accredited college or university is required (PSY 2.09(1)). In addition to the educational requirements, an individual must have experience in psychology. An individual shall complete 3,000 hours of supervised experience as a prerequisite to licensure as a psychologist (PSY 2.09(3)). The first 1,500 hours shall be under the supervision of a licensed psychologist and can be performed while the individual is in school. The second 1,500 hours shall be conducted after the individual receives a doctoral degree. To be a licensed psychologist, an individual shall submit an application, pay the required application fee, and be at least 18 years of age (Wis. Stat. §455.04(1)). If an individual meets all the above requirements, the individual may then sit for the written examination on the practice of psychology (Wis. Stat. §455.45).

Summary and Conclusions

This literature review summarized the legal precedent for adult and JAC and research that has addressed factors that have contributed to JAC. These factors have included clinical and developmental issues as well as competency-related abilities for navigating the legal system. Best practices in evaluation of JAC were summarized and available research regarding assessment tools was reviewed. Since the current study takes place in Wisconsin, competency statutes and current practices were briefly described.

Factors that have impacted JAC have been clinical problems such as mental health and intellectual disabilities. Intellectual and psychiatric factors contributed substantially to deficits in legal decisional ability (Kruh & Grisso, 2009). Developmental factors such as age-related neuropsychological, cognitive, and psychosocial maturation were shown to impact juvenile competency. Juveniles have experienced impairment in their ability to understand legal proceedings and assist defense counsel due to limitations related to their age and cognitive abilities (Warren et al., 2003). Baerger et. al. (2003) stated that the younger the juvenile defendant, the less likely the juvenile will be able to manifest the type of cognitive understanding necessary to satisfy the requirements of the *Dusky* standard. Important processes in juveniles' psychosocial development of perspective, temperance, and responsibility occurs during late adolescence and has a significant effect on the ability to make mature decisions (Cauffman & Steinberg, 2000). Adolescents are more inclined to engage in risky behavior and risky decision-making compared to adults (Gardner & Steinberg, 2005).

The research findings regarding clinical and developmental issues and how these can impact competency-related abilities related to the “*Dusky*” criteria have been used to develop assessment tools to evaluate JAC. The MacCAT-CA, originally developed to evaluate adult competency, has had limited success with juveniles (Grisso, 2005). More recently, the JACI, has demonstrated sensitivity to detecting juveniles’ adjudicative incompetency (Tomei & Panza, 2014). This comprehensive assessment tool includes a protocol to review and compile psychological assessment findings about clinical and developmental issues as well as a structured interview to assess knowledge and functions in the legal system. (Grisso, 2005)

Only a few studies have been published that have evaluated the effectiveness of assessment tools for JAC, and no studies have been published to describe what competency evaluators are actually doing in the field or what factors they perceive to be important to assess (Lexcin & Heavin, 2010; Tomei & Panza, 2014). There is a gap in the literature regarding what factors MHPs take into account depending on the court for which the evaluation is being conducted when evaluating juveniles for adjudicative competency. The intent of this study was to determine if the purpose of the evaluation (i.e., type of court, juvenile or adult) was associated with MHPs’ ratings of research-based factors such as mental health diagnoses, intellectual disabilities, neuropsychological, cognitive, emotional, psychosocial functioning, and *Dusky* criteria/knowledge of the legal system when evaluating juveniles and offering an opinion about adjudicative competency. In addition, the proposed research reviewed if the

purpose of the evaluation (i.e., type of court, juvenile or adult) was associated with MHPs' ratings of usefulness for each of the three most commonly recommended assessment tools to evaluate JAC, the JACI, MacCAT-CA, and the FIT-R.

The following chapter describes the research methods used to carry out this study identifying the research design, methodology, sampling strategy, sample size, participant recruitment, informed consent, data collection, data analysis, and ethical procedures used in this research study.

Chapter 3

Introduction

The purpose of this quantitative study was to determine if the purpose of the evaluation (i.e., type of court, juvenile or adult) was associated with MHPs' ratings of the importance of research-based factors such as mental health diagnoses, intellectual disabilities, neuropsychological, cognitive, emotional, psychosocial functioning, and, *Dusky* criteria/knowledge of the legal system when evaluating juveniles and offering an opinion about adjudicative competency. In addition, the research reviewed if the purpose of the evaluation (i.e., type of court, juvenile or adult) was associated with MHPs' ratings of usefulness of the most commonly recommended tools used to evaluate JAC, the JACI, MacCAT-CA, and the FIT-R. This chapter describes the research procedures to be used to conduct this study. The first section reviews the research design in detail. The second section details the methodology including population, sampling strategy, sample size, power analysis, participant recruitment, informed consent, potential risks to participants, and data collection. The third section explains the instrument that was used in the study and the methods used to ensure the reliability and validity of the instrument. The fourth section explains the data analysis methods and the final section reviews ethical considerations and how these were addressed.

Research Design and Rationale

This quantitative study utilized a non-experimental research design using an online survey. A non-experimental research design utilizes variables that are not

manipulated by the researcher and are studied as they exist (Stangor, 2011).

Nonexperimental research relies on interpretation, interaction, and observation in order to reach a decision. Creswell (2014) stated that the purpose of a non-experimental research design is to provide a credible answer to the researcher's research questions. Researchers rely on case studies, correlations, or surveys (Rea & Parker, 2005).

Research Question 1: Does the purpose of the evaluation (i.e., type of court, juvenile or adult) affect MHPs' ratings of the importance of each of the factors typically taken into account during an evaluation of JAC (i.e., mental health diagnoses, intellectual disabilities, neuropsychological, cognitive, psychosocial functioning, and "Dusky" criteria/knowledge of the legal system)?

H_01 : There will be no differences based on the purpose of the evaluation in how important MHPs rate these.

H_11 : There will be significant differences based on the purpose of the evaluation in how important MHPs rate some of these factors.

Research Question 2: Does the purpose of the evaluation (i.e, type of court, juvenile or adult) affect MHPs' ratings of usefulness for each of the three instruments, JACI, MacCAT-CA, and the FIT-R?

H_02 : There will be no significant difference based on the purpose of the evaluation on how useful MHPs rate the instruments.

H_12 : There will be differences based on the purpose of the evaluation on how useful MHPs rate the instruments.

In quantitative research, it is important to identify the independent and dependent variables. Field (2013) described an independent variable as a cause compared to a dependent variable, which is the effect. The two levels of the independent variable in this study includes whether the purpose of the evaluation was for juvenile court adjudication or for adult criminal court. The dependent variables include ratings for importance of factors typically taken into account during competency evaluations, e.g., mental health diagnoses, intellectual disabilities, neuropsychological, cognitive, emotional, psychosocial functioning, *Dusky* criteria/knowledge of the legal system, and ratings for usefulness for each of the assessment tools, the JACI, MacCAT-CA, and FIT-R.

The results of the study may serve as a basis for further research and may provide MHPs with information regarding what factors and instruments are more important/useful than others when evaluating juveniles for competency.

Methodology

Target Population

The target population for this study was MHPs in Wisconsin who were professionally identified as being a member, associate, or fellow of the American Psychological Association (APA). The number of APA members in Wisconsin was approximately 1,185 (APA, 2014). However, the target population was smaller due to the following issues: 1) MHPs can choose not to publish their information with the APA, and 2) MHPs must have a valid email on file with the APA. After reviewing the list, I noted that 167 MHPs did not have their contact information listed and 155 did not provide an

email address. This reduced the target population to 863 MHPs. The target population may include MHPs who do not conduct JAC assessments, as the APA does not break the list into areas of practice. The sample size was derived from this target population. The survey revealed whether or not a mental health professional conducted JAC assessments. Only MHPs who currently or previously conducted JAC assessments were qualified to partake in the survey.

Sampling Strategy

This study utilized a purposive sampling technique. Stangor (2011) defined a purposive sampling strategy as focusing on particular characteristics of a population that are of interest to the researcher, which enables the researcher to answer the research questions. MHPs in Wisconsin who had email addresses on file with the APA were equally likely to be selected to take part in the research study if they met the eligibility criteria. The sampling was conducted with elements of the sample selected freely of each other (Creswell, 2014). The type of probability sample this study utilized was a total population sampling, which allowed me the ability to examine the entire population of MHPs that meet the eligibility criteria.

Sample Size and Power Analysis

G*Power 3.1 software was used to estimate the sample size necessary. The sample size consisted of those MHPs that met specific criteria previously mentioned. Using a within-subjects/repeated measures multivariate analysis of variance (MANOVA) with 80% power, effect size of .25, and type I error rate of .05, the analyses suggested

that 44 participants were needed for a medium effect size (.25; Wagner, 2014). At 80% power, type 1 error rate of .05, the analyses suggested 160 participants were needed for a small effect size (.10). For purposes of this research, I used the medium effect size, which suggested 44 participants were needed. It is not known how many MHPs assess JAC and therefore 44 participants was a more attainable number.

Participant Recruitment

MHPs received an email inviting them to partake in the survey. The email notified MHPs of my interest in the topic, the problem statement, and a link to the online survey. Potential participants needed: (a) to read English, (b) to have access to a computer, (c) to be licensed as a psychologist with the Wisconsin Department of Safety and Professional Licenses, (d) to have previous or current experience in conducting JAC evaluations within the past three years, and (e) to have access to the Internet to complete the online survey. Participants self-disclosed if they met the requirements to participate in the survey. Participants not meeting the criteria were screened out.

Informed Consent and Potential Risks to Participants

Researchers need to be aware that they are intruding in people's lives when conducting research. Participants may reveal personal information that is not known to their co-workers, friends, or family members. It is important for researchers to ensure that there is no harm to participants and that confidentiality is maintained. All participants completed an informed consent form prior to participating in the researcher's study (American Psychological Association, 2010). The informed consent form clearly explains

the study's nature, benefits, risks, and purpose (Appendix B). All participants who completed the survey signed the consent form electronically. No personal identification information was kept. Participants' email addresses were password protected with only the researcher having access to the password. Data was saved regularly to an external drive, which was stored in a locked file cabinet in the researcher's private residence. No one except for the researcher has access to the data.

Data Collection

With a target population of 863 and a sample size of 44 I asked all MHPs to participate. I used a database called Survey Monkey for participant convenience and to increase confidentiality. The email contained a link to Survey Monkey's Privacy Policy and Security Statement to disclose how Survey Monkey handles participant data on behalf of the researcher. Participants were informed that the survey takes approximately 10 minutes to complete. The data collection period lasted four weeks. Participants who did not complete the survey within one week were sent a second email encouraging a response to the survey. A debriefing statement was provided to participants following completion of the survey. The statement thanked participants for their participation in the survey and provided the researchers contact information. No additional follow-up procedures were included in the study.

The data was exported to the IBM SPSS Software program (Stangor, 2011). The survey was cross-sectional with data collected at one point in time. The Survey Monkey database allowed the researcher to analyze data as it was collected using a number of

statistical analysis components, provided response validation, real time results, and was integrated into SPSS. An online survey offers a means of aggregating data that does not require hand-written transcriptions or manual data entry, which offers a lower margin of error (Creswell, 2014).

Instrumentation

Based on the literature review, I designed the survey (Appendix A) as a way to establish which factors were important when assessing JAC and to determine which assessment tools were more useful than others. Part one of the survey contained basic demographic data and brief questions regarding the mental health professional's current status, occupational specialty, and work setting. This section also included questions regarding the number of adjudicative competency evaluations completed, number of years served as an expert witness, and types of evaluations completed for the court (e.g., juvenile psychological/psychiatric evaluations, adult criminal responsibility, child custody evaluations, and disability evaluations).

To answer the first research question, participants were asked to respond on a Likert type scale of 1 (not important) to 5 (extremely important) to a series of questions. A Likert type scale contains an odd number of options (usually between five and seven). One end of the scale is labeled as the most positive while the other end is labeled as the most negative with a neutral option in the middle (Rea & Parker, 2005). Part two of the survey listed potential factors MHPs consider when forming an opinion on JAC including mental health diagnoses, intellectual disabilities, neuropsychological, cognitive,

emotional, psychosocial functioning related to development, and *Dusky* criteria/knowledge of the legal system. The factors measured in the scale were research-based factors that have emerged about factors relevant during JAC evaluations, and assessment of these factors has been recommended by Grisso (2005) in the JACI, a protocol that has been identified as a best practice by the AAFP for adjudicative juvenile competency evaluations. Participants rated each variable twice, one for each of the two courts: juvenile and adult criminal court. Participants were also asked to respond on a Likert type scale of 1 (not useful) to 5 (extremely useful) regarding the usefulness of the most commonly recommended tools used to evaluate JAC.

Part three of the survey asked MHPs to rate the usefulness of the most commonly recommended tools for JAC evaluation, the JACI, MacCAT-CA, and the FIT-R. Participants rated each variable twice, one for each of the two courts: juvenile and adult criminal court. This section used a Likert type scale from 1 (not useful/not used) to 5 (extremely useful). At the end of part three, a provision was made for the participants to write in any other assessments used for JAC that were not specifically listed in the survey. The option to write in other tests minimizes the chance that the survey missed JAC assessments currently in use by MHPs. It is impossible to list or predetermine every JAC assessment used by MHPs thus, the value of written answers to the “other” section of the survey was acknowledged.

Data Analysis Plan

The data from Survey Monkey was downloaded to IBM SPSS 22. Only completed surveys were used in the analysis. Data was not analyzed until after the deadline for completing the survey had expired. I checked the data set for errors. When checking for errors I looked for values that fell outside the range of potential values for the variable (Pallant, 2013). For example, a double entry such as “55” was rejected because it was not between 1 and 5. Scores that fall outside the range can distort the statistical analysis. Using the SPSS software program, the minimum and maximum values were checked to ensure they were within the range of scores.

Descriptive statistics were conducted on the demographic data contained in the first part of the survey. Descriptive statistics included frequency and percentages for nominal (categorical/dichotomous) data and means and standard deviations for continuous (interval/ratio) data. Standard deviation measures statistical dispersion, or the spread of values in a data set. A low standard deviation indicated that the data was clustered close around the mean or more reliable. A high standard deviation indicated that the data was widely spread or less reliable.

The survey contained multiple questions that formed a Likert type scale. To measure internal consistency, Cronbach’s alpha was used. Each dependent variable was summed to come up with a score for each variable. Cronbach’s alpha helped determine if the questions in the questionnaire all measured the same variable (Field, 2013). The next data analysis step was to compare the means between juvenile court and adult court on

the dependent variables by using a Paired Samples *t* test. The final data analysis step was to conduct a within-subjects/repeated measures MANOVA to determine if the type of court was associated with factors MHPs established as more important than others and which assessment tools were more useful when conducting JAC assessments (Wagner, 2014). This allowed the researcher to assess how well the predictor variables (juvenile court or adult criminal court) predicted or explained the continuous dependent variable (the factors MHPs considered when diagnosing JAC including mental health diagnoses, intellectual disabilities, neuropsychological, cognitive, emotional, psychosocial functioning related to development, *Dusky* criteria/knowledge of the legal system and the JACI, MacCAT-CA, and FIT-R).

Threats to Validity

Internal Validity

Wagner (2014) specified that internal validity is the extent to which variations can confidently be accredited to the impact of the independent variable rather than the influence of confounding variables. There are a number of confounding variables that interfere with internal validity such as: 1) history effects – events that happen prior to or during the study that change the conditions of the study and impact the outcome, 2) maturation – physical or psychological changes in the participants, 3) instrumental bias – results when the survey changes over a period of time, and 4) experimental mortality – participants may drop out of the study (Creswell, 2014). There was a possibility that because of this information, participants may change their answers on the survey to

reflect themselves in a more favorable opinion and not answer the questions honestly. To avoid selection bias in the research study, the researcher ensured that an adequate proportion of the sample took part in the research study. This may involve re-contacting non-participants or reaching out to new participants.

However, there were several weaknesses in using the non-experimental research design proposed for this study. Although not directly applicable to this study, a non-experimental research design does not allow researchers to gather data post treatment. This can result in a number of new areas for researchers to consider (Stangor, 2011). Without experimentation, the research can become one dimensional or focused on a small number of variables. Non-experimental research designs can fail to produce enough data to make a convincing argument for correlation let alone causation. The threats to internal validity in this research study were minimal (Creswell, 2012).

External Validity

Stangor (2011) stated that the degree to which the conclusions of a researcher's study can be universal to other researchers in other places and times is called external validity. Participants involved in this research study were informed that they are participating in a dissertation research study. To maximize the external validity of the research study, all participants were informed prior to starting the online survey that their answers were 100% anonymous. Threats to external validity in this research study were minimal when compared to studies that require participation over a long period of time.

The results of the survey do not include all MHPs in Wisconsin. Only MHPs with experience conducting JAC evaluations are included in the study. Individuals that did not provide their email address, contact information to the APA, or are not members of the APA were not included in the study. To improve external validity, I used the total population selection to choose participants. It would be difficult to replicate this study in another state as each state has different statutes, policies, and standards for assessing JAC.

Ethical Procedures

Certain ethical concerns could arise from this study using an online survey design. Prior to the beginning of the study, permission was obtained from the Walden University Institutional Review Board (IRB), IRB approval #06-16-16-0385087. To avoid any potential ethical concerns, participants received information regarding the research study, how the information was used, the benefits of the study, potential risks or discomforts, confidentiality, and the researcher's contact information. To ensure participants' rights were adhered to, informed consent was necessary. When each participant clicked on the online survey, they indicated their understanding and acceptance to all the terms and conditions of the current study. Participation in the survey was voluntary. Participants were not coerced to participate in the study and could quit at any time. Participants had the opportunity to learn about the research study and decide whether or not to participate. No incentives were provided to participants. These procedures are consistent with the

American Psychological Association's *Ethical Principles of Psychologists and Code of Conduct* (American Psychological Association, 2010).

Participants were assured of their confidentiality and anonymity throughout the study. No names or identification numbers were used in the survey. To help ensure participants only completed the survey once, IP addresses of participants' computers were collected however, this data did not identify specific participants (Rea & Parker, 2005). This research study may contain vulnerable populations such as pregnant women or elderly individuals. However, this information was not relevant to the research. Rea and Parker (2005) stated that risk falls into five categories: physical, psychological, social, legal, and economic. The only risk to this study would be social risks. Social risks occur when there is the chance that participating in the research study or the results of the study if disclosed to individuals outside the field of psychology could negatively influence other people's perceptions of the participant. Any potential risks of participating in this study were outweighed by the benefits.

Data Dissemination

Participant names, if listed on the survey, were excluded from the data and did not appear in any report or publication. Participants email addresses were password protected. Participants were informed that the data was saved regularly to an external drive, which was stored in a locked file cabinet in the researcher's private residence. No one except for the researcher had access to the data. The data was not kept in the public

domain. At the end of five years the data will be destroyed. A copy of the final report was made available to any participants who requested it.

Summary

This chapter began with an introduction of the study, the research purpose and a description of the research design. This chapter also contained a description of the research setting and sample, a discussion on how I selected participants and a presentation and justification of the sample size and power analysis. I discussed data collection and analysis measures. This chapter concluded with the issues surrounding ethical considerations and protection of the participants. I utilized a quantitative research method to answer the research questions. I collected responses from participants via an anonymous electronic survey to minimize the risk to participants as well as to encourage as many participants as possible to participate in the study. Chapter 4 will review the results of the study, the participant demographics, descriptive statistics, data cleaning procedures, and data analyses for each research question.

Chapter 4

Introduction

JAC is a topic of increased interest because of the need to examine juveniles' capacities as trial defendants. There has been an increase in the number of articles pertaining to JAC in the past 14 years due to an increase in juveniles being referred to adult court for serious, violent felonies (Fogel et al. 2013). However, there is a knowledge gap regarding what factors and assessments MHPs consider when evaluating

JAC. The first research question was as follows: Does the purpose of the evaluation (i.e., type of court, juvenile or adult) affect MHPs' ratings of the importance of each of the factors typically taken into account during an evaluation of JAC (i.e., mental health diagnoses, intellectual disabilities, neuropsychological, cognitive, psychosocial functioning, and "*Dusky*" criteria/knowledge of the legal system)? The hypothesis is presented on page 130. The second research question was as follows: Does the purpose of the evaluation (i.e., type of court, juvenile or adult) affect MHPs' ratings of usefulness for each of the three instruments, JACI, MacCAT-CA, and the FIT-R? The hypothesis is presented on page 133 & 134.

The purpose of this chapter is to summarize the findings of the survey designed to gather feedback from MHPs. Participants were asked to reflect on their professional experience in conducting JAC evaluations. It was not known if the purpose of the evaluation (juvenile or adult court) affected MHPs' ratings for the factors typically taken into consideration during an evaluation of JAC. It was also not known if the purpose of the evaluation (juvenile or adult court) affected how MHPs' rated the usefulness of the three assessments (JACI, MacCAT-CA, and the FIT-R). This study contained two levels of one independent variable (juvenile or adult court) and included whether the purpose of the evaluation was for juvenile court adjudication or for adult criminal court. Dependent variables consisted of the ratings for importance of factors typically considered during competency evaluations, e.g., mental health diagnoses, intellectual disabilities, neuropsychological, cognitive, emotional, psychosocial functioning, *Dusky* knowledge of

the legal system, and ratings for usefulness for each of the assessment tools, the JACI, MacCAT-CA and FIT-R.

The chapter is divided into four sections. The first section presents the demographics and descriptive data for the study. The second section of this chapter presents the statistical procedure used to address the two research questions. In this section, I restate the research questions, hypotheses, and discuss the data process and analysis. The third section provides the results of the Paired Samples *t* test based on the responses to the research questions. This section provides the tables for the data collected and analyzed for this study. The final section provides the results of the repeated measures MANOVA for within group comparisons of ratings for factors and assessment tools. The chapter concludes with a brief summary.

Data Collection

Data were obtained using an online survey software program, Survey Monkey (www.surveymonkey.com). All responses were collected online. Participants had the option of completing the survey from any electronic device that had access to the Internet. There was no direct contact by the researcher with any of the participants; therefore, the Institutional Review Board (IRB) determined that there was no risk to participants.

Participants were MHPs in Illinois and Wisconsin who were professionally identified as being a member, associate, or fellow of the APA. The researcher asked participants whether they had professional experience assessing JAC. Only those

participants who indicated having experience were included in this study. Over a period of seven weeks, 4,341 MHPs (3,492 Illinois and 849 Wisconsin) received an email with a link to the survey. The survey questionnaire was made available to the participants on June 17, 2016. During the first two weeks, the survey generated 17 responses. A follow-up email was sent on July 8, 2016, which generated 28 additional responses. Due to a low response rate, the researcher obtained IRB approval to survey MHPs in Illinois. A final email was sent on July 25, 2016, bringing the total number of participants who started the survey to 117 or approximately 1% of the 4,341 online MHPs targeted in this study. Out of the 117 started responses, 45 accepted and completed the survey in its entirety. In addition, 68 participants responded with an email stating that they do not have the experience requested and do not conduct JAC evaluations. The participants who chose to participate in the study clicked on the embedded link and were brought to the first page of the survey. The results of this study were based on the participants who provided a complete response to the survey.

Deviations From Chapter 3

I surveyed MHPs in Wisconsin, but was unable to meet the number of participants needed for the sample size. I submitted a request to the IRB seeking approval to obtain additional participants. The state of Illinois was selected due to the population size. The IRB approved the request to contact MHPs in Illinois. Surveying MHPs in Illinois provided an adequate sample for this study.

In addition, I stated in chapter 3 that a MANOVA would be conducted to determine if the type of court was associated with factors MHPs established were more important than others and which assessment tools were more useful when conducting JAC assessments. However, after reviewing the data, the research did not meet assumption 3 of a MANOVA test. Assumption 3 states that there should be independence of observations (Pallant, 2013). This implies that there is no relationship between the observations in each group or between the groups themselves. There must be different participants in each group with no participant being in more than one group. This study does not contain different participants in each group because the same group of participants was surveyed for juvenile and adult court. In the alternative, a Paired Sample t test was utilized for each factor to test whether it was rated as more important for juvenile court or adult court. This test is used when the researcher has only one group of participants and the data is collected from the same person in terms of his/her response to two different questions. The Paired Sample t test was a more appropriate analysis to use. G*Power 3.1 software was used to estimate the power analysis of the Paired Sample t tests. The analyses suggested that 42 participants were needed for a medium effect size (.24; Wagner, 2014). The actual power for a Paired Sample t test was .954, with a critical t value of 2.02. In addition, to determine what factors and assessment tools MHPs rated as more important/useful than others, a repeated measures ANOVA was performed.

Demographics

Descriptive Data

The participants in this study were MHPs from Illinois and Wisconsin. The first goal of this study was to collect demographics and professional background information. Demographic information included current status, number of years in current position, occupational specialty, place of employment, number of JAC evaluations completed for juvenile and adult court, number of years served as an expert witness in the court system, and the types of evaluations completed for the courts in addition to JAC.

Table 2 summarizes the title under which participants were licensed to practice psychology. Out of the 45 participants who completed the survey, a large percentage of the participants were either licensed or board certified clinical psychologists ($n = 22$, 56.4%) or licensed or board certified forensic psychologists ($n = 7$, 17.9%). The eight participants who selected “other” clarified their status as a certified senior addictions counselor ($n = 1$), pediatric mental health specialist ($n = 1$), currently licensed but retired ($n = 3$), licensed school psychologist ($n = 2$), and one participant did not specify a status. In addition, more than half of the MHPs surveyed ($n = 30$, 68.2%) have been in their current job for at least 15 years.

Table 2

Demographic Information: Current Position of Participants

| Position Title | Frequency | Valid Percent |
|---|-----------|---------------|
| Licensed or Board Certified Forensic Psychologist | 7 | 17.9 |
| Licensed or Board Certified Clinical Psychologist | 22 | 56.4 |
| Board Certified Child or Adolescent Psychiatrist | 1 | 2.6 |
| Board Certified Psychiatrist | 1 | 2.6 |
| Other | 8 | 20.5 |
| Failed to Respond | 6 | |
| Total | 45 | 100 |

Table 3 summarizes the participants' occupational specialty. The results showed ($n = 17$, 37.8%) participants were in the forensic psychology/psychiatry area, ($n = 8$, 17.8%) participants were in the clinical psychology/psychiatry area, and ($n = 10$, 22.2%) participants were in the child/adolescent psychology/psychiatry area. Those who responded "other" specified different specialties or combinations of specialties. These specialties included correctional psychology, clinical neuropsychology, in-patient and outpatient therapy, neuropsychologist, and court ordered evaluations.

Table 3

Demographic Information: Occupational Specialty

| Specialty | Frequency | Valid Percent |
|--|-----------|---------------|
| Forensic Psychology/Psychiatry | 17 | 37.8 |
| Clinical Psychology/Psychiatry | 8 | 17.8 |
| Child/Adolescent Psychology/Psychiatry | 10 | 22.2 |
| Neuropsychology/Neuropsychiatry | 1 | 2.2 |
| School Psychologist | 1 | 2.2 |
| Other | 8 | 17.8 |
| | 45 | 100 |

Participants were asked to describe their place of employment. As illustrated in Table 4, the majority of the participants were either self-employed ($n = 13$, 28.9%) or in private practice ($n = 10$, 22.2%). Those that responded "other" specified their places of

employment as circuit court, university, research facility, trauma center, outpatient clinic, and business/non-profit.

Table 4

Demographic Information: Place of Employment

| Place of Employment | Frequency | Valid Percent |
|----------------------------|-----------|---------------|
| Local Government Employee | 4 | 8.9 |
| State Government Employee | 2 | 4.4 |
| Self-Employed | 13 | 28.9 |
| Hospital | 1 | 2.2 |
| Mental Health Facility | 4 | 8.9 |
| Private Practice | 10 | 22.2 |
| Corrections System | 2 | 4.4 |
| Public and Private Schools | 2 | 4.4 |
| Other | 7 | 15.6 |
| Total | 45 | 100 |

To determine how many JAC evaluations participants completed for juvenile court, participants were asked to list the number of evaluations completed within the past three years. The results showed that ($n = 19, 47.5\%$) participants conducted between 1-5 JAC evaluations in juvenile court, ($n = 6, 15\%$) participants conducted between 6-10 evaluations, ($n = 4, 10\%$) participants conducted between 11-15 evaluations, and ($n = 10, 25\%$) participants conducted over 21 evaluations within the past three years. There were ($n = 5$) participants who did not answer the question.

Participants were also asked how many JAC evaluations they completed for adult court within the past three years. The results showed that ($n = 23, 63.9\%$) participants conducted between 1-5 JAC evaluations in adult court, ($n = 4, 11.1\%$) participants completed 6-10 evaluations, ($n = 1, 2.8\%$) participant completed between 11-15 evaluations, ($n = 4, 11.1\%$) participants completed 16-20 evaluations, ($n = 4, 11.1\%$)

participants completed 21 or more evaluations, and 9 participants did not respond.

Overall, there was not a large difference in the percentage of JAC evaluations completed in juvenile court compared to adult court.

Participants were asked how many years they served as an expert witness in the court system with ($M = 3.2$, $SD = 1.75$, $n = 23$) stating that they served over 11 years. In addition to the JAC evaluations, ($n = 11$, 24.4%) participants stated that they also conducted juvenile psychological/psychiatric evaluations, ($n = 7$, 15.6%) conducted adult competency to stand trial evaluations, ($n = 7$, 15.6%) conducted child custody evaluations, ($n = 5$, 11.1%) conducted disability evaluations and ($n = 14$, 31.1%) participants stated that they conducted other evaluations. Those that responded “other” specified evaluations including juvenile neuropsychological and custody, Miranda rights, risk assessments, violence risk assessments, pre-sentence investigations, juvenile transfer from juvenile court to adult criminal court, and not guilty by reason of insanity evaluations.

Data Analysis

This section presents a description of the process used to analyze the data collected from MHPs in Illinois and Wisconsin. Data was downloaded from Survey Monkey into Microsoft Excel for screening before being imported into IBM SPSS 22 for data analysis. Only completed surveys were used in the analysis. Pallant (2013) stated that data analysis includes cleaning, transforming, inspecting, and modeling data to formulate the results and conclusions. The data was imported into SPSS where further

manipulation occurred. The first step was to run frequencies on each variable to identify any errors. When checking for errors I looked for values that fell outside the range of potential values for the variables (Pallant, 2013). For example, a double entry such as “55” was rejected because it was not between 0 and 5. In addition, the data were checked for any missing values. The results indicated that there were no missing values.

Many statistical methods are sensitive to outliers. Outliers are extreme values compared to the rest of the data (Pallant, 2013). Tabachnick and Fidell (2007) stated several reasons for outliers including incorrect data entry; the outlier is not a member of the intended population that the researcher was sampling, and failure to specify missing values in SPSS so the missing values are read as real data. Outliers were checked as well as straight-liners (people who answered the same throughout the survey). This survey had neither outliers nor straight-liners. The survey instrument had three sections: (1) demographic information to collect the descriptive data of the participants; (2) factors related to JAC; and (3) assessment tools.

Scale Development

The survey contained six dependent variables and two levels of one independent variable (Courts: juvenile and adult). This researcher created 12 scales to separate the six dependent variables and the independent variable. The scales included: neuropsychological development (juvenile court), neuropsychological development (adult court), intellectual disabilities/mental health diagnosis (juvenile court), intellectual disabilities/mental health diagnosis (adult court), cognitive development (juvenile court),

cognitive development (adult court), psychosocial development (juvenile court), psychosocial development (adult court), *Dusky* related criteria (juvenile court), *Dusky* related criteria (adult court), assessment tools (juvenile court), and assessment tools (adult court). The survey contained multiple Likert type questions that formed a scale. To determine if the scale was reliable, Cronbach's alpha was tested for each factor in both juvenile and adult court. In addition, the Pearson product moment correlation technique was selected to examine the relationships between the variables. Each scale is discussed below.

Neuropsychological Development

The neuropsychological development factor contained six items: (a) history of head injury, (b) history of current brain illness, (c) history of current seizures, (d) abnormal response latency, (e) perseverating, and (f) problems with memory. Cronbach's alpha was .85, which indicated a high level of internal consistency for the neuropsychological development (juvenile court) scale with this specific sample. The neuropsychological development (adult court) scale also had a high level of internal consistency with a Cronbach alpha coefficient of .80.

Intellectual Disabilities/Mental Health Diagnosis

The intellectual disabilities/mental health factor scale contained twelve items: (a) history of current mental disorder; (b) history of current attentional disorders; (c) history of current alcohol/substance abuse; (d) history of current hallucinations or delusions; (e) current psychiatric medicine; (f) history of psychiatric hospitalization; (g) history or

current counseling/therapy; (h) history or current intellectual disability; (i) low I.Q.; (j) problems with expressive or receptive language use; (k) history of current learning disability; and (l) other disorder not specified here. The Cronbach alpha for intellectual disabilities/mental health diagnosis (juvenile court) scale was .90, which indicated a high level of internal consistency. The Cronbach alpha for intellectual disabilities/mental health adult court scale was .84, which indicated a high level of internal consistency.

Cognitive Development

The cognitive development factor scale contained four items: 1) developmental immaturity – functioning at a level that falls short of mature, 2) ability to concentrate on a task and complete it, 3) able to demonstrate age appropriate problem solving, and 4) able to use appropriate concrete or abstract reasoning. The Cronbach alpha was .74, which indicated a high level of internal consistency for the cognitive development juvenile court scale. The adult scale showed similar results with a Cronbach alpha of .73 indicating a high level of internal consistency.

Psychosocial Development

The psychosocial development factor contained five items: (a) the juveniles' ability to delay responses in order to assess and consider consequences, (b) the juveniles' perception of risk, (c) the juveniles' ability to exercise self-control, (d) the juveniles' susceptibility to peer or parental influence versus independent decision making, and (e) interpersonal perspective taking. The psychosocial development juvenile subscale appeared to have a high level of internal consistency for the scale with this specific

sample, with a Cronbach alpha of = .70. The psychosocial development adult subscale also had a high level of internal consistency for the scale with this specific sample, with a Cronbach alpha of = .72.

Dusky Related Criteria

The *Dusky* related criteria factor contained five items: (a) ability of the juvenile to understand the courts process, (b) ability of the juvenile to understand the charges, (c) ability of the juvenile to understand the different types of pleas, (d) ability of the juvenile to work with his/her defense counsel, and (e) factual and rational understanding of the legal proceedings. The *Dusky* related criteria juvenile scale had a high level of internal consistency, with a Cronbach alpha of = .73. The *Dusky* related criteria adult scale also had a high level of internal consistency with a Cronbach alpha of .76.

Results

In order to answer the research questions, the researcher performed Paired Samples *t* tests. A Paired Sample *t* test is used when there is only one group of people and the data is collected from the same person in terms of his/her response to two different questions. The assumptions for a Paired Sample *t* test were checked prior to performing the test (Pallant, 2013).

Assumptions

Assumption 1: Dependent variables should be measured on a continuous scale. The dependent variables (neuropsychological development, intellectual disability/mental health diagnosis, cognitive development, psychosocial development, *Dusky* related criteria, and assessments) were measured on a continuous scale. This assumption was met.

Assumption 2: Independent variables should consist of two categorical, “related groups” or “matched pairs.” Related groups indicate that the same participants are present in both groups (Pallant, 2013). MHPs were asked to respond to questions regarding juvenile court and adult court. This assumption was met.

Assumption 3: There should be no significant outliers in the differences between the two related groups. Pallant (2013) defined points as outliers if they extended more than 1.5 box lengths from the edge of the boxplot. Extreme points are those values that extend more than three box lengths from the edge of the box. Descriptive statistics were analyzed to determine if there were any outliers. No significant outliers were found; therefore, this assumption was met.

Assumption 4: The distribution of the differences in the dependent variable between the two related groups should be normally distributed. Obtaining skewness and kurtosis values can assess normality. The Kolmogorov-Smirnov statistic assesses the normality of the distribution of the scores. A non-significant result ($p > .05$) indicated normality. This assumption was met.

Findings for Research Questions

Findings for Research Question 1:

The first research question and corresponding hypotheses were as follows: Does the purpose of the evaluation (i.e., type of court, juvenile or adult) affect MHPs' ratings of the importance of each of the factors typically taken into account during an evaluation of JAC (i.e., mental health diagnoses, intellectual disabilities, neuropsychological, cognitive, psychosocial functioning, and "*Dusky*" criteria/knowledge of the legal system)?

Null Hypothesis: There will be no difference based on the purpose of the evaluation (i.e., type of court, juvenile or adult) in how MHPs' rate the importance of each of the factors typically taken into account during an evaluation of JAC (i.e., mental health diagnoses, intellectual disabilities, neuropsychological, cognitive, psychosocial functioning, and "*Dusky*" criteria/knowledge of the legal system).

H₀1: There will be differences based on the purpose of the evaluation (i.e., type of court, juvenile or adult) in how MHPs' rate the importance of each of the factors typically taken into account during an evaluation of JAC (i.e., mental health diagnoses, intellectual disabilities, neuropsychological, cognitive, psychosocial functioning, and "*Dusky*" criteria/knowledge of the legal system).

Paired-Samples t tests were conducted to compare the means between juvenile court and adult court on the same dependent variables (neuropsychological development,

intellectual disability/mental health diagnosis, cognitive development, psychosocial development, and *Dusky* related criteria).

Results of the Paired Sample *t* tests showed the mean difference of neuropsychological development juvenile court ($M = 16.33$, $SD = 5.059$) to neuropsychological development adult court ($M = 16.22$, $SD = 4.395$) was not statistically significant ($t(44) = .302$, $p > .05$). The 95% confidence interval for the difference was $-.631$ to $.853$. Therefore, the juvenile and adult court scores are similar for neuropsychological development.

Similar to the neuropsychological development factor, the results of the Paired Sample *t* test showed the difference of intellectual disability/mental health diagnosis juvenile court ($M = 33.76$, $SD = 8.507$) to intellectual disability/mental health diagnosis adult court ($M = 33.36$, $SD = 7.129$) was not statistically significant ($t(44) = .653$, $p > .05$). The 95% confidence interval for the difference was $-.834$ to 1.634 . Therefore, the juvenile and adult court scores are similar for intellectual disability/mental health diagnosis.

In comparison to the intellectual disability/mental health diagnosis factor, the results of the Paired Sample *t* test showed the difference of cognitive development juvenile court ($M = 11.73$, $SD = 2.553$) to cognitive development adult court ($M = 11.96$, $SD = 2.486$) was not statistically significant ($t(44) = -.737$, $p > .05$). The 95% confidence interval for the difference was $-.830$ to $.385$. Therefore, the juvenile and adult court scores are similar for cognitive development.

Similar to the previous factors, the results of the Paired Sample t test showed the difference of psychosocial development juvenile court ($M = 13.78, SD = 3.357$) to psychosocial development adult court ($M = 13.56, SD = 3.428$) was not statistically significant ($t(44) = .497, p > .05$). The 95% confidence interval for the difference was -.679 to 1.123. Therefore, the juvenile and adult court scores are similar for psychosocial development.

The results of the Paired Sample t test showed the difference of *Dusky* related criteria juvenile court ($M = 15.80, SD = 2.727$) to *Dusky* related criteria adult court ($M = 14.42, SD = 3.381$) was statistically significant ($t(44) = 2.820, p = .007$). The 95% confidence interval for the difference was 2.362 to 2.820. Therefore, the statistical analysis provides evidence to conclude that the type of court (juvenile or adult) had an impact on the *Dusky* related criteria in that the *Dusky* factor was rated as more important for juvenile court evaluations compared to those for adult court.

In summary, as shown in Table 5, there were no statistically significant differences between the purpose of the evaluation (type of court, juvenile or adult court) in how MHPs' rated the importance of neuropsychological development, intellectual disability/mental health diagnosis, cognitive development, and psychosocial development. However, the purpose of the evaluation (type of court) was statistically significant in how MHPs' rated the importance of *Dusky* related criteria. *Dusky* related criteria were rated as more important for juvenile court compared to those for adult court.

Table 5

Paired Sample t test

| Outcome | M | SD | Std. Error Mean | 95% CI for Mean Difference | <i>t</i> | <i>df</i> | Sig. |
|--------------------|-------|------|-----------------|----------------------------|----------|-----------|------|
| Neuropsychological | .111 | 2.47 | .368 | -.631, .853 | .302 | 44 | .764 |
| Mental Health | .400 | 4.10 | .612 | -.834, 1.634 | .653 | 44 | .517 |
| Cognitive | -.222 | 2.02 | .301 | -.830, .385 | -.737 | 44 | .465 |
| Psychosocial | .222 | 2.99 | .447 | -.679, 1.123 | .497 | 44 | .622 |
| Dusky Related | 1.378 | 3.27 | .489 | .393, 2.362 | 2.820 | 44 | .007 |
| Assessments | -.267 | 2.75 | .410 | -1.093, .560 | -.650 | 44 | .519 |

Findings for Research Question 2

The second research question and corresponding hypotheses were as follows:

Does the purpose of the evaluation (i.e., type of court, juvenile or adult) affect MHPs' ratings of usefulness for each of the three instruments, JACI, MacCAT-CA, and the FIT-R?

H₀2: There will be no difference based on the purpose of the evaluation (i.e., type of court, juvenile or adult) in how MHPs' rate the usefulness for each of the three instruments, JACI, MacCAT-CA, and the FIT-R.

H₁2: There will be differences based on the purpose of the evaluation (i.e., type of court, juvenile or adult) in how MHPs' rate the usefulness for each of the three instruments, JACI, MacCAT-CA, and the FIT-R.

Results of the Paired Sample *t* tests that evaluated differences in mean ratings for usefulness for the three assessment tools did not reveal any statistically significant differences. The difference in mean ratings for the JACI when used in juvenile court ($M=1.33$, $SD 1.523$) compared to the JACI when used in adult court ($M=1.56$,

$SD=1.423$) was not statistically significant, $t(44) = -1.301, p >.05$. The 95% confidence interval for the difference was $-.566$ to $.122$. Therefore, the juvenile and adult court scores are similar for the JACI assessment. Similarly, the difference in mean ratings for the MacCAT-CA in juvenile court ($M=1.64, SD=1.401$) compared to the MacCAT-CA in adult court ($M=1.67, SD=1.382$) was not statistically significant, $t(44) = -.086, p >.05$. The 95% confidence interval for the difference was $-.541$ to $.496$. Therefore, similar to the JACI assessment, the juvenile and adult court ratings are similar for the MacCAT-CA assessment. The differences in mean ratings for the FIT-R in juvenile court ($M=1.40, SD=1.321$) compared to the FIT-R in adult court ($M=1.42, SD=1.305$) was not statistically significant, $t(44) = -.099, p >.05$. The 95% confidence interval for the difference was $-.473$ to $.428$. Therefore, there was not enough evidence to conclude that the type of court (juvenile or adult) had an impact on the type of assessments. The juvenile and adult court ratings are similar for the three types of assessments.

Within Group Comparisons

A Paired-Samples t-test compared the means between juvenile court and adult court on the same dependent variables. However, it was unclear what factors MHPs rated as more important than others. To determine this, the participants mean scale scores for each factor (neuropsychological development, intellectual disabilities/mental health diagnosis, cognitive development, psychosocial development, and “*Dusky*” criteria/knowledge of the legal system) were calculated. The means for each factor were then compared using a within-subjects repeated measures ANOVA to determine if MHPs

rated one factor as more important than another. A repeated measures ANOVA is used to compare participants' responses to two or more different questions or items (Pallant, 2013). A repeated measures ANOVA was performed (adjustment for multiple comparisons: Bonferroni), but results need to be interpreted with caution due to the low number of participants ($n = 45$). At 80% power, type 1 error rate of .05, the G power analysis suggested that 66 participants were needed for a large effect size (.40).

Factor Ratings, Juvenile Court

A repeated measures ANOVA was performed to analyze if MHPs rated some of these factors as more important than others in the juvenile court system: neuropsychological development, intellectual disabilities/mental health diagnosis, cognitive development, psychosocial development, and “*Dusky*” criteria/knowledge of the legal system. The null hypothesis predicted that there would be no differences in how important MHPs rated these. The alternative hypothesis predicted that there would be significant differences in how important MHPs rated some of these factors.

Table 6

Comparisons of Ratings for Factor Means for Juvenile Court

| Factor | Mean Ratings for Importance | Std. Deviation | Differences in means that met statistical significance * | P value |
|--------------------|-----------------------------|----------------|--|----------------------|
| Neuropsychological | 2.72 | .843 | Dusky (-.44) | .021 |
| Cognitive | 2.93 | .638 | None | |
| ID/Mental Health | 2.81 | .708 | Dusky (-.35) | .004 |
| Psychosocial | 2.75 | .671 | Dusky (-.40) | .002 |
| Dusky | 3.16 | .545 | As above: Neuropsych MR/Mental Health Psychosocial | .021 .004 .002 |

Note. * Adjustment for multiple comparisons: Bonferroni.

The results of repeated measure ANOVA suggest that differences between the ratings for the *Dusky* factor and the ratings for the three factors, neuropsychological development, intellectual disability/mental health diagnosis, and psychosocial development were statistically significant at p values of .021, .004, and .002, respectively. The effect size of this result was .334 which indicated a large effect size. These results implied that MHPs rated the *Dusky* factor to be more important than three other factors. The difference in the mean ratings for the cognitive factor and *Dusky* factor was slight and not found to be statistically significant. As a result, the alternative hypothesis was accepted. The *Dusky* factor was rated as more important compared to the ratings for the three factors, neuropsychological development, intellectual disability/mental health diagnosis, and psychosocial development.

Factor Ratings, Adult Court

Similar to the factor ratings for juvenile court, a repeated measures ANOVA was performed to analyze if MHPs rated factors as more important than others in the adult court system.

Table 7*Comparisons of Ratings for Factor Means for Adult Court*

| Factor | Mean Ratings for Importance | Std. Deviation | Differences in means that met statistical significance * | P value |
|--------------------|-----------------------------|----------------|--|--------------|
| Neuropsychological | 2.70 | .732 | Cognitive (-.29) | .029 |
| Cognitive | 2.99 | .621 | As mentioned: Mental Health | .023 .012 |
| | | | Psychosocial | .029 |
| ID/Mental Health | 2.78 | .594 | Neuropsychological | |
| Psychosocial | 2.71 | .685 | Cognitive (-.21) | .023 |
| Dusky | 2.89 | .676 | Cognitive (-.28) | .012 |
| | | | None | |

* Adjustment for multiple comparisons: Bonferroni

The results of the repeated measures ANOVA suggest that differences between the ratings for the cognitive development factor and the ratings for the three factors, neuropsychological development, intellectual disability/mental health diagnosis, and psychosocial development were statistically significant at p values of .029, .023, and .012, respectively. The effect size of this result was .355 which indicated a large effect size. These results implied that MHPs rated the cognitive factor to be more important than neuropsychological development, intellectual disability/mental health diagnosis, and psychosocial development. The difference in the mean ratings for the *Dusky* factor and cognitive factor was slight and not found to be statistically significant. Therefore, the alternative hypothesis was accepted.

Ratings of Assessment Tools, Juvenile Court

A repeated measures ANOVA was performed to determine if MHPs rated the following instruments as more useful than others: JACI, MacCAT-CA, and the FIT-R. The null hypothesis predicted that there would be no significant difference on how MHPs

rated the usefulness of the instruments. The alternative hypothesis predicted that there would be a significant difference on how MHPs rated the usefulness of the instruments.

Table 8

Ratings of Assessment Tools Juvenile Court

| Factor | Mean Ratings for Usefulness | Std. Deviation | Statistical significance |
|-----------|-----------------------------|----------------|--------------------------|
| JACI | 1.33 | 1.52 | None |
| FIT-R | 1.40 | 1.32 | None |
| MacCAT-CA | 1.64 | 1.40 | None |

The results of the repeated measure ANOVA for juvenile court indicated that there was not a statistically significant difference between the ratings for usefulness for the JACI, FIT-R, and the MacCAT-CA. The effect size of this result was .038, which indicated a small effect size. The null hypothesis was accepted.

Ratings of Assessment Tools, Adult Court

Similar to the repeated measures ANOVA for juvenile court, a repeated measure ANOVA was performed to determine if MHPs rated the instruments as more useful than others.

Table 9

Ratings of Assessment Tools Adult Court

| Factor | Mean Ratings for Usefulness | Std. Deviation | Statistical significance |
|-----------|-----------------------------|----------------|--------------------------|
| JACI | 1.55 | 1.42 | None |
| FIT-R | 1.42 | 1.30 | None |
| MacCAT-CA | 1.67 | 1.38 | None |

The results of the repeated measure ANOVA for adult court indicated that there was not a statistically significant difference between the ratings for usefulness for the JACI, FIT-R, and the MacCAT-CA. The effect size of this result was .019, which indicated a small effect size. The null hypothesis was accepted.

Summary

Based on the review of the literature, six factors were identified as potentially relevant to assess when evaluating JAC and included in a survey to rate the importance of each: neuropsychological development, intellectual disability/mental health diagnosis, cognitive development, psychosocial development, *Dusky* related criteria, and assessments. Qualified MHPs rated the importance of each factor for both levels of the independent variable, type of court. Using the Paired Samples *t* test, the results showed that there was only one statistically significant difference between the ratings based on the purpose of the evaluation (type of court, juvenile or adult court). The *Dusky* factor was rated as more important for juvenile court evaluations compared to those for adult court. There were no statistically significant differences between the ratings based on the purpose of the evaluation (type of court, juvenile or adult court) for five of the six factors:

neuropsychological development, intellectual disability/mental health diagnosis, cognitive development, and psychosocial development.

The three assessments that were determined relevant for JAC were JACI, MacCAT-CA, and the FIT-R. Using the Paired Samples *t* test, the results showed there was not enough evidence to conclude that the type of court (juvenile or adult) had an impact on the ratings for usefulness for the assessments. The juvenile and adult court ratings are similar for the types of assessments.

Using the repeated measures ANOVA, the *Dusky* factor was rated as more important compared to the ratings for the three factors neuropsychological development, intellectual disability/mental health diagnosis, and psychosocial development for juvenile court. For adult court, the results implied that MHPs rated the cognitive factor as more important than neuropsychological development, intellectual disability/mental health diagnosis, and psychosocial development. The results also indicated that there was not a statistical significance between the ratings for usefulness for the JACI, FIT-R, and the MacCAT-CA for juvenile and adult court.

Chapter 5 will discuss the results and findings, provide a comprehensive summary, and offer a conclusion to the study. Chapter 5 will show the gap in existing literature on the topic of adjudicative juvenile competency evaluations. The chapter will conclude with implications and recommendations for the future.

Chapter 5

Introduction

The purpose of this quantitative study was to determine if the purpose of the evaluation (i.e., type of court, juvenile or adult) was associated with MHPs' ratings of the importance of research-based factors such as mental health diagnoses, intellectual disabilities, neuropsychological, cognitive, emotional, psychosocial functioning, and, *Dusky* criteria/knowledge of the legal system when evaluating juveniles and offering an opinion about adjudicative competency. In addition, the research reviewed if the purpose of the evaluation (i.e., type of court, juvenile or adult) was associated with MHPs' ratings of usefulness of the most commonly recommended tools used to evaluate JAC, the JACI, MacCAT-CA, and the FIT-R.

The impact of mental disorders, developmental immaturity, and developmental disabilities on JAC has gained attention over the past decade. Research has shown that intellectual impairments, learning disabilities, and certain mental health illnesses have been linked to impaired competency in juveniles (Merikangas et al., 2010). Juveniles may manifest deficits in legally relevant abilities based on their age. These deficits may severely impact a juvenile's ability to stand trial.

From the literature review, research was not found to suggest that there is uniformity among MHPs regarding the specific factors and assessments used when assessing juveniles for adjudicative competency. Each jurisdiction has a statute for adult adjudicative competency, and this typically identifies the *Dusky* criteria. The statutes

typically only include the *Dusky* legal criteria as there are not legal standards for how a mental health professional conducts an evaluation (Kruh & Grisso, 2009). Few jurisdictions have a separate statute for JAC. Most evaluators evaluate according to the statute for adult competency (*Dusky* criteria). The best practice guidelines from the AAFP provide guidance on juvenile adjudicative competence (Grisso, 2005). This study included the factors and assessments recommended in these best practice guidelines. Generally, the only other standard for MHPs to follow when conducting a specific type of forensic evaluation is to use legitimate assessment tools that are valid for the issues being assessed and the population from which the individual comes (American Psychological Association, 2010).

The study was important as it surveyed the type of clinical data and processes that MHPs consider during an evaluation of JAC in a currently under researched population in the states of Wisconsin and Illinois. These are factors necessary by MHPs to consider when protecting juveniles from an unfair trial and preventing their constitutional rights from violation.

Key Findings

This study explored the following two research questions: RQ1: Does the purpose of the evaluation affect MHPs' ratings of the importance of each of the factors typically taken into account during an evaluation of JAC? RQ2: Does the purpose of the evaluation affect MHPs' ratings of usefulness for each of the three assessments?

Repeated measures ANOVA and Paired Samples *t* tests were used to answer the first research question.

Qualified MHPs rated the importance of each factor (mental health diagnoses, intellectual disabilities, neuropsychological, cognitive, psychosocial functioning, and *Dusky* criteria/knowledge of the legal system) for both levels of the independent variable, type of court. Repeated measures ANOVA was used to evaluate within group differences for each level of the independent variable (juvenile court and adult court). In this study, each participant was asked the same questions for each court system (juvenile court and adult court). The results showed that there was one statistically significant difference in the ratings for the *Dusky* factor when the ratings for both juvenile court and adult court were compared. The *Dusky* factor was rated as more important in juvenile court compared to adult court. Using the repeated measures ANOVA, the *Dusky* factor for juvenile court was rated as more important compared to the ratings for the three factors neuropsychological development, intellectual disability/mental health diagnosis, and psychosocial development. Within the juvenile court group, the mean ratings for the cognitive factor and the *Dusky* factor did not significantly differ.

For adult court, the results demonstrated that MHPs rated the cognitive factor as more important than neuropsychological development, intellectual disability/mental health diagnosis, and psychosocial development. Within the adult court group, the ratings

for the cognitive factor and the *Dusky* factor did not significantly differ. The alternative hypothesis for the first research question was supported.

Repeated measures ANOVA and Paired Samples *t* tests were also used to answer the second research question. There was not enough evidence to conclude that the type of court (juvenile or adult court) had an impact on the ratings of usefulness for three assessment tools. The juvenile and adult court scores were similar for the three types of recommended tools used to evaluate JAC. The results also indicated that there was not a statistically significant difference between the within group ratings for usefulness for the JACI, FIT-R, and the MacCAT-CA for juvenile and adult court. Within each group, these ratings were very low, similar to the ratings compared between the two groups, juvenile court and adult court.

Interpretation of the Findings

RQ1: Analysis of the data revealed that the *Dusky* factor in juvenile court and the cognitive factor in adult court were rated as the most important factors used to evaluate a juvenile in a competency evaluation. Both of these factors tap into the ability of the juvenile to attend to relevant information and process it, remember relevant details, and integrate details into an application scheme. In the survey, the MHPs were asked the following as it related to *Dusky* related items: 1) ability of the juvenile to understand the court's process, 2) ability of the juvenile to understand the charges, 3) ability of the juvenile to understand the different types of pleas, 4) ability of the juvenile to work with his/her defense counsel, and 5) factual and rational understanding of the legal

proceedings. MHPs were also asked the following as it related to cognitive development items: 1) developmental immaturity – functioning at a level that falls short of a mature level, 2) ability to concentrate on a task and complete it, 3) able to demonstrate age appropriate problem solving (e.g., identify possible options, weight pros and cons of different possible solutions), and 4) able to use age appropriate concrete or abstract reasoning.

This high value placed on cognitive capabilities is consistent with other research findings. In a systematic review of 10 studies, cognitive processes were found to separate fit from unfit defendants during competency exams in an analysis of adult competency evaluations (White, Mears, & Batchelor, 2014). Cognition was also found to play an important role in competency evaluations, especially factors related to attention and memory (White, Batchelor, Pulman, & Howard, 2012).

In a landmark juvenile study with a survey of 214 attorneys, the following were identified as reasons that juveniles were unable to understand the way the legal system works and were determined to be unfit to stand trial: (a) inability to understand the legal process, (b) not taking into account the seriousness of charges, (c) inability to participate in legal decision-making, and (d) not being able to understand long term consequences of conduct (Viljoen, McLachlan, Wingrove, and Penner, 2010). In the same landmark study, the following top three conditions were identified as the main underlying problems that contributed to the reasons that juveniles could not seem to grasp the way the legal system functions: immaturity, followed by intellectual impairments, and then mental disorder

(Viljoen et al., 2010). In another study, 87% of the mental health adult evaluators surveyed indicated that it was critical to identify the underlying conditions that contributed to the defendant's incapacities to be sufficiently competent to stand trial (White et al., 2015).

The participants in this dissertation study who were MHPs in WI and IL attributed slightly more importance to considering factors related to cognitive functioning and *Dusky* criteria during evaluations for JAC. The *Dusky* items provide information about the extent to which the juvenile understands the legal process and the cognitive items can lead to identifying the underlying conditions that might be impairing the abilities specified by the *Dusky* items (Grisso, 2005). Laws regarding competency to stand trial vary from state to state, however, all states use a variant of the *Dusky* standard to define competency. Competency to stand trial is a legal concept, but not a psychological concept. Mental health evaluators typically "translate" the legal concept into psychological terms in order to conduct their evaluation. The MHPs who were participants in this study may have deemed it of utmost importance to determine if a juvenile demonstrates sufficient cognitive skills in order to conclude that the juvenile is competent. These cognitive skills likely include components of the *Dusky* criteria such as the ability to understand the charges against him/her and to aid in his/her defense

Cognitive development is expressed through juveniles' intellectual abilities and develops well into adolescence (Steinberg, 2008). During cognitive development juveniles' abilities to organize and process information and maintain attention improve,

they also gain the ability to engage in deductive reasoning and think abstractly.

Participants may have attributed these cognitive abilities as essential for a juvenile to fully participate in a legal proceeding.

The results of this study indicated that cognitive abilities that include the *Dusky* criteria were important to consider when conducting competency evaluations for juvenile and adult courts. For both courts, the evaluator must identify the underlying reasons for a finding of incompetency. In adult courts, these have traditionally been intellectual disability or mental illness (Grisso, 2005). A number of states have recognized developmental immaturity as a base for incompetency in juvenile courts. However, when extended to adult court, the *Dusky* standard by itself does not specify the reasons that must cause a deficit in trial related abilities but simply states that if a deficit does exist, the juvenile should be found incompetent (Viljoen & Roesch, 2005). Participants may have concluded that evaluating cognitive abilities is essential, because these are often the deficits that indicate incompetence.

RQ2: Overall mean ratings for the usefulness of the three assessment tools were low across the board for all tools for juvenile competency evaluations for both courts. According to the Likert type scale used in the survey, the ratings fell between “Not Useful/Not Used” and “Somewhat Useful”. A possible explanation for the low ratings could be that participants were not familiar with the assessment tools. Another explanation could be that the participants were familiar with the assessment tools but found them only somewhat useful when conducting JAC evaluations. The survey used in

the study did not ask specifically in a separate item whether the participant was familiar with the assessment tool. This item might have been helpful to include in the survey to delineate those participants who were not familiar with the assessment tool from those that simply did not find the assessment tool useful.

The low ratings for usefulness of the tools obtained in this study perhaps reflect that the MHPs who were participants do not use or recognize the tools. MHPs do not have or use a standardized protocol to complete evaluations for the courts, so not surprisingly, the tools used will likely vary from evaluator to evaluator. Juvenile competency evaluations are no exception. The only protocol for JAC evaluations is the best practice guidelines recommended by the AAFP (Grisso, 2005; Grisso, 2009). Psychologists and psychiatrists use standardized assessment tools within the protocol that is used, but the protocol itself is not standardized. Psychologists in particular are trained to conduct assessments to meet specific goals, such as assessment of competency to stand trial or for adult defendant's only, criminal responsibility. Their training encourages psychologists to select tools and procedures that they believe will best help them meet the goals for the assessment, but there are no required protocols. This approach is reflected in the best practice guidelines for JAC. Domains highly recommended for assessment are identified in these guidelines, but specific assessment tools are not (Grisso, 2005; Grisso, 2009).

The low ratings for the assessment tools are not completely what one might expect based on previous research findings about JAC evaluations and promising results

when an assessment tool is used. Lexcen and Heavin (2010) evaluated whether the JACI would yield findings about incompetency similar to previous findings that did not use the JACI, such as clinical interviewing/records review. The results of this study indicated that the evaluation results produced by the JACI were accurate and consistent with previous findings in studies in which the JACI was not used. Tomei and Panza (2014) evaluated the usefulness of the JACI protocol by focusing on how well it informed the evaluator's opinion about the juveniles' adjudicative competency. The researchers concluded that the JACI is a strong predictor of final competency recommendations and is a valuable tool for MHPs in conducting juvenile competency assessments. There currently are no research findings to guide further discussion on why no differences were found in the usefulness of these tests and why their overall ratings were so low. These may be topics for further research.

It is also important to consider ways in which attorneys and judges might influence how MHPs conduct court-ordered evaluations. Attorneys and judges might emphasize cognitive and/or Dusky related factors when MHPs evaluate JAC. In adult courts, judges have generally endorsed psychological evaluations as valuable and an important component of addressing legal questions that have a psychological aspect (Viljoen, Wingrove, & Ryba, 2008). But, in another study conducted in adult court with perceptions of attorneys, the findings were that mental health experts were often perceived to be inconsistent in how psychological concepts were defined, they did not adequately consult with the legal team, and malingering should be assessed (Rogers,

Blackwood, Farnham, Pickup, & Watts, 2009). In a study that explored the opinions and recommendations of criminal attorneys, it was recommended that mental health experts use standardized instruments for each type of assessment so that others outside the field of psychology understand what is being measured and how (White, Batchelor, Pulman, & Howard, 2015).

In sum, the participants in this study did not rate the assessment tools commonly used for JAC evaluations to be very useful. Perhaps future research could explore other groups of participants to determine levels of familiarity with these tools and ratings for usefulness to see if similar findings are obtained. A study that jointly studies the opinions of mental health experts and those of judges/attorneys about the tools and procedures used to conduct court evaluations might shed additional light on the subject.

Limitations of the Study

Multiple limitations existed in this study. As mentioned in Chapter 1, innate limitations exist in data collection using online survey data, therefore, potentially threatening the generalizability and trustworthiness of the study. The first limitation is consistent with all anonymous, online survey data. The researcher has no confirmation of the actual person completing the online form. When conducting research using surveys, the researcher must take the participants' information at face value. The study was limited to the participants answering the survey honestly and having an interest in the research in order to determine the accuracy of the results. No attempt was made to assess the validity of the responses by measuring social desirability.

Another limitation to this study was sample size. In order to account for this limitation, a power analysis was conducted to determine an appropriate sample size. Though assessed as adequate using a statistical measure, the sample size was relatively small ($n=44$) in comparison to the number of MHPs in Wisconsin and Illinois. The interpretations and conclusions derived from the results of this study should consider the limited application to all MHPs.

This study was limited to the MHPs in Wisconsin and Illinois that are members of the APA, had their contact information including email addresses on file, and had experience with JAC evaluations. This study was not generalized to other populations as it did not reach beyond MHPs, nor did it reach beyond Wisconsin and Illinois.

An additional limitation was selection bias, the potential inability of all possible participants to have access to and understand the technology associated with an online survey. Since the sample was ascertained through online email lists, participants who would normally qualify to participate in the research, yet did not have access to computers, the internet, or membership to the APA were excluded. This limitation reduces generalizability to groups without access.

In addition, there were also limitations linked to the survey. Because of the way the items were worded, it was not possible to know whether participants were not familiar with the assessment tools, or if they simply did not find them useful. It would have been interesting to have participants rank order factors and assessment tools to determine what they perceived to be important and useful. It would also be interesting to

compare correlations of items on the survey under factors and how well they predict a determination of not competent. A potential future study would be to conduct an analysis of completed JAC evaluations by determining the extent to which specific factors included in the evaluation are related to the outcome of the evaluation in terms of whether the juvenile is considered to be competent or not competent.

Recommendations

This study focused on the ratings MHPs placed on the importance of research-based factors (mental health diagnoses, intellectual disabilities, neuropsychological, cognitive, emotional, psychosocial functioning, and *Dusky* criteria/knowledge of the legal system) when evaluating juveniles and offering an opinion about adjudicative competency. In addition, the research reviewed if the purpose of the evaluation (i.e., type of court, juvenile or adult) was associated with MHPs' ratings of usefulness of the most commonly recommended tools used to evaluate JAC, the JACI, MacCAT-CA, and the FIT-R.

Future research should encompass a larger sample of MHPs in other states. This study surveyed MHPs in two states. Research in more diverse populations may provide a larger data set to determine if the results are generalizable to the larger population. A researcher may survey all MHPs in their geographic boundaries (i.e., the 7th Circuit Court contains Illinois, Indiana, and Wisconsin). In addition, additional research could be conducted on other factors that MHPs consider when assessing JAC. There may be additional factors such as education, criminal history, psychiatric history, current

medications, substance abuse, or traumatic brain injury that may be helpful when assessing juveniles for adjudicative competency.

Future research could explore other members of the legal team (attorneys, prosecuting attorneys, and judges) to determine if they are familiar with these factors. A study that reviews the opinions of both MHPs and legal professionals regarding the factors used to conduct court evaluations may provide additional information on JAC. Future research could evaluate the reports of MHPs to determine if and how they assess and communicate information regarding juveniles' neuropsychological development, intellectual disabilities, cognitive development, psychosocial development and other factors that impact JAC.

The small sample size may not allow for generalizations. The response rate for MHPs was quite small. This was particularly frustrating in light of the list obtained from the APA. Future researchers may want to consider using additional lists from other psychological organizations and obtain lists from conference attendees.

Implications

The results from this study may provide legal professionals with a starting point for developing a legal consensus regarding the relevance of the set of functional capacities related to JAC. A consensus may help reduce potential confusion or disagreement regarding the construct of JAC. It may also help legislators and judges determine what to include in statutory revisions or case law regarding JAC.

The results from this study may also guide MHPs in deciding what factors to assess in the functional and development component of JAC evaluation. These functional capacities may be reworded into questions for an assessment tool or structured interview of juvenile defendants whose competency is being assessed. These questions may address the specifics of each individual case as well as the developmental level of the juvenile.

This study may lead to positive social change by contributing to the knowledge base regarding what MHPs consider when conducting JAC evaluations. This positive social change may result in more consistent methods when evaluating JAC. As a result, juveniles convicted of crimes may be treated in a more fair and equitable way. In addition, this project added another piece of research in the field of JAC.

Conclusion

Competency evaluations have steadily increased from the 1978 estimate of 25,000 annually to the more recent estimate of 50,000-60,000 competency evaluations (Bonnie & Grisso, 2000). Despite the states acknowledgement that competence is a requirement before an individual may stand trial, most states continue to rely on competency statutes that were developed for adult defendants and fail to consider factors regarding competence that are unique to juveniles. As competence to stand trial is increasingly raised in juvenile proceedings across the world, the need for guidance is intensified.

The results of this study are intended to provide MHPs with an evaluation of the perceived importance of the factors and tools recommended by the American Academy

of Forensic Psychology (AAFP) as best practices when evaluating JAC. Mental health experts continue to grow and adapt to improve upon ways to best serve the legal system. Continuing to evaluate JAC assessment procedures is not only important for finding the best assessment tools and factors considered when assessing juveniles for competency, but also for providing the field of psychology with additional guidance.

References

- Advokat, C.D., Guidry, D., Burnett, D.M.R., Manguno-Mire, G., & Thompson, J.W. (2012). Competency restoration treatment: Differences between defendants declared competent or incompetent to stand trial. *Journal of the American Academy of Psychiatry and the Law*, 40(1) 89-97. Retrieved from www.jaapl.org.
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders*. (4th text revision ed.). Washington, DC: American Psychiatric Association, 553-557.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.
- American Psychological Association. (2010). Ethical principles of psychologists and code of conduct. Retrieved from <http://apa.org/ethics/code/index.aspx>
- AP-LS Committee on the Revision of the Specialty Guidelines for Forensic Psychology. (2013). Specialty guidelines for forensic psychology. *American Psychologist*, 68(1), 7-19. Doi:10.1037/a0029889.
- Appelbaum, P.S., & Grisso, T. (2001). *MacArthur Competency Assessment Tool for Clinical Research (MacCAT-CR)*. Sarasota, FL: Professional Resource Press.
- Baerger, D. R., Griffin, E. F., Lyons, J. S., & Simmons, R. (2003). Competency to stand trial in preadjudicated and petitioned juvenile defendants. *Journal of the American Academy of Psychiatry and the Law*, 31(3), 314-320. Retrieved from www.jaapl.org.

- Baltes, P.B. (1987). Theoretical propositions of life span developmental psychology: On the dynamics between growth and decline. *Developmental Psychology, 23*(5), 611-626. doi: 10.1037/0012-1649.23.5.611.
- Baltes, P.B. (1997). On the incomplete architecture of human ontogeny: Selection, optimization, and compensation as foundation of developmental theory. *American Psychologist, 52*(4) 366-380. doi:10.1037/0003-066x.52.4.366.
- Baltes, P.B., Lindenberger, U., & Staudinger, U.M., (2006). Life span theory in developmental psychology. In W. Damon & R. Lerner (Eds.) *Handbook of child psychology: Vol. 1, Theoretical Models of Human Behavior* (6 ed.). New York: Wiley.
- Baltes, P.B., Reese, H.W., & Nesselroade, J.R. (1977). *Life span developmental psychology: Introduction to research methods*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Baltes, P.B. & Society for the Study of Human Development. (2005). *Theoretical approaches to life span development: Interdisciplinary perspectives*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Baltes, P.B., Staudinger, U.M., & Lindenberger, U. (1999). Life span psychology: Theory and application to intellectual functioning. *Annual Review of Psychology, 50*, 471-507. doi: 0084-6570/99/0201-0471.
- Benthin, A., Slovic, P., & Severson, H. (1993). A psychometric study of adolescent risk perception. *Journal of Adolescence, 16*(2), 153-168. doi: 10.1006/jado.1993.1014.

- Bjorklund, D.F., & Harnishfeger, K.K. (1995). The role of inhibition mechanisms in the evolution of human cognition and behavior. In F.N. Dempster & C.J. Brainerd (Eds.), *New Perspectives on interference and inhibition in cognition*. New York: Academic Press.
- Bonnie, R. J. (1992). The competency of criminal defendants: A theoretical reformulation. *Behavioral Sciences & The Law*, *10*(3), 291-316.
doi:10.1002/bsl.2370100303.
- 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*(3), 249-259. Retrieved from www.jaapl.org.
- Borum, R., & Grisso, T. (2007). Developmental considerations for forensic assessment in delinquency cases. In A. Goldstein (ed.), *Forensic psychology: Emerging topics and expanding roles*. New York: John Wiley.
- Burnett, D., Noblin, C., Prosser, V. (2004). Adjudicative competency in a juvenile population. *Criminal Justice and Behavior*, *31*(4), 438-462.
doi:10.1177/0093854804265175.
- Butterworth, G. (2014). *Principles of Developmental Psychology: An Introduction*. (1st ed.). Psychology Press.

- Cauffman, E., & Steinberg, L. (2000). (Im) maturity of judgment in adolescence: Why adolescents may be less culpable than adults. *Behavioral Sciences & The Law*, 18(6), 741-760. doi:10.1002/bsl.416
- Cauffman, E. & Steinberg, L. (2012). Emerging findings from research on adolescent development and juvenile justice. *Victims & Offenders*, 7(4), 428-449. doi:10.1080/15564886.2012.713901
- Chein, J., Albert, D., O'Brien, L., Uckert, K., & Steinberg, L. (2011). Peers increase adolescent risk taking by enhancing activity in the brain's reward circuitry. *Developmental Science*, 14(2), F1-F10. doi:10.1111/j.1467-7687.2010.01035.x
- Choudhury, S., Blakemore, S., & Charman, T. (2006). Social cognitive development during adolescence. *Social Cognitive and Affective Neuroscience*, 1(3), 165-174. doi:10.1093/scan/nsl024
- Conklin, H. M., Luciana, M., Hooper, C. J., & Yarger, R. S. (2007). Working memory performance in typically developing children and adolescents: Behavioral evidence of protracted frontal lobe development. *Developmental Neuropsychology*, 31(1), 103-128. doi:10.1207/s15326942dn3101_6
- Cooper, D.K. (1997). Juveniles' understanding of trial-related information: Are they competent defendants? *Behavioral Sciences & The Law*, 15(2), 167-180. doi: 10.1002/(SICI)1099-0798(199721)15:2<167::AID-BSL266>3.0.CO;2-E.
- Creswell, J. W. (2014). *Qualitative inquiry and research design: Choosing among five*

approaches (3rd ed.). Thousand Oaks, CA: Sage Publications, Inc.

Duncan, J., Emsile, H., Williams, P., Johnson, R., & Freer, C. (1996). Intelligence and the frontal lobe: The organization of goal-directed behavior. *Cognitive Psychology*, 30(3), 257-303. doi: ANID:8660786.

Dusky v. United States, 362 U.S. 402 (1960).

Embretson, S.E. & Reise, S.P. (2000). *Item response theory for psychologists*. Kansas City, MO: Multivariate Book Series.

Feldman, R. (2010). *Development across the lifespan* (6th ed.). Upper Saddle River, J.J.: Pearson.

Felthous, A. R. (2011). Competency to stand trial should require rational understanding. *Journal of the American Academy of Psychiatry and the Law*, 39(1), 19-30.
Retrieved from www.jaapl.org.

Ficke, S., Hart, K. J., Deardorff, P. A. (2006). The performance of incarcerated juveniles on the MacArthur Competency Assessment Tool-Criminal Adjudication (*MacCat-CA*). *Journal of the American Academy of Psychiatry and the Law*, 34(3), 360-373.
Retrieved from www.jaapl.org.

Field, A. (2013). *Discovering Statistics Using IBM SPSS Statistics* (4th ed.). London: Sage Publications.

Flavell, J.H. (1985). *Cognitive development* (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall.

- Flavell, J.H. (1992). Cognitive development: Past, present, and future. *Developmental Psychology*, 28(6) 998-1005. doi:0012-1649/92.
- Fogel, M. H., Schiffman, W., Mumley, D., Tillbrook, C., & Grisso, T. (2013). Ten year research update (2001–2010): Evaluations for competency to stand trial (adjudicative competency). *Behavioral Sciences & The Law*, 31(2), 165-191. doi:10.1002/bsl.2051
- Ford, M., Wentzel, K., Wood, D., Stevens, E., & Siesfeld, G.A. (1989). Processes associated with integrative social competency: Emotional and contextual influences on adolescent social responsibility. *Journal of Adolescent Research*, 4(4), 405-425. doi:10.1177/074355488944002.
- Frankfort-Nachmias, C., & Nachmias, D. (2008). *Research methods in the social sciences*, (7th ed.). New York, NY: Worth Publishers.
- Fry, A.F., & Hale, S. (1996). Processing speed, working memory, and fluid intelligence: Evidence for a developmental cascade. *Psychological Science*, 7(4), 237-241. Retrieved from <http://psych.wustl.edu>.
- Gardner, M., & Steinberg, L. (2005). Peer influence on risk taking, risk preference, and risk decision making in adolescence and adulthood: An experimental study. *Developmental Psychology*, 41(4), 625-635. doi:10.1037/0012-1649.41.4.625.
- Giedd, J. N., Blumenthal, J., Jeffries, N. O., Castellanos, F. X., Liu, H., Zijdenbos, A., ... & Rapoport, J. L. (1999). Brain development during childhood and adolescence:

A longitudinal MRI study. *Nature Neuroscience*, 2(10), 861-863.

doi:10.1038/13158.

Gowensmith, W., Murrie, D.C., & Boccaccini, M.T. (2012). Field reliability of competency to stand trial opinions: How often do evaluators agree, and what do judges decide when evaluators disagree? *Law and Human Behavior*, 36(2), 130-139. doi:10.1037/h0093958

Greenberger, E., Josselson, R., Knerr, C., and Knerr B. (1975). The measurement and structure of psychosocial maturity. *Journal of Youth and Adolescence*, 4(2), 127-143. doi:10.1007/BF01537437.

Grisso, T. (1988). *Competency to stand trial evaluations: A manual for practice*.

Sarasota, FL: Professional Resource Exchange, Inc.

Grisso, T. (2002). Using what we know about child maltreatment and delinquency.

Children's Services: Social Policy, Research, and Practice. 5(4), 299-305.

doi:10.1207/SIS326918C50504-6.

Grisso T. (2003). Competency to stand trial, in *Evaluating Competencies: Forensic Assessments and Instruments*. New York: Kluwer Academic.

Grisso, T. (2005). *Evaluating juveniles' adjudicative competency: A guide for clinical practice*. Sarasota, FL: Professional Resource Press.

Grisso, T. (2009). *Legal questions about juveniles' capacities. Module 4 in series:*

Toward developmentally appropriate practice: A juvenile court training

curriculum. Washington, D.C.: National Juvenile Defender Center and MacArthur Foundation Models for Change Project.

Grisso, T., Steinberg, L., Woolard, J., Cauffman, E., Scott, E., Graham, S., & ...

Schwartz, R. (2003). Juveniles' competency to stand trial: A comparison of adolescents' and adults' capacities as trial defendants. *Law and Human Behavior*, 27(4), 333-363. doi:10.1023/A:1024065015717

Hoge, S.K., Bonnie, R.J., Poythress, N., & Monahan, J. (1999). *The MacArthur Competency Assessment Tool – Criminal Adjudication*. Odessa, FL: Psychological Assessment Resources.

Hoge, S.K., Poythress, N., Bonnie, R.J., Monahan, J., Eisenberg, M., & Feucht-Haviar, T (1997). The MacArthur adjudicative competency study: Diagnosis, psychopathology, and competency-related abilities. *Behavioral Sciences & The Law*, 15(3), 329-345. doi:10.1002/(SICI)1099-0798(199722/06)15:3<329::AID-BSL276>3.CO;2-Z

Hughes, C.W., Rintleman, 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(1), 77-93. doi:10.1089/104454601750143500.

Kaufman, A.S., & Kaufman, N.L. (1990). Kaufman Brief Intelligence Test. Circle Pines, MN: American Guidance Service.

- Kessler, R.C., & Ustun, T.B. (2004). The World Mental Health (WMH) survey initiative version of the World Health Organization (WHO) Composite International Diagnostic Interview (CIDI). *International Journal of Methods in Psychiatric Research*, 13(2), 93-121. Retrieved from <http://www.ncbi.nlm.nih.gov>.
- Kruh, I., & Grisso, T. (2009). *Evaluations of juveniles' competency to stand trial*. New York, NY: Oxford University Press.
- Kruh, I. P., Sullivan, L., Ellis, M., Lexcen, F., & McClellan, J. (2006). Juvenile competency to stand trial: A historical and empirical analysis of a juvenile forensic evaluation service. *International Journal of Forensic Mental Health*, 5(2), 109-123. doi:10.1080/14999013.2006.10471236.
- Larson, K. A., & Grisso, T., & National Youth Screening & Assessment Project. (2011). *Developing statutes for competency to stand trial in juvenile delinquency proceedings: A guide for lawmakers*. Retrieved from http://works.bepress.com/thomas_grisso/106.
- Lerner, R.M. (1984). *On the nature of human plasticity*. New York, NY: Cambridge University Press.
- Lexcen, F., & Heavin, S. (2010). Evaluating for competency to proceed in juvenile court: Findings with a semi-structured interview. *Open Access Journal of Forensic Psychology*, 21, 359-376. Retrieved from www.forensicpsychologyunbound.ws/OAJFP/Home

- Lipsett, P., Lelos, D., & McGarry, A. (1971). Competency for trial: A screening instrument. *American Journal of Psychiatry* 128(1), 105-109. doi: 10.1176/ajp.128.1.105.
- Luciana, M., & Nelson, C. A. (2002). Assessment of neuropsychological function through use of the Cambridge Neuropsychological Testing Automated Battery: Performance in 4-to 12-year-old children. *Developmental Neuropsychology*, 22(3), 595-624. doi:10.1207/S15326942DN2203_3.
- Luna, B., Thulborn, K. R., Munoz, D. P., Merriam, E. P., Garver, K. E., Minshew, N. J., ... & Sweeney, J. A. (2001). Maturation of widely distributed brain function subserves cognitive development. *NeuroImage*, 13(5), 786-793. doi:10.1006/nimg.2000.0743.
- Merikangas, K. R., He, J. P., Burstein, M., Swanson, S. A., Avenevoli, S., Cui, L., ... & Swendsen, J. (2010). Lifetime prevalence of mental disorders in US adolescents: Results from the National Comorbidity Survey Replication–Adolescent Supplement (NCS-A). *Journal of the American Academy of Child & Adolescent Psychiatry*, 49(10), 980-989. doi:10.1016/j.jaac.2010.05.017.
- Miller, M.K., Chamberlain, J., & Wingrove, T. (2014). *Psychology, law, and the wellbeing of children*. American Psychology Law Society Series: Oxford University Press. New York: NY.

- Nelson, C.A. (1995). The ontogeny of human memory: A cognitive neuroscience perspective. *Developmental Psychology*, 31(5), 723-738. doi:10.1037/0012-1649.31.5.723.
- Otto, R.K., Poythress, N.G., Nicholson, R.A., Edens, J.F., Monahan, J., Bonnie, R.J., & ... Eisenberg, M. (1998). Psychometric properties of the MacArthur Competency Assessment Tool-Criminal Adjudication. *Psychological Assessment*, 10(4), 435-443. doi: 10.1037/1040-3590.10.4.435.
- Otto, R.K. (2006). Competency to stand trial. *Applied Psychology in Criminal Justice*, 2(3), 82-113. Retrieved from www.apcj.org.
- Overall, J., & Gorham, D. (1962). The Brief Psychiatric Rating Scale. *Psychological Reports*, 10, 799-812. doi: 10.2466/pr0.1962.10.3.799.
- Overall, J.E., & Pfefferbaum, B. (1982). The Brief Psychiatric Rating Scale for Children. *Psychopharmacology Bulletin*, 18, 10-16. Retrieved from <http://medworksmmedia.com>
- Pallant, J. (2013). *SPSS Survival Manual*, (5th ed.) New York, NY: McGraw Hill
- Patton, J.H., Stanford, M.S., & Barratt, E.S. (1995). Factor structure of the Barratt Impulsiveness Scale. *Journal of Clinical Psychology*, 51(6), 768-774. doi:10.1002/1097-4679(199511)51:6<768::AID-JCLP2270510607>3.0.CO;2-1.
- Petrides, M. (1995). Functional organization of the human frontal cortex for mnemonic processing. *Annals of the New York Academy of Sciences*, 769, 85-96. Doi:10.1111/j.1749-6632.1995.tb38133.x.

- Pirelli, G., Zapf, P. A., & Gottdiener, W. H. (2011). Competency to stand trial research: Guidelines and future directions. *Journal Of Forensic Psychiatry & Psychology*, 22(3), 340-370. doi:10.1080/14789949.2011.552622
- Poythress, N., Lexcen, F.J., Grisso, T., & Steinberg, L. (2006). The competency-related abilities of adolescent defendants in criminal court. *Law and Human Behavior* 30(1), 75-92. doi: 10.1007/s10979-006-9005-4.
- Poythress, N., Nicholson, R., Otto, R.K., Edens, J.F., Bonnie, R.J., Monahan, J., & Hoge, S.K. (1999). *The MacArthur Competency Assessment Tool – Criminal Adjudication: Professional manual*. Odessa, FL: Psychological Assessment Resources.
- Rea, L.M. & Parker, R.A. (2005). *Designing and Conducting Survey Research: A Comprehensive Guide*, (3rd ed.). San Fransisco, CA: Jossey-Bass.
- Robbins T.W & Sahakian B.J. (1994). Computer methods of assessment of cognitive function. In *Principles and Practice of Geriatric Psychiatry*, Copeland JRM, Abou-Saleh MT, Blazers DG (eds), John Wiley & Sons Ltd., Chichester.
- Roesch, R., Webster, C.D., & Eaves, D. (1984). *The Fitness Interview Test: A method for assessing fitness to stand trial*. Toronto, Ontario, Canada: University of Toronto Centre of Criminology.
- Roesch, R., Zapf, P., & Eaves, D. (2006). FIT-R Fitness Interview Test – Revised: A

Structured Interview for Assessing Competency to Stand Trial. *Professional Resource Press*.

Rogers, T.P., Blackwood, N., Farnham, F., Pickup, G. & Watts, M. (2009).

Reformulating fitness to plead: a qualitative study. *The Journal of Forensic Psychiatry & Psychology*, 20, 815-834.

Savitsky, J.C., & Karras, D. (1984). Competency to stand trial among adolescents.

Adolescence, 19(74), 349-358.

Scott, E.S., & Grisso, T. (2004). Developmental incompetency, due process and juvenile justice policy. *University of Virginia Legal Working Paper Series. University of Virginia Public Law and Legal Theory Working Paper Series. Working Paper 11.*

Retrieved from http://law.bepress.com/uvalwps/uva_publiclaw/art11.

Schmidt, M. G., Reppucci, N. D., & Woolard, J. L. (2003). Effectiveness of participation as a defendant: The attorney–juvenile client relationship. *Behavioral Sciences Law*, 21, 175–198. doi: 10.1002/bsl.532

Scott, E., & Grisso, T. (2005). Developmental incompetency, due process, and juvenile justice policy. *North Carolina law Review*, 83, 101-147.

Sheldrick, R.C. (2004). Social networks and degree of psychopathy among adolescent offenders (Doctoral dissertation, Temple University, 1990). *Dissertation Abstracts International*, 65(3-B), 1564.

Sowell, E.R., Thompson, P.M., Tessner, K.D., & Toga, A.W. (2001). Mapping continued brain growth and gray matter density reduction in dorsal frontal cortex: Inverse

relationships during post-adolescent brain maturation. *Journal of Neuroscience*, 21,(22), 8819-8829. PMID: 11698594

Stafford, K.P. & Sellbom, M.O (2012). *Assessment of Competence to Stand Trial:*

Handbook of Psychology (2nd Ed.). New York, NY: John Wiley & Sons, Inc.

Stangor, C. (2011). *Research Methods for the Behavioral Sciences*. Belmont, CA:

Wadsworth, Cengage Learning.

Strathman, A., Gleicher, F., Boninger, D., & Edwards, C.S. (1994). The consideration of future consequences: Weighing immediate and distant outcomes of behavior.

Journal of Personality and Social Psychology, 66(4): 742-752. Retrieved from www.researchgate.net/profile/Alan_Stratham/Publication.

Steinberg, L. (2008). *Adolescence* (8th ed.). New York: McGraw-Hill.

Steinberg, L., Graham, S., O'Brien, L., Woolard, J., Cauffman, E., & Banich, M. (2009).

Age differences in future orientation and delay discounting. *Child*

Development, 80(1), 28-44. doi: 0009-3920/2009/8001/0006.

Steinberg, L., & Schwartz, R. G. (2000). Developmental psychology goes to court. In T.

Grisso & R. G. Schwartz (Eds.), *Youth on trial: A developmental perspective on*

juvenile justice (pp. 9-31). Chicago, IL: University of Chicago Press.

Tate v. State of Florida, 864 So. 2d44 (2003).

Teplin, L. A., Abram, K. M., Washburn, J. J., Welty, L. J., Hershfield, J. A., & Dulcan,

M. K. (2013). The Northwestern Juvenile Project: Overview. *Office of Juvenile*

Justice and Delinquency Prevention, Office of Justice Programs, U.S. Department of Justice.

- Tomei, J., & Panza, N.R. (2014). The juvenile adjudicative competency interview (JACI): Current usage in juvenile competency to stand trial evaluations. *Journal of Knowledge and Best Practices in Juvenile Justice and Psychology*, 8(1), 1-19. Retrieved from www.pvamu.edu
- Viljoen, J.L., Klaver, J., & Roesch, R. (2005). Legal decisions of preadolescent and adolescent defendants: Predictors of confessions, pleas, communication with attorneys, and appeals. *Law and Human Behavior*, 29(3), 253-277. doi:10.1007/s10979-005-3613-2.
- Viljoen, J.L., McLachlan, K., Wingrove, T., & Penner, E. (2010). Defense attorneys' concerns about the competence of adolescent defendants. *Behavioral Sciences and the Law*, 28, 630-646. doi:10.1002/bsl.954.
- Viljoen, J. L., & Roesch, R. (2005). Competency to waive interrogation rights and adjudicative competency in adolescent defendants: Cognitive development, attorney contact, and psychological symptoms. *Law And Human Behavior*, 29(6), 723-742. doi:10.1007/s10979-005-7978-y
- Viljoen, J.L., Slaney, K. & Grisso, T. (2009). The use of the MacCAT-CA with adolescents: An item response theory investigation of age-related measurement bias. *Law and Human Behavior*, 33, 283-297. doi:10.1007/s10979-008-9154-8.

- Viljoen, J. L., Vincent, G. M., & Roesch, R. (2006). Assessing adolescent defendants' adjudicative competency interrater reliability and factor structure of the fitness interview test–revised. *Criminal Justice and Behavior*, *33*(4), 467-487.
doi:10.1177/0093854806287317.
- Viljoen, J.L., Wingrove, T., & Ryba, N.L. (2008). Adjudicative competence evaluations of juvenile and adult defendants: Judges' views regarding essential competence of competence reports. *The International Journal of Forensic Mental Health*, *7*, 107-119.
- Viljoen, J.L., & Wingrove, T. (2007). Adjudicative competency in adolescent defendants: Judges' and defense attorneys' views of legal standards for adolescents in juvenile and criminal court. *Psychology, Public Policy, and Law*, *13*(3), 204-229.
doi:10.1037/1076-8971.13.3.204
- Wagner, W., (2014). *Using IBM SPSS Statistics for Research Methods and Social Science Statistics* (5th ed.). Thousand Oaks, CA: Sage Publications, Inc.
- Warren, J. I., Aaron, J., Ryan, E., Chauhan, P., & DuVal, J. (2003). Correlates of adjudicative competency among psychiatrically impaired juveniles. *Journal of the American Academy of Psychiatry and the Law Online*, *31*(3), 299-309. Retrieved from www.jaapl.org.
- Warren, J. I., DuVal, J., Komarovskaya, I., Chauhan, P., Buffington-Vollum, J., & Ryan, E. (2009). Developing a forensic service delivery system for juveniles adjudicated

incompetent to stand trial. *The International Journal of Forensic Mental Health*, 8(4), 245-262. doi:10.1080/14999011003635670.

Warren, J.I., Chauhan, P., Kois, L., Dibble, A., & Knighton, J. (2013). Factors influencing 2,260 opinions of defendants' restorability to adjudicative competency. *Psychology, Public Policy, and Law*, 19(4), 498-508. doi:10.1037/a0034740.

Wechsler, D. (1991). Manual for the Wechsler Intelligence Scale for Children (3rd. ed.). New York, NY: The Psychological Corporation.

Wechsler, D. (1981). *The Wechsler Adult Intelligence Scale – Revised: Manual*. San Antonio, TX: Psychological Corporation.

Weinberger, D.A. & Schwartz, G.E. (1990). Distress and restraint as superordinate dimensions of self-reported adjustment: A typological perspective. *Journal of Personality* 58(2), 381-417. doi: 10.1111/j.1467-6494.1990.tb00235.x

White, A.J., Batchelor, J., Pulman, S. & Howard, D. (2012). The role of cognitive assessment in determining fitness to stand trial. *International Journal of Forensic Mental Health* 11(2), 102-109. doi: 10.1080/14999013.2012.688091.

White, A.J., Batchelor, J., Pulman, S. & Howard, D. (2015). Fitness to stand trial: Views of criminal lawyers and forensic mental health experts regarding the role of neuropsychological assessment. *Psychiatry, Psychology and Law* 22(6), 880-889. doi: 10.1080/13218719.2015.1015400.

Wilkinson, G.S. (1993). *Wide Range Achievement Test Administration Manual*.

Wilmington, DE: Wide Range.

Wis. Stat. § 455.04(1)

Wis. Stat. § 455.45

Wis. Stat. § 938.295(4)(c)

Wis. Stat. § 938.295

Wis. Stat. § 938.30(4)(c)

Wis. Stat. § 938.30(5)(bm)

Wis. Stat. § 938.30(5)(d)

Wis. Stat. § 938.30(5)(bm)

Wis. Stat. § 971.13(1)

Wis. Stat. § 971.14

Wis. Stat. § 971.14(2)

Wisconsin Department of Health Services. (2014). *Division of Mental Health and Abuse*

Services Community Forensic Services Annual Report. Retrieved from

<https://www.dhs.wisconsin.gov/cf/index.htm>

Wisconsin Department of Health Services. (2013). *Division of Mental Health and Abuse*

Services Community Forensic Services Annual Report. Retrieved from

<https://www.dhs.wisconsin.gov/cf/index.htm>

- Wisconsin Department of Health Services. (2012). Division of Mental Health and Abuse Services Community Forensic Services Annual Report. Retrieved from <https://www.dhs.wisconsin.gov/cf/index.htm>
- Wisconsin Department of Health Services. (2011). Division of Mental Health and Abuse Services Community Forensic Services Annual Report. Retrieved from <https://www.dhs.wisconsin.gov/cf/index.htm>
- Woodcock, R., McGrew, K., & Mather, N. (2001). *The Woodcock-Johnson III Cognitive Assessment Battery*. Itasca, IL: Riverside.
- Zapf, P. A., & Viljoen, J. L. (2003). Issues and considerations regarding the use of assessment instruments in the evaluation of competency to stand trial. *Behavioral Sciences & The Law*, 21(3), 351-367. doi: 10.1002/bsl.535

Appendix A: Questionnaire

SECTION 1: Demographic Information

1. What is your current status?
 - Licensed or board certified forensic psychologist
 - Licensed or board certified clinical psychologist
 - Board certified child or adolescent psychiatrist
 - Board certified psychiatrist
 - Other

2. How many years have you been in your current occupation?
 - 1-3 years
 - 4-6 years
 - 7-10 years
 - 11-14 years
 - 15 + years

3. What is your occupational specialty? (Check all that apply)
 - Forensic Psychology/Psychiatry
 - Clinical Psychology/Psychiatry
 - Child/Adolescent Psychology/Psychiatry
 - Neuropsychology/Neuropsychiatry
 - School Psychologist
 - Other

4. Please describe your place of employment: (Check all that apply)
 - Local government employee (city, county, etc.)
 - State government employee
 - Federal government employee
 - Self-employed
 - Hospital
 - Residential Treatment Center
 - Mental Health Facility
 - Private Practice
 - Rehabilitation Center
 - Corrections System

- Research Facility
 - Public and Private Schools
 - Other
5. Number of juvenile adjudicative competency evaluations completed for **juvenile court** within the past three years: (not including re-evaluations of the same individual)
- 1-5
 - 6-10
 - 11-15
 - 16-20
 - 21 or more
6. Number of juvenile adjudicative competency evaluations completed for **criminal court** within the past three years: (not including re-evaluations of the same individual)
- 1-5
 - 6-10
 - 11-15
 - 16-20
 - 21 or more
7. Number of years serving as an expert witness in the court system:
- Less than one year
 - 2-4 years
 - 5-8 years
 - 8-10 years
 - 11 or more years
 - Not applicable
8. Types of evaluations completed for the courts, in addition to juvenile adjudicative competency evaluations:
- Juvenile psychological/psychiatric evaluations
 - Adult competency to stand trial evaluations
 - Other adult competency evaluations
 - Adult criminal responsibility – legal insanity
 - Child custody evaluations
 - Disability evaluations

Other

SECTION 2: Factors Related to Juvenile Adjudicative Competency

For each question, please rate each of the factors for each court. JC = Juvenile Court, AC=Adult Court.

9. Neuropsychological Development

Rate the importance of considering each of the following during an evaluation of juvenile adjudicative competency:

| | Not Important/Not Considered | | Somewhat Important | | Important | | Very Important | | Extremely Important | |
|---|------------------------------|----|--------------------|----|-----------|----|----------------|----|---------------------|----|
| | JC | AC | JC | AC | JC | AC | JC | AC | JC | AC |
| History of head injury | | | | | | | | | | |
| History or current brain illness such as meningitis, encephalitis | | | | | | | | | | |
| History or current seizures | | | | | | | | | | |
| Abnormal response latency (too long or too short) | | | | | | | | | | |
| Perseverating | | | | | | | | | | |
| Problems with memory, short term or long term | | | | | | | | | | |

10. Intellectual Disability/Mental Health Diagnosis

Rate the importance of considering each of the following during an evaluation of juvenile adjudicative competency:

| | Not Important/Not | Somewhat Important | Important | Very Important | Extremely Important |
|--|-------------------|--------------------|-----------|----------------|---------------------|
|--|-------------------|--------------------|-----------|----------------|---------------------|

| | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|
| disability | | | | | | | | | | |
| Other disorder not specified here (indicate) | | | | | | | | | | |
| | | | | | | | | | | |

11. Cognitive Development

Rate the importance of considering each of the following during an evaluation of juvenile adjudicative competency:

| | Not Important/Not Considered | | Somewhat Important | | Important | | Very Important | | Extremely Important | |
|--|------------------------------|----|--------------------|----|-----------|----|----------------|----|---------------------|----|
| | JC | AC | JC | AC | JC | AC | JC | AC | JC | AC |
| Developmental immaturity – functioning at a level that falls short of a mature level | | | | | | | | | | |
| Ability to concentrate on a task and complete it | | | | | | | | | | |
| Able to demonstrate age appropriate problem solving (i.e., identify possible options, weigh pros and cons of different possible solutions) | | | | | | | | | | |
| Able to use age appropriate concrete or abstract reasoning | | | | | | | | | | |

12. Psychosocial Development

Rate the importance of considering each of the following during an evaluation of juvenile adjudicative competency:

| | Not Important/Not Considered | | Somewhat Important | | Important | | Very Important | | Extremely Important | |
|---|------------------------------|----|--------------------|----|-----------|----|----------------|----|---------------------|----|
| | JC | AC | JC | AC | JC | AC | JC | AC | JC | AC |
| The juvenile's ability to delay responses in order to assess and consider consequences | | | | | | | | | | |
| The juvenile's perception of risk – judgment made when juveniles are asked to characterize and evaluate hazardous activities. | | | | | | | | | | |
| The juvenile's ability to exercise self-control | | | | | | | | | | |
| The juveniles susceptibility to peer or parental influence versus independent decision-making | | | | | | | | | | |
| Interpersonal perspective taking, ability to see another's view point | | | | | | | | | | |

13. Dusky Related Criteria

Rate the importance of considering each of the following during an evaluation of juvenile adjudicative competency:

| | Not Important/Not Considered | | Somewhat Important | | Important | | Very Important | | Extremely Important | |
|--|------------------------------|----|--------------------|----|-----------|----|----------------|----|---------------------|----|
| | JC | AC | JC | AC | JC | AC | JC | AC | JC | AC |
| Ability of the juvenile to understand the court's process | | | | | | | | | | |
| Ability of the juvenile to understand the charges | | | | | | | | | | |
| Ability of the juvenile to understand the different types of pleas | | | | | | | | | | |
| Ability of the juvenile to work with his/her defense counsel | | | | | | | | | | |
| Factual and rational understanding of the legal proceedings | | | | | | | | | | |

14. Please list any other factors considered during evaluations for juvenile adjudicative competency not otherwise mentioned in this survey.

SECTION 3: Assessment tools

15. Do you use assessment tools designed specifically for evaluating juvenile adjudicative competency?

- Yes
- No

16. Rate the usefulness of the following in conducting an evaluation of juvenile adjudicative competency.

| | Not Useful/Not | Somewhat Useful | Useful | Very Useful | Extremely Useful |
|--|----------------|-----------------|--------|-------------|------------------|
|--|----------------|-----------------|--------|-------------|------------------|

| | Used | | | | | | | | | |
|--|------|----|----|----|----|----|----|----|----|----|
| | JC | AC | JC | AC | JC | AC | JC | AC | JC | AC |
| <i>Juvenile Adjudicative Competency Inventory (JACI)</i> | | | | | | | | | | |
| <i>MacArthur Competency Assessment Tool- Criminal Adjudication (MacCAT-CA)</i> | | | | | | | | | | |
| <i>Fitness Interview Test – Revised (FIT-R)</i> | | | | | | | | | | |

17. Please list any other assessment tools that were designed to assess juvenile adjudicative competency that you have used not otherwise mentioned in this survey.

Appendix B: Informed Consent Form

INFORMED CONSENT FORM

You are invited to take part in a research study on factors used by mental health professionals when assessing juvenile adjudicative competency. The researcher is inviting all participants who are a psychologist with a minimum of three years' experience in assessing juvenile adjudicative competency to be in this study. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Heidi M. Wennesheimer who is a doctoral student at Walden University.

Background Information:

The purpose of this study is to determine the importance mental health professionals in Wisconsin place on research-based factors and how they rate existing assessment tools when evaluating juveniles and offering an opinion about adjudicative competency.

Procedures:

If you agree to be in this study, you will be asked to:

- Agree to this informed consent.
- Complete an online survey.
- The total time for completion of the survey is approximately 10-15 minutes.

Voluntary Nature of the Study:

This study is voluntary. No compensation will be provided. Your decision of whether or not you choose to participate in the study will be respected. No one will treat you differently if you decide not to be in the study. If you decide to join the study now, you can still change your mind later. You may stop at any time.

Risks and Benefits of Being in the Study:

Risks: Being in this type of study involves some risk of the minor discomforts that can be encountered in daily life, such as time taken to complete the surveys, (total time 10-15 minutes) which may at times seem tiring or inconvenient. Participating in this study would not pose risk to your safety or wellbeing.

Benefits: Your participation in this survey will help provide a better understanding of the research based factors and assessment tools used when evaluating juvenile adjudicative competency.

Privacy:

Any information you provide will be kept confidential. The researcher will not use your personal information for any purposes outside of this research project. Also, the researcher will not include your name or anything else that could identify you in the study reports. Data will be kept secure by a password protected laptop with a password protected folder. Data will be kept for a period of at least 5 years, as required by the university.

Contacts and Questions:

You may ask any questions you have now. Or if you have questions later, you may contact the researcher via phone (920) 562-1699 or by email heidi.wennesheimer@waldenu.edu. If you want to talk privately about your rights as a participant, you can email the Walden University representative who can discuss this with you at irb@waldenu.edu. Walden University's approval number for this study is 06-16-16-0385087 and it expires on June 15, 2017.

Please print or save this consent form for your records.

Statement of Consent:

I have read the above information and I feel I understand the study well enough to make a decision about my involvement. By clicking the link to complete the survey, I understand that I am agreeing to the terms described above. It is recommended you keep a copy of this informed consent for your records, if you choose to participate. Completion of these surveys is considered consent to participate in this study. By completing this survey you are also agreeing that you are currently over the age of 18 and a psychologist who has experience assessing juvenile adjudicative competency.

Appendix C: NIH Human Participants Training Certificate

