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Multiple Case Analysis Exploration of Prenatal Substance Exposure on Juvenile Adjudicative Competence

Danielle Leigh Williams
Walden University

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Walden University

College of Social and Behavioral Sciences

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Danielle Williams

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Review Committee

Dr. Jessica Hart, Committee Chairperson, Psychology Faculty
Dr. Sharon Xuereb, Committee Member, Psychology Faculty
Dr. Victoria Latifses, University Reviewer, Psychology Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

Walden University
2021

Abstract

Multiple Case Analysis Exploration of Prenatal Substance Exposure on Juvenile
Adjudicative Competence

by

Danielle Williams

MA, The Chicago School of Professional Psychology, 2009

BS, Western Michigan University, 2007

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Forensic Psychology

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Abstract

Research into the neurological and cognitive factors influencing juveniles' adjudicative competence psycholegal abilities is needed to ensure their due process rights and help inform qualified forensic mental health examiners offering their opinions on adjudicative competence in courts. The purpose of this study was to explore the impact of prenatal substance exposure on neurological factors related to juveniles' abilities to understand the charges against them and participate in legal proceedings. Jean Piaget's cognitive developmental theory was the theoretical framework for this study. Concrete operational and formal operational stages of cognitive development were addressed to help frame juveniles' factual and rational understanding and ability to assist in their defense identified in the *Dusky v. United States* adjudicative competence legal standard. This qualitative research design involved an archival multiple case analysis to explore adjudicative competence evaluations in a Michigan circuit court. The Juvenile Adjudicative Competency Interview was used to assess juveniles' psycholegal abilities. Findings of this study suggest that lower intellectual functioning, limited rational understanding, limited reasoning and decision-making abilities, and limited ability to assist in defense has a substantial relationship with competence judgments to proceed with adjudication. This study promotes positive social change by providing insight into the neurological and cognitive factors that affect adolescents' psycholegal abilities when there is prenatal substance exposure. Juveniles with prenatal substance exposure are a vulnerable population that needs protective measures to ensure their constitutional rights.

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Chapter 1: Introduction to the Study

Introduction

Neurological and cognitive factors have the potential to have a significant impact on psycholegal abilities related to adjudicative competence. Juvenile adjudicative competence is a complex topic with the need for additional research. Researchers have explored areas of brain development, developmental maturity, and psychosocial abilities; however, there is limited research into the impact of prenatal substance exposure on the appreciation component of adjudicative competence standards and limited research into the use of the Juvenile Adjudicative Competence Interview (JACI).

The JACI is a forensic instrument to assess adjudicative competence with juveniles. The JACI was developed by Thomas Grisso in 2005 to assist qualified forensic mental health examiners in providing information to the court on juveniles' psycholegal abilities related to adjudicative competence. The instrument is a semistructured interview that consists of information on the roles of the courtroom participants, terms used during the adjudicative process, and hypothetical scenarios to determine the juvenile's level of factual understanding, rational understanding, decision-making abilities, and ability to help assist in their defense (Grisso, 2005). The JACI was developed following the research findings of the MacArthur studies (Grisso, 2005).

This study was originally designed as a quantitative hierarchical logistic regression. Before submission to Institutional Review Board (IRB), the study was changed to a qualitative exploratory multiple case analysis. The COVID-19 pandemic safety precautions issued by the Michigan Department of Health and Human Services

(MDHHS) limited access to Michigan circuit courts. With limited access to circuit court data, the original study could not be completed due to lack of available juvenile adjudicative competence evaluations. The dissertation committee approved the change in research designs before IRB submission. IRB approved the qualitative study. The first three chapters of the dissertation reference the original quantitative study and the last two chapters reflect the completed qualitative study. However, the literature review and research information apply to both research designs.

The original quantitative study had three research questions related to neurological factors of juvenile defendants and their impact on adjudicative competence. The original study involved exploring the effects of prenatal substance exposure on rational understanding of juvenile defendants, results of prenatal substance exposure on retention of information learned during the JACI and the impact of intellectual functioning on rational understanding of juvenile defendants. The quantitative study findings would have led to information to inform the gap in the literature related to effects of prenatal substance exposure on adjudicative competence and the impact of intellectual functioning on the appreciation component of adjudicative competence standards. The original and the completed study can inform the juvenile adjudicative competence community of factors that impact adolescents' psycholegal abilities and how juvenile adjudicative competence evaluations should proceed.

Dusky v. United States (1960) set the legal standard for this study. The landmark case was brought before the Supreme Court in 1960. The standards for adjudicative competence was provided in the resolution of the case, with the Supreme Court stating

that defendants need to have both a factual and rational understanding of the legal proceedings against them and be able to assist in their defense in order for legal proceedings to commence (*Dusky v. United States*, 1960). Factual understanding is the understanding of the legal roles within legal proceedings and a basic understanding of the legal process. Rational understanding is the appreciation of the legal procedures and how the defendants' decisions might impact their court proceedings. Ability to assist in defense includes the ability to communicate effectively with courtroom workers, maintain self control during court proceedings, and provide effective testimony if needed. These three areas of the *Dusky* standard are referred to as the three prongs.

There is a growing need to provide standards regarding juvenile adjudicative competence related to specific factors unique to juvenile defendants. This chapter includes an overview of the original study, including background information related to neurological factors impacting juvenile adjudicative competence, the research problem, purpose of the study, research questions and hypotheses, theoretical framework, research design, definitions, assumptions of the study, potential generalizability, limitations, and potential contributions towards social change.

Background

Research regarding juvenile adjudicative competence supports unique factors of adolescent development critical for consideration in terms of juvenile adjudicative competence evaluations. Juvenile adjudicative competence research requires further exploration. Bath et al. (2015) identified through an archival analysis of Los Angeles adolescents that juveniles with intellectual disabilities were significantly more likely to

be found incompetent to proceed with adjudication. Ragatz et al.'s (2015) results emphasized brain development of juvenile offenders as significant for assessing rational understanding related to adjudicative competence. Furthermore, similar to the Bath et al. study, Armstrong and Friedman's (2016) archival research with New Zealand adjudicative competence evaluations identified issues with developmental maturity and cognitive abilities as limiting adolescents' adjudicative competence abilities. From the review of the research, there was a need to explore issues related to juvenile adjudicative competence.

During the gestation period, drug exposure has the potential for significant teratogenic effects on brain development in the embryo (Behnke & Smith, 2013). During the fetus stage of development, the impact of prenatal substance exposure on brain development is severe (Behnke & Smith, 2013; Santorv et al., 2017). Brown et al. (2017) said confabulation and suggestibility negatively impacted individuals' ability to engage in the legal process when the individual had an FASD diagnosis. However, there is no legal standard relating to how to manage the effects of FASD on psycholegal abilities (Brown et al., 2017). However, Brown et al. was an adult study and did not include juveniles. McLachlan et al. (2014) compared juveniles with and without FASD and identified the FASD group demonstrated limited rational understanding of psycholegal abilities. McLachlan et al. emphasized the need to define proper assessment factors to adhere to due process standards of the law. Research studies regarding prenatal substance exposure support the need for further research into the effects of prenatal substance exposure on juvenile adjudicative competence.

Additionally, there has been limited research regarding specific factors relating to adjudicative competence capabilities of juveniles. Fogel et al. (2013) found that age and IQ had a significant impact on adjudicative competence findings when using the MacArthur Competence Assessment Tool-Criminal Adjudication (MacCAT-CA) and McLachlan et al. (2014) identified IQ was a "robust independent predictor on [Fitness Interview Test-Revised] FIT-R subscales" (p. 18); however, there is limited information regarding other evidence-based standards of assessment. Additionally, there is limited research regarding the impact of instruction on adjudicative competence instruments. Viljoen, Odgers, et al. (2007) found that juveniles with lower IQs typically do not benefit from instruction in terms of adjudicative competence evaluations. Their lower-than-average IQ functioning appeared similar to older adults' performance with mental health deficits (Viljoen, Odgers, et al., 2007). Additionally, due to their developmental deficits, they would likely not benefit from short- or long-term instruction on legal matters (Viljoen, Odgers, et al., 2007). There is a need to seek other studies to test other forensic instruments to see if there would be similar findings.

There are additional factors that relate to adjudicative competence with juveniles that need exploration. Armstrong and Friedman (2016) identified that 71% of juveniles offenders in their study had a nonviolent offense (property offense, traffic offense, or drug offense) when found not competent to proceed with adjudication as opposed to a violent offense (violent acts against others or sexual offense); however, there was no significant trend related to whether the offense would determine adjudicative competence. Kois et al. (2013) found the best predictor of a not competent to stand trial

opinion with the female offenders ordered to complete adjudicative competence evaluations in their study was when there were active psychotic symptoms, the participant refused to answer questions during the evaluation, and the participant refused to comply with medication. Panza and Fraser (2015) said age was a reliable indicator of adjudicative competence status, with younger adolescents having the highest chance of being found not competent to proceed with adjudication compared to older adolescents. A review of the literature supports the need to explore the impact of IQ, biological sex, age, and offense type as controlling factors when examining results of prenatal substance exposure on adjudicative competence abilities.

There is limited research regarding the effects of prenatal substance exposure on adjudicative competence concerns. The completed study will provide information to help fill this gap in knowledge. There is limited research regarding the use of the JACI within the literature. Critical brain development features impact adolescents' intellectual functioning, developmental maturity, and psychosocial maturity that are not as significant with adult defendants due to their brain maturity (Armstrong & Friedman, 2016; Panza & Fraser, 2015; Ragatz et al., 2015).

Juvenile defendants are guaranteed due process rights under the United States Constitution. Juvenile defendants must receive informed evaluations during court proceedings (1939 PA 288 MCL 712A.18n; *Dusky v. United States*, 1960; *In re Gault*, 1967). Forensic juvenile mental health examiners and the court system need information related to adolescent psycholegal abilities to inform their opinions regarding juvenile defendants' ability to understand the charges against them, make decisions relevant to

legal proceedings and potential consequences, and seek help to assist in their defense.

The completed study will help fill the gap in literature related to the impact of prenatal substance exposure on juveniles' ability to understand and appreciate the legal proceedings against them and the juveniles' ability to help assist in their defense.

Problem Statement

Due process rights of delinquent adolescents require assessment of psycholegal abilities for deficits in terms of factual and rational understanding of the legal proceedings against them (Bath et al., 2015; McLachlan et al., 2014; Ragatz et al., 2015). Juvenile adjudicative competence is influenced by developmental maturity related to prefrontal cortex development (Bath et al., 2015; Panza & Fraser, 2015). Juveniles' intellectual functioning and ability to understand the against them has the potential to impact their adjudicative competence status (Fogel et al., 2013). Issues that influence intellectual functioning, such as prenatal substance exposure, need further research. Eiden et al. (2015) said prenatal substance exposure impacts the brain in different areas between the biological sexes; however, there is limited research regarding specific differences between them. There is also limited research regarding effects of offense type in terms of adjudicative competence and adjudication determinations of competency to proceed with adjudication abilities, with the potential of prenatal substance exposure impacting certain offense types and ability to respond to remediation services. Exposure to substances during gestation impacts brain development and the ability to comprehend information (Brown et al., 2017). Therefore, the influence of prenatal substance exposure on juvenile adjudicative competence requires further research to identify proper assessment

measures. Ragetz et al. (2015) said that developmental limitations most influence the rational understanding component of adjudicative competence.

However, despite its influence on developmental immaturity, the presence of substance exposure during gestation does not guarantee deficits in psycholegal abilities (Brown et al., 2017; Chien et al., 2016). Additionally, there is limited research regarding the impact of IQ on the rational understanding component of adjudicative competence related to assessment measures. Given the potential impact of age, biological sex, and offense type on adjudicative competence, there is a need for research that controls for these variables to inform standards. Qualified forensic mental health examiners that complete adjudicative competence evaluations with juveniles need standards that relate specifically to the impact of prenatal substance exposure and intellectual functioning on psycholegal abilities to determine whether these adolescents are competent to proceed with adjudication or able to retain information learned during assessment procedures. Overall, there are limited resources regarding the impact of intellectual functioning on juveniles' rational understanding of the charges against them and their ability to assist in their defense.

Purpose of the Study

The purpose of the quantitative study would have been to explore if prenatal substance exposure and intellectual functioning can influence juveniles' rational understanding of the *Dusky* standard assessed on the JACI, as well as whether prenatal substance exposure can influence whether juveniles will be able to retain information learned during forensic instruments. Full Scale IQ, type of intellectual functioning

instrument, biological sex, age, and offense type would have been the controlling variables to answer research questions. The quantitative archival study intended to inform qualified forensic mental health examiners conducting adjudicative competence evaluations whether prenatal substance exposure can influence the juveniles' demonstration of the rational understanding prong of the *Dusky* standard and the ability to retain information learned through the JACI. The original study also intended to explore whether intellectual functioning impacted rational understanding when there is prenatal substance exposure.

Research Questions and Hypotheses

RQ1: Does prenatal substance exposure influence the rational understanding prong of the *Dusky* standard for juvenile adjudicative competence evaluations when controlling for Full Scale IQ, type of intellectual functioning instrument, biological sex, age, and offense type?

H₀₁: Prenatal substance exposure does not influence the rational understanding prong of the *Dusky* standard for juvenile adjudicative competence evaluations when controlling for Full Scale IQ, type of intellectual functioning instrument, biological sex, age, and offense type.

H_{a1}: Prenatal substance exposure does influence the rational understanding prong of the *Dusky* standard for juvenile adjudicative competence evaluations when controlling for Full Scale IQ, type of intellectual functioning instrument, biological sex, age, and offense type.

RQ2: Does juvenile offenders' prenatal substance exposure influence retention of information provided through the Capacity Check items of the JACI when controlling for Full Scale IQ, type of intellectual functioning instrument, biological sex, age, and offense type?

H₀₂: Juvenile offenders' prenatal substance exposure does not influence retention of information provided through the Capacity Check items of the JACI when controlling for Full Scale IQ, type of intellectual functioning instrument, biological sex, age, and offense type.

H_{a2}: Juvenile offenders' prenatal substance exposure does influence retention of information provided through the Capacity Check items of the JACI when controlling for Full Scale IQ, type of intellectual functioning instrument, biological sex, age, and offense type.

RQ3: Does juveniles' Full Scale IQ influence their adjudicative competence rational understanding when assessed using the JACI when controlling for type of intellectual functioning instrument, biological sex, age, and offense type?

H₀₃ Juveniles' Full Scale IQ does not influence their adjudicative competence rational understanding when assessed using the JACI when controlling for type of intellectual functioning instrument, biological sex, age, and offense type.

H_{a3}: Juveniles' Full Scale IQ does influence their adjudicative competence rational understanding when assessed using the JACI when controlling for type of intellectual functioning instrument, biological sex, age, and offense type.

Theoretical Framework

The theoretical framework for the quantitative and qualitative study was Jean Piaget's cognitive developmental theory. Piaget (2009/1928) identified four stages humans progress through during development, with formal operational the last stage of cognitive development. The formal operational stage of development typically begins around the age of 12, with adolescents developing the ability to think abstractly and hypothetically (Piaget 2008/1972; Piaget 2009/1928). For this study, juveniles' ability to think abstractly and hypothetically will form the basis of assessment of rational understanding abilities with the JACI. In this study, Piaget's cognitive development theory stages were used to assist in understanding juveniles' psycholegal abilities and were the standard for juveniles with prenatal substance exposure who had a rational understanding of the charges against them. Cognitive stages of development were used to determine how global intellectual functioning impacts rational understanding standards for adjudicative competence.

Nature of the Study

I intended to conduct a quantitative research study with archival data collected from juvenile adjudicative competence evaluations in Michigan circuit courts between 2006 and 2020. The quantitative methodology of study was justified due to the exploration of the influence of the independent variables, intellectual functioning and prenatal substance exposure, on the dependent variables, rational understanding of the psycholegal capacities assessed on the JACI and ability to retain information learned during the Capacity Check items on the JACI. A predictive correlational research design

would have explored the influence of prenatal substance exposure when controlling for Full Scale IQ, type of intellectual functioning instrument, biological sex, age, and offense type, as well as retention abilities and information learned using the JACI when there is prenatal substance exposure. Furthermore, the research design would have explored the influence of intellectual functioning on the opinion of rational understanding on the JACI when controlling for type of intellectual functioning instrument, biological sex, age, and offense type. The quantitative study would have used hierarchical multiple regression to explore the results of the data.

Definitions

Abstract reasoning: Ability to analyze information at a sophisticated level and demonstrate decision-making abilities in terms of adjudicative competence (Kruh & Grisso, 2009). In Michigan, abstraction is determined in terms of juveniles' ability to appreciate charges against them, their role in legal proceedings, realistic outcomes from the legal proceedings, and "an ability to extend their thinking into the future" (1939 PA 288 MCL 712A.18).

Adjudication: The legal term used within the court system for legal proceedings against an individual (Kruh & Grisso, 2009).

Adjudicative competence: Psycholegal abilities related to the understanding and appreciation of legal proceedings against the defendant and their ability to help assist in their defense (*Dusky v. United States*, 1960; Grisso, 2005; Kruh & Grisso, 2009). In order to proceed with legal proceedings against an individual, the individual needs to have both

a factual and rational understanding of the charges against them and their role in legal proceedings (*Dusky v. United States*, 1960).

Capacity Check item: The JACI has Capacity Check items that qualified forensic mental health examiners can provide to juveniles if they appear to lack understanding of the term. After the qualified forensic mental health examiner reads the prompted information related to the term, the juvenile is questioned again to determine their understanding and retention of the information they learned (Grisso, 2005). Additionally, following the completion of the JACI, Capacity Check items are reviewed again with the juvenile to determine whether they retained the information and can use it in meaningful ways to answer questions (Grisso, 2005). Role of the Defense Attorney, Role of the Prosecutor, and Plea Bargain/Plea Agreement are the three Capacity Check items on the JACI (Grisso, 2005).

Civil commitment: Involuntarily placement in a psychiatric facility (Kruh & Grisso, 2009).

Concrete reasoning: Ability to analyze information and problem solve with literal thinking patterns (Grisso, 2005).

Defendant: An individual with legal proceedings against them (Grisso & Schwartz, 2000).

Delinquent: A juvenile that pleads guilty or is found guilty of an offense by a judge during a dispositional hearing (Grisso & Schwartz, 2000).

Developmental Maturity: Progressive development of physical, cognitive, social, and emotional domains as a child matures into adulthood (Kruh & Grisso, 2009).

Dispositional hearing: A dispositional hearing is a hearing where the juvenile defendant receives the legal consequence for the offense (1939 PA 288 MCL 712A.2). Within the adult criminal system, the dispositional hearing is called a sentencing hearing (Kruh & Grisso, 2009).

Due process: Fair treatment within the legal system based on standards in the Fifth and 14th Amendments of the United States Constitution (Kruh & Grisso, 2009).

Full Scale IQ: The overall IQ provided through intellectual functioning assessments (Wechsler, 2011).

Gestation: The period of growth and development within the womb (Behnke & Smith, 2013).

Petition: Within the juvenile court system, the prosecutor authorizes charges against juvenile defendants in the form of petitions to the court (1939 PA 288 MCL 712A.1).

Plea agreement: Offer prosecutors provide to juvenile defendants to agree to plead guilty to current offenses in order to streamline the adjudicative process (Grisso & Schwartz, 2000). In exchange for the guilty plea, the prosecutor offers a lesser charge or sentence (Grisso & Schwartz, 2000).

Prefrontal cortex: Located in the front of the frontal lobe, the prefrontal cortex is responsible for problem solving and logical thought processes (Konrad et al., 2013). Prenatal substance exposure typically impacts the development of the prefrontal cortex (Konrad et al., 2013).

Prenatal substance exposure: Exposure to a substance during pregnancy (Behnke & Smith, 2013).

Property crime: An offense involving destruction or illegal entry into a building or dwelling (Armstrong & Friedman, 2016).

Psycholegal abilities: Psychological abilities relate to the understanding and appreciation of legal concepts (McLachlan et al., 2014).

Psychosocial Maturity: Level of maturity relating to psychological and sociological factors of development (Grisso et al., 2003).

Remediation: Within the juvenile court setting, remediation services refer to the adult concept of restoration (Kruh & Grisso, 2009). If a juvenile is determined to be not competent to proceed with adjudication, they can be ordered to have remediation services to teach juvenile concepts related to adjudicative competence (Kruh & Grisso, 2009).

Remediation services: Court-ordered services for juvenile defendants found not competent to proceed with adjudication (Grisso, 2005).

Status offense: A juvenile offense related to a violation of the law just for minors (Grisso & Schwartz, 2000).

Substance possession: An offense when the individual has an illegal substance on their person (Armstrong & Friedman, 2016).

Theory of the mind: The ability of a person to understand that other people have mental states different than their own (Piaget 2008/1972; Piaget 2009/1928).

Violent crime: An offense related to bodily harm of another individual (Armstrong & Friedman, 2016).

Assumptions

Research studies have general assumptions. I assumed that the archival data were accurate, and qualified forensic mental health examiners collecting original data had experience with juvenile adjudicative competence evaluations and knew the complexities of the developing adolescent brain and how juveniles make decisions to best form opinions. In addition, it was assumed qualified forensic mental health examiners understood juvenile adjudicative competence standards within the state of Michigan and adolescents represented a general population of juveniles who interact with the legal system in the state of Michigan.

Scope and Delimitations

The original study would have addressed the effects of prenatal substance exposure and intellectual functioning on juvenile defendants' adjudicative competence abilities. The study would have addressed the relationship between independent and dependent variables while controlling for intellectual functioning, type of intellectual functioning instrument, chronological age, biological sex, and offense type. The original study would have been conducted with juvenile defendants between the ages of 11 and 17 within Michigan circuit courts, with the results generalizable to the larger population of juvenile defendants.

All participants who were individuals under the age of 11 and over the age of 17, those with certain mental health conditions not covered in archival data, those with less severe offenses not addressed by the juvenile court system, and juvenile defendants being evaluated for waivers into the adult criminal system were eliminated from the study.

Adjudicative competence evaluations that do not include all the variables of this study would have been excluded.

Limitations

Before the switch in methodology, the study would have been limited to data provided through juvenile adjudicative competence evaluations from qualified forensic mental health examiners in Michigan circuit courts. The study would have been a nonexperimental retrospective evaluation review. There would have been limitations in terms of controls of data collection and randomization of individuals. There are weaknesses in the ability to conclude accurate information from nonexperimental research designs due to the lack of research controls (Gelman & Hill, 2007).

The qualitative study was limited to the juvenile adjudicative competence evaluations available through one Michigan circuit court. I have access to 14 juvenile adjudicative competence evaluations. The qualitative study had a small sample size and it was not possible to determine whether I met saturation of the data. Purposeful sampling methods were used to confirm the adjudicative competence evaluations had the criteria for the qualitative design; however, the study was limited in terms of biological sexes, ages, prenatal substance exposure types, and intellectual functioning. The study was an archival review and I could not ask additional questions of the juveniles or the qualified forensic mental health examiner that completed the adjudicative competence evaluation. Specific findings are limited to this qualitative study. Triangulation was limited for this study due to the archival review design.

Significance

Juvenile qualified forensic mental health examiners and judges need to have extensive knowledge of adolescent development and adjudicative competence. There is limited research into the psycholegal abilities of juveniles with prenatal substance exposure and the potential impact of intellectual functioning on rational understanding, this archival study would have filled the gap in the research of markers to assess when there is a concern with prenatal substance exposure and how intellectual functioning impacts rational understanding on a standard juvenile assessment instrument. The original study would have been used to identify potential factors that may warrant further assessment into prenatal substance exposure with juveniles who may not have been previously diagnosed with prenatal substance exposure. The study would have been unique in that it would explore the impact of prenatal substance exposure when controlling for Full Scale IQ, type of intellectual functioning instrument, biological sex, age, and offense type, with the results providing assessment markers for qualified forensic mental health examiners to explore during adjudicative competence evaluations. There are limited standards in terms of juvenile adjudicative competence findings.

Furthermore, there is limited research regarding the effects of prenatal substance exposure on juveniles' psycholegal abilities. Insights from the original and current study can aid qualified forensic mental health examiners when forming opinions regarding adjudicative competence. There is limited information available regarding the impact of general intellectual functioning on juveniles' rational understanding. The study's findings can help inform adjudicative competence evaluations using the JACI.

The results of the original study would have enhanced positive social change with juveniles involved in the legal system and the forensic psychology field in terms of ensuring due process rights of young offenders. Juveniles with prenatal substance exposure are a vulnerable population that needs protective measures to ensure their constitutional rights. The study results would have promoted positive social change by providing insight into the effects of prenatal substance exposure on juveniles' rational understanding of the legal proceedings against them and inform necessary assessment measures to identify their abilities. Also, in general, juveniles are considered a vulnerable population, and the results of the study would have helped promote positive social change by further informing forensic examiners regarding the impact of general intellectual functioning on the rational understanding standard on the JACI.

Summary

Neurological and cognitive factors have an impact on adjudicative competence. The potential impact of prenatal substance exposure on juvenile adjudicative competence requires further research. The literature review identified a history of research regarding unique developmental factors of adolescence that influence psycholegal abilities and adjudicative competence standards. Chapter 2 includes a literature review of juvenile adjudicative competence research and the theoretical framework. The chapter includes information regarding the history of juvenile adjudicative competence standards, Michigan statute requirements for adjudicative competence evaluations, and a brief overview of prefrontal cortex development and the impact of prenatal substance exposure

on the prefrontal cortex. The chapter concludes with a history of research regarding variables under study.

Chapter 2: Literature Review

Introduction

Juvenile adjudicative competence research is a developing field. There are gaps in the literature related to various factors that influence adjudicative competence. For legal proceedings to commence against a juvenile, the juvenile must demonstrate a factual and rational understanding of the charges against them and an ability to assist in their defense (*Dusky v. United States*, 1960). Ragetz et al. (2015) said the rational understanding prong is the most impacted by neurological functioning and developmental factors. Prenatal substance exposure can impact neurological functioning related to adjudicative competence, including intellectual functioning, reasoning ability, memory ability, and emotion regulation (Brown et al., 2017). The influence of prenatal substance exposure on juvenile adjudicative competence needs further research. The original study would have explored the influence of neurological factors on the rational understanding prong for juvenile adjudicative competence.

This chapter addresses the history of research on juvenile adjudicative competence and the influence of prenatal substance exposure on brain development. The chapter includes a discussion of Piaget's cognitive developmental theory as the theoretical framework for the study. The history of juvenile adjudicative competence includes legal standards based on developmental maturity, differences between juvenile and adult competence standards, and adjudicative competence instruments. This chapter also provides an overview of prefrontal cortex development and the influence of prenatal substances on brain development and adjudicative competence. The chapter concludes

with a justification for the use of research variables for the original study. The literature review provides the basis for additional research needed regarding the topic of juvenile adjudicative competence.

Literature Review Strategy

I searched psychological and criminological databases to gather peer-reviewed articles related to my dissertation topic. PsycINFO, PsycARTICLES, PsycBOOKS, PsycCRITIQUES, PsycEXTRA, Criminal Justice Database, MEDLINE, Neuroscience Information Framework, Political Science Complete, Sage Journals, SocINDEX, Oxford Criminology Bibliographies, Thoreau, Nexus Uni, and Google Scholar databases. Search terms related to adjudicative competency were: *adjudicative competence*, *adjudicative competency*, or *competency to stand trial*, *juvenile*, *youth*, or *adolescent*, *empirical*, *prenatal substance exposure*, and *brain development*.

Seminal work from Piaget, translated from French to English, was identified in the search. I searched for the theoretical framework for this study by using the words *Piaget*, *cognitive developmental theory*, *juvenile delinquency*, and *juvenile court system*. The timeframe for all the database searches was 1994 to 2020. Juvenile adjudicative competence is a relatively new concept, given the infancy and ongoing development of this topic, and all sources were published between 1994 and 2020.

Theoretical Framework

Piaget's cognitive developmental theory was the theoretical framework for this dissertation. Piaget (2009/1928) identified four stages of human development: sensorimotor (birth to 2 years old), preoperational (age 2 to 7 years old), concrete

operational (age 7 to 11 years old), and formal operational (age 12 and older). Piaget stated that children learn as they age through interactions with their environment (i.e., through cause-and-effect relationships). Children learn through sensory experiences and pretend play before the concrete operational stage of cognitive development (Piaget 2008/1972; Piaget 2009/1928). As they progress to the concrete operational stage, children develop the skills to think logically and use reason to form their decisions (Piaget 2008/1972; Piaget 2009/1928). During the concrete operational stage of cognitive development, children have not formed the skills to think in abstraction or hypothetical reasoning (Piaget 2008/1972; Piaget 2009/1928). Once children have reached the formal operational stage of cognitive development, they can demonstrate abstract reasoning and use deductive logic (Piaget 2008/1972; Piaget 2009/1928). If children can possess abstract reasoning and deductive logical abilities, they have reached the formal operational stage of cognitive development.

The concrete and formal operational stages of cognitive development are critical to adjudicative competence. In Michigan, children under the age of 10 are assumed incompetent to proceed with formal adjudication, and if adjudication of charges is pursued, the juvenile needs to demonstrate adequate adjudicative competence abilities through a forensic adjudicative competence evaluation (1939 PA 288 MCL 712A.18n). Children and adolescents who possess adjudicative competence can demonstrate factual and rational understanding of the charges against them and an ability to assist in their defense (1939 PA 288 MCL 712A.18p; *Dusky v. United States*, 1960; Grisso, 2005; Grisso et al., 2003).

The factual understanding prong of adjudicative competence is satisfied when a juvenile demonstrates knowledge about the roles of courtroom workers and psycholegal concepts related to adjudication (*Dusky v. United States*, 1960). The rational understanding prong of adjudicative competence is only satisfied when a juvenile demonstrates an appreciation of the roles of courtroom workers and psycholegal concepts related to adjudication (*Dusky v. United States*, 1960). Appreciation of roles and psycholegal concepts is demonstrated when the juvenile can use information to make informed decisions about potential decisions made within juvenile court settings, rather than simply iterate information as with the factual understanding prong (Grisso, 2005). Both the factual understanding and rational understanding components of adjudicative competence require higher-level thinking abilities related to thinking logically and making informed decisions (Grisso, 2005; Grisso et al., 2003). During the concrete operational stage of cognitive development, children and adolescents should demonstrate adjudicative competence factual understanding, and juveniles during the formal operational stage should demonstrate both adjudicative competence factual understanding and rational understanding.

Piaget (2009/1928) said the formal operational stage of development relates to the ability to think in abstraction and complete higher-level decision-making. A juvenile must be able to use their appreciation of the legal process to engage in decision-making related to their case and assist their attorney during their defense (*Dusky v. United States*, 1960). Children or adolescents could demonstrate factual understanding of charges against them and their role in the courtroom process, and yet still could not appreciate the

implications of their role and psycholegal concepts related to adjudicative competence (*Dusky v. United States*, 1960; Grisso, 2005; Grisso et al., 2003). For this study, I used Piaget's theory as the framework for determining if juveniles meet the rational understanding prong for the Michigan Legislature standards. Therefore, if a juvenile has reached the formal operational cognitive stage of development, they will likely be able to satisfy both the factual and rational understanding prong of the *Dusky* standard.

The forensic instrument to assess juvenile adjudicative competence for this study, the JACI, provides a semistructured format to assess juveniles' psycholegal abilities, with questions related to both factual and rational understanding, as well as problem-solving styles related to the formal operational cognitive stage of development (Grisso, 2005; Scott & Grisso, 1998). The use of the JACI or comparable forensic instrument when assessing adjudicative competence with juvenile defendants is stated in the Michigan statute (1939 PA 288 MCL 712A.18p). Guidelines for the thinking abilities needed to satisfy adjudicative competence is stated in the Michigan statute, with the specified abilities related to Piaget's formal operational stage of cognitive development.

In the original study, I would have addressed issues with general intellectual functioning related to juveniles' rational understanding of the legal process. Piaget's formal operational stage of cognitive development relates to juveniles' general intellectual functioning (Piaget 2008/1972; Piaget 2009/1928). The juveniles' general intellectual functioning scores help support the rational understanding component of the Michigan Legislature adjudicative competence standard (1939 PA 288 MCL 712A.18p). Juvenile qualified forensic mental health examiners must provide information on

juveniles' intellectual functioning per the Michigan Legislature (1939 PA 288 MCL 712A.18p). Adolescents in the formal operational stage of cognitive development will typically demonstrate average intellectual functioning (Kambam & Thompson, 2009; Piaget 2008/1972; Piaget 2009/1928) and demonstrate adequate decision-making abilities for adjudication (Scott & Grisso, 1998). The theoretical framework of Piaget's cognitive stages of development would have set the foundation to assess the effect of intellectual functioning on the rational understanding prong of adjudicative competence.

Juvenile Offender Statistics

There are trends within the juvenile justice system within the United States. The U.S. Department of Justice Juvenile Justice Statistics National Report identified 850,500 juvenile delinquency cases processed through the juvenile court system in 2016 (Hockenberry, 2019). The 2016 National Report statistics used information from approximately 2,500 juvenile courts handling juvenile petitions from age 10 to the oldest age allowed in the state's jurisdiction (Hockenberry, 2019). The National Report published that of the 850,500 juvenile petitions, 33% were property offenses, 29% were person offenses, 25% were public order offenses, and 13% were drug offenses (Hockenberry, 2019). Males accounted for the highest number of juvenile petitions, with 614,900 of the 850,500 cases (Hockenberry, 2019). White offenders were the highest percentage among the delinquency cases at 44%, with Black youth at 36%, Hispanic youth at 18%, American Indian youth at 2%, and Asian youth at 1% (Hockenberry, 2019). Fifty-two percent of the delinquency cases were with youth under 16 (Hockenberry, 2019). The National Report found that 250,400 of the 850,500

delinquency cases were found delinquent, with formal probation (62%) the most common disposition ordered (Hockenberry, 2019). The majority of juvenile offenders are under 16, with studies identifying adjudicative competence concerns for children under 15. The trends among juvenile offenders support the need for further research into adjudicative competence capacities.

Juvenile Court Procedures

Adolescent Adjudicative Competence Due Process Rights

Landmark Supreme Court decisions informed juvenile adjudicative competence standards. Juvenile defendants differ from adult defendants due to developmental maturity (Grisso et al., 2003). The legal system developed the juvenile court system to prevent juvenile offenders from entering into the adult court system (Grisso et al., 2003; Scott et al., 2016). Due to their developmental functioning, juveniles perceive and process information and events differently than adults (Grisso et al., 2003; McLachlan et al., 2014; Panza & Fraser, 2015). Following the court findings in *Dusky v. United States* (1960) and *In re Gault* (1967), the federal court system identified that juvenile defendants require the same legal protections under due process laws as adult defendants. *Dusky v. United States* found that defendants need to demonstrate both factual and rational understanding of the charges against them and demonstrate an ability to assist in their defense. The U.S. Constitution states that individuals have the right to notice of the charges against them, right to legal counsel, a right to remain silent or not testify about themselves, and a right to confront their accusers (*In re Gault*, 1967). *In re Gault* found that juvenile defendants were allowed the same due process rights as adult defendants.

Both landmark Supreme Court decisions set the legal standard for the current juvenile justice system and are related to adjudicative competence standards.

There are standards and procedures within the juvenile court system to ensure due process rights. For juvenile defendants, their developmental functioning directly impacts their ability to demonstrate both the factual understanding and the rational understanding needed to satisfy the *Dusky* standard for adjudication of offenses (Grisso et al., 2003; Ragatz et al., 2015; Scott et al., 2016). Given the developmental functioning of younger children, children younger than 10 are assumed not competent to proceed with adjudication in Michigan (1939 PA 288 MCL 712A.18n). Juvenile defendants in Michigan are assumed competent to proceed with adjudication unless the issue of adjudicative competence is raised, and the presiding judge has the authority to determine whether the juvenile is not competent to proceed with adjudication (1939 PA 288 MCL 712A.18n). When the issue of adjudicative competence is raised, a qualified forensic mental health examiner completes a comprehensive evaluation with the adolescent who identifies issues related to adjudicative competence and provides an opinion of adjudicative competence to the court (1939 PA 288 MCL 712A.18p; Grisso et al., 2003; Grisso, 2005). The judge uses the adjudicative competence evaluation and the juvenile qualified forensic mental health examiner's opinion to make the final determination of adjudicative competence (1939 PA 288 MCL 712A.18q). The forensic evaluation process in Michigan follows the due process standards criteria and helps ensure juvenile defendants can understand their charges and assist in their defense.

Adolescent Competence Versus Adult Competence

There are differences between adolescent and adult adjudicative competence. Guidelines for juvenile and adult adjudicative competence follow the *Dusky* standard; however, juvenile standards emphasize developmental maturity rather than significant mental health concerns (*Dusky v. United States*, 1960; Grisso, 2005; Grisso et al., 2003). Adult referrals with adjudicative competence concerns are typically an issue with a severe mental health disorder that is not adequately treated (Scott et al., 2016). Following the conclusion of an incompetent determination, the adult typically is placed in a psychiatric restoration facility for treatment under civil commitment (Grisso et al., 2003; NeMoyer et al., 2018; Scott et al., 2016). Once determined restored to adjudicative competence, the legal process against the adult defendant resumes (Grisso et al., 2003; NeMoyer et al., 2018; Scott et al., 2016). Adult adjudicative competence issues are typically related to severe mental illness, emphasizing treatment for the mental illness to continue the criminal proceedings against the defendant.

There are specific issues that apply to juvenile defendants. Juvenile adjudication standards recognize that juveniles are not the same as adult defendants due to their age and brain development (Grisso et al., 2003). Adjudicative competence concerns with juveniles, especially younger juveniles, relate to lack of developmental maturity and ability to appreciate the legal process against them due to limited higher-level thinking abilities (Chien et al., 2016; Cox et al., 2012; Grisso et al., 2003; Ragatz et al., 2015; Scott et al., 2016). In some jurisdictions, suspension of the legal process against the juvenile defendant for restoration or remediation services occurs for a period (1939 PA

288 MCL 712A.18s; Chien et al., 2016; Grisso, 2005). Michigan statute stipulates that juveniles shall remain in the least restrictive environment during restoration/remediation services, with the severity of the charge dictating whether the juvenile is placed in a psychiatric facility or remains in the care and custody of their legal guardian (1939 PA 288 MCL 712A.18s). If the juvenile is determined competent to proceed with adjudication following restoration/remediation services, then the legal process against the juvenile resumes (1939 PA 288 MCL 712A.18s). However, if the juvenile is not restored/remediated to adjudicative competence with a specific timeframe, the court can either dismiss the charges or recommend further psychiatric services (1939 PA 288 MCL 712A.18s). The restoration or remediation process relates to the juvenile's ability to learn and use information learned during the adjudicative competence evaluation process.

Juvenile Adjudicative Competence

Juvenile adjudicative competence is a developing field of research. Following the court findings in *Dusky v. United States* (1960) and *In re Gault* (1967), the federal court system identified that juvenile defendants require the same legal protections under the U.S. Constitution as adult defendants. Juvenile adjudicative competence evaluations developed into an essential research topic following the 2003 MacArthur Study. The MacArthur Study researchers' findings supported that juvenile defendants are unique from adult defendants due to developmental concerns (Grisso et al., 2003). The researchers stated that forensic evaluators completing evaluations with children and adolescents need to know about childhood development and how it affects psycholegal abilities (Grisso et al., 2003). The MacArthur Study identified a need for forensic

instruments to assess juvenile's psycholegal abilities (Grisso et al., 2003). The need for research into the use of forensic adjudicative competence instruments with juveniles followed the MacArthur study.

Forensic instruments to measure psycholegal abilities are available to forensic examiners. Before 2005, the development of adjudicative competence instruments was focused on the use with adults (Grisso, 2005). Given the lack of juvenile forensic instruments, qualified forensic mental health examiners used forensic instruments developed for adults with adolescents (Grisso, 2005). Grisso (2005) developed the JACI to identify the specific issues surrounding juvenile defendants' adjudicative competence. The JACI assesses the juvenile's understanding, appreciation, and reasoning abilities through semistructured questions relating to juvenile court workers' roles and how the juvenile interacts with them (Grisso, 2005). The JACI design relates to adolescents' developmental concerns, with the forensic examiner allowed to provide additional information as needed and then assess the juvenile's ability to use the information (Grisso, 2005). Forensic instruments to assess psycholegal abilities are valuable instruments for adjudicative competence evaluations.

History of Juvenile Adjudicative Competence

The themes for juvenile adjudicative competence revolve around developmental immaturity and its impact on juveniles' psycholegal abilities. Continued research is needed to develop standards of addressing juveniles' due process rights within the juvenile justice system. The first juvenile court system developed in 1899 through Cook County addressed children and adolescents' developmental immaturity, emphasizing

rehabilitation rather than punishment within the juvenile court system (Grisso et al., 2003; Scott et al., 2016). Due to their cognitive abilities and developmental level, juvenile offenders were held to a different standard than adult offenders (Grisso et al., 2003; Scott et al., 2016). Juvenile offenders' due process rights were not an issue during the first juvenile court system era because they were provided with services to rehabilitate the juvenile rather than detain the juvenile (Grisso et al., 2003; Scott et al., 2016). However, over time, the model of the juvenile court system changed to a more punitive system.

The juvenile civil court system developed into a model comparable to the adult criminal court system during the 1980s and 1990s (Grisso et al., 2003). The juvenile court system restructured into a more punitive system following high profile violent cases involving juvenile defendants in the 1980s and 1990s, with adolescents dispositioned to juvenile detention or waived into the adult court system rather than provided with rehabilitation services (Grisso et al., 2003; Scott et al., 2016). However, before the increased sanctions of the juvenile court system, landmark cases started in the 1960s that address juvenile defendants' rights and provide guidelines for today's court system (Grisso et al., 2003). With the increase in sanctions, there was an increased concern with adolescents' due process rights within the court setting, with court statutes created to ensure juveniles the same protections under the law as their adult counterparts (Grisso et al., 2003; Scott et al., 2016). Juvenile adjudicative competence concerns rose from the need for policies to ensure juvenile defendants' due process rights (Grisso et al., 2003; Scott et al., 2016). Following the Supreme Court decision in *In re Gault* (1967), the

question of a juvenile defendant's ability to understand and appreciate the legal proceedings against them became a constitutional issue for juveniles. With the ever-growing juvenile justice system and understanding of adolescent development, there is support for further research into the developmental features influencing adjudicative competence.

Development and Psychosocial Maturity

Developmental maturity is a theme surrounding juvenile adjudicative competence. Due to brain development, juveniles may lack the developmental maturity required to satisfy the *Dusky* standard (Chien et al., 2016; Cox et al., 2012; Grisso et al., 2003). The ability to understand the legal concepts and appreciate the legal process is a concern for children and adolescent defendants (Bath et al., 2015; Chien et al., 2016; Cox et al., 2012; Grisso et al., 2003; Panza & Fraser, 2015; Viljoen, Odgers, et al., 2007). Childhood development is a nonlinear path, with brain development progressing at different rates for different children and adolescents (Broekman et al., 2014; Konrad et al., 2013; Ross et al., 2015). Therefore, developmental maturity and age are separate factors impacting juvenile adjudicative competence. For this reason, qualified forensic mental health examiners conducting adjudicative competence evaluations with juveniles must have knowledge related to childhood development.

Researchers who have studied developmental maturity and juvenile adjudicative competence emphasize the impact of developmental maturity on adjudicative competence determinations. When assessing the impact of maturity level and age of juvenile offenders for judges' opinions on competence to proceed to adjudication, Cox et al.

(2012) found that the age and maturity levels were different factors of consideration. There is more of a concern with the younger adolescents to comprehend and assist in their defense because of their lack of maturity; however, older adolescents may also possess significant higher-level thinking deficits due to lack of developmental maturity (Chien et al., 2016; Cox et al., 2012; Fogel et al., 2013; Grisso et al., 2003; Panza & Fraser, 2015).

Lack of psychosocial maturity compounds issues with lack of developmental maturity, with juvenile defendants typically being more impulsive and non-compliant with authority figures than adult defendants (Grisso et al., 2003). Steinberg (2009) identified complex issues of impulse control, risk appraisal, the influence of social pressure, and logical decision-making abilities were critical areas of concern during adolescence. Overall, neuroscientists state that adolescents experience a decrease in gray matter and an increase in white matter in the prefrontal cortex and changes in dopamine receptors and pathways that connect the limbic system to the prefrontal cortex (Steinberg, 2009). During adolescence, the critical brain changes directly influence a juvenile's psychosocial maturity and developmental maturity, which affects their psycholegal abilities (Kambam & Thompson, 2009).

Michigan Statutes

Michigan statutes have specific requirements for juvenile adjudicative competence. In Michigan, the juvenile statute for adjudicative competence states that qualified forensic mental health examiners need to have knowledge of childhood development and use the JACI or a similar forensic instrument when conducting

adjudicative competence evaluations with juveniles (1939 PA 288 MCL 712A.18p). The Michigan statute is compliant with the recommendations within the juvenile adjudicative competence research that identifies the need for a conceptualization of developmental factors specific to childhood and adolescence regarding the opinion of adjudicative competence (Bath et al., 2015; Chien et al., 2016; Cox et al., 2012; Grisso et al., 2003; Panza & Fraser, 2015; Viljoen, Odgers, et al., 2007). Qualified forensic mental health examiners need to discuss the mental status examination, diagnostic features affecting adjudicative competence, intellectual functioning, age, maturity level, developmental stage, ability to engage in reasoning and decision making, factual and rational understanding of the legal proceedings against them, ability to assist their attorney, and abstract thinking abilities (1939 PA 288 MCL 712A.18p). The juvenile's psycholegal abilities assessment encompasses the full developmental and functional history of the juvenile defendant. Qualified forensic mental health examiners in Michigan provide opinions to the court in their evaluations, with the judge determining the ultimate issue of competence (1939 PA 288 MCL 712A.18q). Michigan qualified forensic mental health examiners must address all issues under the statute to provide an opinion to the court.

There are additional requirements related to remediation services and civil commitment procedures for juveniles determined not competent to proceed with adjudication. Michigan statute states that with certain misdemeanors, such as traffic offenses or non-serious misdemeanors such as petty theft or simple assault, the court will dismiss all charges if the juvenile is determined not competent to proceed with adjudication (1939 PA 288 MCL 712A.18s). The Michigan statute also allows dismissing

a serious misdemeanor with judge discretion (1939 PA 288 MCL 712A.18s). Otherwise, Michigan statute allows juvenile civil commitment to remediate psycholegal abilities, with a limitation on 120 days for the juvenile to be determined remediated or not remediated (1939 PA 288 MCL 712A.18s). If the juvenile is determined remediated, the juvenile adjudication continues, or if the juvenile is determined not remediated within the 120 days, charges are either dismissed, or further psychiatric services are recommended (1939 PA 288 MCL 712A.18s). The Michigan statute for remediation services for juvenile determined not competent to proceed with adjudication follows the recommendations within the juvenile adjudicative competence research (Chien et al., 2016; Grisso et al., 2003). The influence of developmental factors on remediation services is a developing area of interest, with more research needed to direct policy standards.

Juvenile Adjudicative Competence Forensic Instruments

Juvenile adjudicative competence evaluations are referred to as adjudicative competence, competency to stand trial evaluations, competency to proceed with adjudication evaluations, or fitness to stand trial within the literature. The majority of qualified forensic mental health examiners that complete adjudicative competence evaluations use forensic instruments to aid in forming an opinion for the court (Neal & Grisso, 2014). Neal and Grisso (2014) identified that competency to stand trial evaluations, with both adult and juvenile evaluations, is the most common forensic evaluation referral when surveying forensic evaluators in the United States, Canada, Australia, New Zealand, and Europe. Forensic instruments were developed to assess

defendants' psycholegal abilities related to their factual and rational understanding of the legal proceedings against them and their ability to assist in their defense (Grisso et al., 2003; Grisso, 2005; Viljoen et al., 2006). With the adjudicative competence evaluations in demand, there is a need to have further information to help support qualified forensic mental health examiners with the administration of the instruments and to help support qualified forensic mental health examiners' opinions on adjudicative competence.

Within the competency to stand trial referrals for juveniles and adults, Neal and Grisso (2014) found the three most common adjudicative competence forensic instruments were the Evaluation of Competence to Stand Trial-Revised (ECST-R), MacArthur Competence Assessment Tool-Criminal Adjudication (MacCAT-CA), and Juvenile Adjudicative Competence Interview (JACI). Due to the limited history of juvenile adjudication competence standards, there has been a history of using adult forensic instruments to assess psycholegal abilities with juvenile defendants (Grisso et al., 2003; Grisso, 2005; Viljoen et al., 2009). There are three forensic adjudicative competence instruments commonly used with juveniles within the literature review: MacCAT-CA, Fitness Interview Test-Revised (FIT-R), and the JACI.

MacCAT-CA

The forensic instrument with the most empirical research for juvenile adjudicative competence evaluations is the MacCAT-CA. The MacCAT-CA is based on the *Dusky* standard and developed for use with adult offenders (Poythress et al., 1999). The MacCAT-CA is administered by a forensic evaluator, with the forensic evaluator objectively scoring vignette scenarios answered by the defendant (Otto et al., 1998). The

MacCAT-CA is objectively scored with a 0-2 scale, with 22 items related to the components of the *Dusky* standard (Otto et al., 1998). The examiner scores based on the respondent's answers to the vignette questions and the demonstration of their understanding of the legal process, reasoning abilities of the legal process, and appreciation of the legal process (Otto et al., 1998). The forensic evaluator assigns a 0 score to a low capacity item, a 1 score to a medium capacity item, and a 2 score to a high capacity item (Otto et al., 1998). Individuals with good understanding, reasoning, and appreciation abilities, a high score, demonstrate competence to proceed (Otto et al., 1998). The MacCAT-CA provides qualified forensic mental health examiners a basis to formulate their opinion on adjudicative competence.

Despite the use of the MacCAT-CA with juveniles, the research warns that the MacCAT-CA was normed with adult defendants, and therefore the forensic evaluator cannot provide quantitative results for juvenile defendants (Armstrong & Friedman, 2016; Grisso et al., 2003; Ficke et al., 2006; Panza & Fraser, 2015). The forensic evaluator provides an opinion from their subjective evaluation of the juvenile's answers to the vignette questions (Armstrong & Friedman, 2016; Grisso et al., 2003; Ficke et al., 2006; Panza & Fraser, 2015). The MacArthur research group identified factors related to developmental maturity concerns specific to children's and adolescents' psycholegal abilities within the juvenile court system (Grisso et al., 2003). The MacCAT-CA does not address the specific developmental maturity concerns for juvenile defendants (Armstrong & Friedman, 2016; Grisso et al., 2003; Ficke et al., 2006; Panza & Fraser, 2015). Following the MacArthur research findings, there was an increase in research with

juvenile adjudicative competence and the need to explore the use of forensic instruments developed for adults with juveniles.

FIT-R

The FIT-R was developed as a semistructured interview guide for forensic evaluators assessing adjudicative competence with adults (Viljoen et al., 2006; Viljoen, Zapf, et al., 2007). The FIT-R was developed to assess the psycholegal abilities of adults according to the competency standards for Criminal Code of Canada, with the Revised version including the United States of America law and procedure as well (Viljoen, Zapf, et al., 2007; Zapf et al., 2001). The FIT-R has 16 items designed to assess the individual's ability to understand the legal proceedings against them (Factual Understanding), understand the potential consequences of the legal proceedings (Rational Understanding), and ability to communicate effectively with their attorneys (Participation: Viljoen, Zapf, et al., 2007; Zapf et al., 2001). The forensic instrument is rated using a 3-point scale, with a score of 2 identifying serious impairment in psycholegal ability, a score of 1 identifying mild impairment, and a score of 0 identifying no impairment (Viljoen, Zapf, et al., 2007; Zapf et al., 2001). However, the forensic instrument does not contain cut-off scores for the judgment of psycholegal abilities and requires the forensic examiner to consider the importance of the impairment on the defendant's psycholegal abilities (Zapf et al., 2001).

FIT-R is used with juvenile adjudicative competence evaluations. The FIT-R has adequate interrater reliability and factor structure to assess juvenile adjudicative competence issues (Roesch et al., 2006; Viljoen et al., 2006). However, there is still concern that the forensic instrument was developed for use with adult offenders and

addressed issues related to adult court proceedings rather than the juvenile court proceedings (Grisso, 2005; Viljoen et al., 2006; Viljoen, Zapf, et al., 2007). Viljoen, Zapf, et al. (2007) used the FIT-R with 143 adolescents between the age of 11 to 17 to study the impact of using the Adult Standard (adolescent impaired in psycholegal abilities to stand trial if their scores fell below two or more standard deviations away from the adult mean) and the Adolescent Norm Standards (adolescent impaired in psycholegal abilities to stand trial if their scores fell below two or more standard deviations away from the adolescent mean). Viljoen, Zapf, et al. identified that a significant number of adolescents would be identified as impaired using the Adult Standard rather than the developmentally appropriate Adolescent Norm Standard. Viljoen, Zapf, et al. recommended that the Adult Standard only be used when the adolescent was facing criminal charges. Research studies with adult forensic instruments emphasized the need for a forensic instrument for juvenile adjudicative competence.

JACI

Following the MacArthur study, Grisso developed a forensic instrument to use with juvenile defendants. JACI is a semistructured forensic instrument explicitly developed to assess juvenile defendants' competency to proceed with adjudication abilities (Grisso, 2005; Neal & Grisso, 2014). The JACI is based on the *Dusky* standard, with the instrument measuring juveniles' factual and rational understanding of the legal process and their ability to assist in their defense (*Dusky v. United States*, 1960; Grisso, 2005; Neal & Grisso, 2014). The JACI assesses issues specific to the juvenile court setting, with the ability to add additional questions as needed to evaluate juveniles'

psycholegal abilities (Grisso, 2005). The JACI has questions designed to explore the juveniles' perceived autonomy, perception of risk, time perspective, and abstract/concrete thinking abilities (Grisso, 2005).

The JACI has 12 sections, with the forensic evaluator asking the juvenile about their experience with the juvenile court system, the nature of their charges, the roles of the courtroom workers, and legal knowledge about their rights within the juvenile court system (Grisso, 2005). The forensic evaluator asks the juvenile questions related to the juvenile's factual understanding for each section and then asks appreciation questions or rational understanding questions related to the factual understanding component (Grisso, 2005). Appreciation or rational understanding is demonstrated when the juvenile can use the information they knew or learned during the evaluation to answer questions related to potential decisions made during juvenile court proceedings (Grisso, 2005).

The JACI allows the evaluator to provide prompted information for Capacity Check items, with the evaluator providing the juvenile with the factual description of the item and then asking the juvenile to reply with their understanding of the information (Grisso, 2005). There are optional questions following the 12 sections that assess the juvenile's reasoning and decision-making abilities (Grisso, 2005). Following the completion of the JACI, the evaluator provides an opinion on whether the juvenile demonstrated both the factual and rational understanding and the reasoning and decision-making abilities needed to meet the standard for their jurisdiction (Grisso, 2005). In Michigan, the juvenile standard for adjudicative competence evaluations mentions the JACI and states the qualified forensic mental health examiner needs to use the

instrument, or a comparable instrument, to assess a juvenile's psycholegal abilities (1939 PA 288 MCL 712A.18p). The JACI assesses issues specific to the juvenile court system and is sensitive to childhood development issues.

Juvenile Adjudicative Competence Research

Research into different variables related to adjudicative competence continues to be an area of inquiry. Following the juvenile adjudicative competence concerns identified in the MacArthur study, researchers identified issues specific to juvenile offenders and competency to proceed with adjudication concerns. Armstrong and Friedman (2016) conducted a study in New Zealand that provided support for the juvenile's cognitive functioning as a significant variable affecting competency to stand trial determinations. Consistent with the literature review, juveniles with higher cognitive functioning abilities performed better on the competency to stand trial assessments than juveniles with lower cognitive functioning abilities (Armstrong & Friedman, 2016). Contrary to the literature review, the researchers did not find the support that a juvenile's age significantly impacts their competency to stand trial determination (Armstrong & Friedman, 2016). Armstrong and Friedman warned that the small sample size (324 participants), small geographic location, and short timeframe (2012-2013) were limitations for the results.

Similar to Armstrong and Friedman's research, Bath et al. (2015) completed an archival review of adjudicative competence evaluations from a juvenile mental health court. Of the 324 samples, there was a significant difference between males and females, with males most likely to be opined not competent to stand trial (Bath et al., 2015). Age and intellectual disability were also significant variables with adjudicative competence

opinions, with juveniles aged 15 and younger more likely to be found not competent to stand trial and individuals with intellectual disability more likely to be found incompetent to stand trial (Bath et al., 2015). Bath et al. stated that the limitations of the study were that it was a retrospective review of the competency evaluations.

Panza and Fraser (2015) completed a study with 92 juveniles to identify the impact of age and adaptive functioning on psycholegal abilities using the MacCAT-CA. The researchers found that age had a positive correlation between deficits in psycholegal abilities, with the younger the offender, the more likely the offender demonstrated limited psycholegal abilities (Panza & Fraser, 2015). Panza and Fraser stated that juveniles' cognitive abilities impacted juveniles' reasoning abilities related to competency to stand trial. Panza and Fraser identified their limitations as using the MacCAT-CA, which was normed on adult offenders, and only using a juvenile delinquent sample rather than a community sample. The connection between intellectual functioning and adjudicative competence is a common trend supported in the literature. There are different results when assessing the impact of age on adjudicative competence opinions; however, the research supports that age significantly impacts adjudicative competence.

Prefrontal Cortex Development

Prefrontal cortex development is a critical process for higher-level thinking. The prefrontal cortex is the brain's processing center and is directly related to Piaget's formal operational stage of development (Konrad et al., 2013; Piaget 2008/1972; Piaget 2009/1928). As the brain develops through the lifespan, the adolescent period is critical for the development of higher-order thinking and planning (Konrad et al., 2013). As the

youth engages in life experiences, the brain matures, develops synapses, and prunes unneeded connections in the brain (Konrad et al., 2013). During this time, the youth begins to engage in higher-level thinking, with abstract thinking abilities, the theory of the mind, and future orientation developing (Konrad et al., 2013). Abstract thinking abilities, the theory of the mind, future orientation, and formal operational stage abilities are critical for psycholegal abilities for adjudicative competence (Grisso et al., 2003). The adjudicative competence standards in Michigan require forensic examiners to assess juveniles' cognitive abilities and provide information on how juveniles' abilities impact their adjudicative competence (1939 PA 288 MCL 712A.18p). Juveniles' prefrontal cortex development directly impacts juveniles' psycholegal abilities and their ability to understand the charges against them.

Prenatal Substance Exposure

The most studied substance use during pregnancy within the research is alcohol exposure. A diagnosis of fetal alcohol spectrum disorder (FASD) is supported when an individual is exposed to alcohol during gestation and develops features that interfere with adaptive functioning due to the exposure. Fetal alcohol exposure leads to difficulties with critical developmental features related to the prefrontal cortex higher-level thinking abilities, mood regulation, and behavioral inhibition (Ross et al., 2015). The National Survey on Drug Use and Health (SAMHDA, 2013) found that 8.5% of women reported drinking alcohol during pregnancy, with 2.7% of women reporting binge alcohol use during pregnancy. The use of alcohol during pregnancy has a direct impact on brain development.

Impact of Prenatal Substance Exposure on Prefrontal Cortex

Prenatal substance exposure can affect brain development. Qualified forensic mental health examiners who complete juvenile adjudicative competence evaluations need to know the various factors influencing childhood development, especially brain development (Brown et al., 2017). Prenatal substance exposure impacts brain development during gestation and impacts higher-level thinking abilities as the individual ages (Minnes et al., 2017; Ross et al., 2015). Exposure to alcohol and drugs during pregnancy increases the fetus's risk of brain complications and is a continued public health issue (Ross et al., 2015). Exposure to substances during gestation can increase brain development delays, with individuals exposed to illegal substances and prescription medication displaying features of brain development delays (Konrad et al., 2013; Ross et al., 2015). There continues to be research into the effects of exposure to substances during pregnancy.

As the information on the effects of prenatal substance exposure on brain development advances, the implications for juvenile adjudication competence needs exploration. Brain development and developmental maturity have a direct impact on a juvenile's ability to attend to the demands of juvenile court decision making (Bath et al., 2015; Chien et al., 2016; Cox et al., 2012; Grisso et al., 2003; Panza & Fraser, 2015; Viljoen, Odgers, et al., 2007). Studies completed with adults identify atypical brain development during gestation can negatively affect a person's ability to demonstrate the psycholegal abilities needed for adjudicative competence (Brown et al., 2017; McLachlan

et al., 2014). There is limited research into the effects of prenatal substance exposure on adjudicative competence.

McLachlan et al. (2014) used the FIT-R to assess the psycholegal abilities of 100 Canadian juvenile offenders, with 50 having a diagnosis of FASD and 50 not having the diagnosis of FASD. The researchers found that juvenile offenders with a diagnosis of FASD had significant impairments on the understanding, appreciation, and communication scales as compared to the control group (McLachlan et al., 2014). The researchers stated that limitations of the study include the modest sample size, the FIT-R, which was normed on adult offenders, and that the researchers knew whether the participants were in the control group or the FASD group (McLachlan et al., 2014). The research is consistent with the findings of prenatal substance exposure on brain development (Minnes et al., 2017; Ross et al., 2015). With the identified impact of prenatal substance exposure on brain development and psycholegal abilities, further research is needed to inform policy decisions.

Variables for this Study

The original study would have explored the neurological factors influencing the juvenile rational understanding of adjudicative competence. The literature review on juvenile adjudicative competency identified themes related to biological sex, age, intellectual functioning, adjudicative offense type, prenatal substance exposure, and retention abilities of Capacity Check items.

Biological Sex

There is limited information about the difference between biological sexes' juvenile adjudicative competence abilities within the literature review. The standard term within the literature review for biological sex is gender. Within the literature, descriptive demographics identified gender for the majority of research studies; however, predictor variables mention gender in only five research studies. Overall, there was no significant predictor indication for gender identified within the research studies (Chien et al., 2016; Grisso et al., 2003; Kruh et al., 2006; Viljoen, Odgers, et al., 2007).

Chien et al. (2016) researched factors related to restoration capacity following the determination of not competent to proceed with adjudication, with their empirical study identifying that while IQ of the 58 participants in their study had a significant impact on restoration abilities, biological sex appeared to have no significant impact on remediation to competence. Kruh et al. (2006) went through 253 adjudicative competence interviews with juveniles and identified that while IQ had an essential impact on competency to proceed with adjudication determination, biological sex and ethnicity had no significant impact on adjudicative competence determination. From the empirical research studies addressing biological sex, the impact of biological sex on adjudicative competence is minimal (Chien et al., 2016; Grisso et al., 2003; Kruh et al., 2006; Viljoen, Odgers, et al., 2007).

However, Bath et al. (2015) found a significant difference within the research results, with males significantly more likely identified as not competent to proceed with adjudication than the females in the study. Of the 324 juvenile participants, 42% of males

were determined competent to proceed with adjudication, and 64% of females were determined competent to proceed with adjudication (Bath et al., 2015). The study looked to find the different characteristics that qualified forensic mental health examiners needed to identify when conducting competency evaluations. As Bath et al. identified a significant difference between biological sex for a characteristic despite other research determining no significant impact, the variable would have been included to explore further whether biological sex is a variable that needs to be further looked at when completing evaluations. The difference between males and females may be explained through the difference in brain development between male and female adolescents, with females proposed to have faster developments than their male counterparts (Broekman et al., 2014; Eiden et al., 2015; Konrad et al., 2013).

Chronological Age

The research supports that juveniles' age influences their adjudicative competence (Bath et al., 2015; Cox et al., 2012; Grisso et al., 2003; Panza & Fraser, 2015). Factors related to brain development and cognitive thinking abilities differentiate younger and older juveniles, with the review of the research supporting significant differences between adjudicative competence abilities related to age. Armstrong and Friedman (2016) found no significant age difference contrary to the other studies supporting significant differences in abilities based on the juvenile's age. Bath et al. (2015) researched 324 juveniles referred for adjudicative competence evaluations, with the researchers exploring the impact of various characteristics on adjudicative competence abilities. Bath et al. found that participants under the age of 15 were more likely to be

found not competent to proceed with adjudication than the group above the age of 16; however, after the age of 16, there is no significant difference between individuals age 16 to 17, or 17 to 18. Panza and Fraser (2015) researched the influence of IQ and adaptive functioning with juveniles referred to adjudicative competence evaluations and determinations of if they understood their Miranda Rights. Panza and Fraser said that the individual's age was the best predictor of the 92 participants used. The researchers warned that qualified forensic mental health examiners need to be mindful of age-related adjudicative competence concerns when conducting evaluations, especially if the juvenile is young.

Overall, younger adolescents have more limitations related to their psycholegal abilities, with older adolescents demonstrating higher-level thinking abilities more similar to adults (Bath et al., 2015; Cox et al., 2012; Fogel et al., 2013; Grisso et al., 2003; Panza & Fraser, 2015). Piaget's cognitive developmental stages theory supports differences between younger and older adolescents. Younger adolescents are more likely to demonstrate concrete operational thinking abilities and older adolescents are more likely to demonstrate formal operational thinking abilities (Piaget 2008/1972; Piaget 2009/1928). However, not all studies identified a significant difference based on age. Armstrong and Friedman (2016) stated that age had no significant impact on the findings of fitness for trial in their research study in Australia; however, there was no specific explanation for the discrepancy of the researchers' findings from the research findings review of the research. Despite some contrary findings, the research supports age as a significant factor influencing juvenile adjudicative competence.

Intellectual Functioning

The impact of intellectual functioning on adjudicative competence is a common issue in the literature. Intellectual functioning directly impacts juvenile adjudicative competence abilities (Armstrong & Friedman, 2016; Bath et al., 2015; Chien et al., 2016; Fogel et al., 2013; Grisso et al., 2003; McLachlan et al., 2014; Panza & Fraser, 2015). Juveniles with lower than average intellectual abilities struggle with comprehension and appreciation of the legal process and their ability to assist in their defense (Armstrong & Friedman, 2016; Bath et al., 2015; Chien et al., 2016; Grisso et al., 2003; McLachlan et al., 2014; Panza & Fraser, 2015). Viljoen, Odgers, et al. (2007) found that adolescents with lower intellectual functioning did not benefit from instruction within adjudicative competence evaluations. The adolescents with lower than average intellectual functioning could not demonstrate retention of information learned during the evaluation process (Viljoen, Odgers, et al., 2007). Armstrong and Friedman (2016) researched 117 juveniles between the ages of 12 to 17, with intellectual functioning and comprehension of the information determined a significant factor influencing adjudicative competence. McLachlan et al. (2014) researched the impact of FASD on psycholegal abilities. McLachlan et al. said that IQ was the best predictor of whether the juvenile would be determined competent to proceed with adjudication or not competent to proceed with adjudication. Intellectual functioning is an essential factor to assess when exploring juvenile adjudicative competence.

The rational understanding prong of adjudicative competence relates to juveniles' intellectual abilities, with the rational understanding prong the ability to appreciate and

use psycholegal abilities to make decisions and assist in their defense (1939 PA 288 MCL 712A.18p; *Dusky v. United States*, 1960; Grisso, 2005). When children and adolescents have lower than average intellectual functioning, it is difficult to satisfy the rational understanding prong for the *Dusky* standard (Grisso et al., 2003; McLachlan et al., 2014; Panza & Fraser, 2015). Grisso et al. (2003) found that intellectual functioning of the juvenile was significantly correlated with all three prongs of the *Dusky* standard, with juvenile with lower than average intellectual functioning demonstrating more deficits on the items related to the appreciation of the legal proceedings compared with juveniles with average intellectual functioning.

Panza and Fraser (2015) identified that intellectual functioning and developmental age had the most impact on a juvenile's rational understanding. The juvenile's intellectual abilities are further complicated given the age of the juvenile, with younger juveniles shown to have more cognitive functioning deficits compared to older adolescents whose brains are typically more developed (Grisso et al., 2003; Konrad et al., 2013). Additionally, Chien et al. (2016) identified that juveniles with higher intellectual functioning benefited more from instructional information during the remediation process. With the potential impact of intellectual functioning on adjudicative competence, there is support for further research on the impact of intellectual functioning on juvenile adjudicative competence.

Adjudication Offense Type

Young offenders have a variety of adjudicative offense types leading to juvenile court involvement. There is limited research on the relationship between the offense and

findings of adjudicative competence. Of the journal articles that reference offense type, most do not identify the use of the variable within the research study. Armstrong and Friedman (2016) mentioned adjudicative offense type (violent and non-violent offenses) and used the offense type to determine if there was a significant difference between adjudicative competency findings. Armstrong and Friedman identified within their study, 62% were charged with property crimes, 53% with violent acts, 12% with sexual acts, 9% with traffic offenses, 2.5% with drug offenses, and 33% had more than one charge against them. Armstrong and Friedman identified non-violent offenses had a non-significant result with fitness to stand trial (Australia's term for adjudicative competence), with 71% of non-violent offenses (sexual acts, traffic offenses, and drug offenses) opined not competent to proceed with adjudication by the qualified forensic mental health examiner. The review of the literature supports further research on the impact of adjudicative offense type on adjudicative competency findings.

Retention of Capacity Check Items

The evaluation process for juvenile adjudicative competence allows for the assessment of the ability of the juvenile to learn and use information during the evaluation process. The JACI is a semistructured interview for juvenile adjudicative competence. The forensic evaluator can provide instruction to the juvenile throughout the evaluation and test the juvenile's ability to retain and use information (Grisso, 2005). The literature review identifies three research studies that explored juveniles' learning abilities during the adjudicative competence evaluation. Ficke et al. (2006) found that juvenile examinees demonstrated limited benefit from the teaching component on the

MacCAT-CA. Viljoen, Odgers, et al. (2007) explored the learning abilities of juveniles with the MacCAT-CA, with the archival research studying using the original data from the 2003 MacArthur study. The results identified that juveniles generally benefited from instruction on the MacCAT-CA when comparing pre-test scores to post-test scores, with older adolescents and adolescents with average to above average intellectual functioning showing more improvement than younger adolescents (Viljoen, Odgers, et al., 2007).

Additional research was conducted with juveniles ordered to receive restoration or remediation services following a finding of not competent to proceed with adjudication. Chien et al. (2016) researched juveniles ordered into an inpatient facility for juveniles who were determined not competent to stand trial. Chien et al. reviewed the forensic evaluations of 58 juveniles who had received multiple one-on-one verbal instruction sessions with staff members of the psychiatric hospital, with findings that youth who received instruction related to adjudicative competence issues demonstrated improvement in their psycholegal abilities. The results mention that IQ had a significant difference between the adolescents identified as restored to competence versus the adolescents not determined restored to competence (Chien et al., 2016). Chien et al. said that the juveniles with average intellectual functioning had more improvement than juveniles with lower than average intellectual functioning. The study's limitations were identified as having a small sample size and completing the study in retrospection (Chien et al., 2016). No peer-reviewed journal articles mention juveniles' ability to learn from the Capacity Check on the JACI. The review of the literature supports a need for further research into the remediation abilities of juveniles.

Summary

Juvenile adjudicative competence research has identified themes related to developmental maturity, cognitive functioning, and psychosocial abilities. The need for further research into adjudicative competence concerns is supported within the review of the literature, with juvenile adjudicative competence still in the developing stage of research. The literature supports specific characteristics related to the juvenile's age and intellectual functioning, with brain development and changes during adolescent development identifying that juvenile defendants are separate from their adult counterparts. With this in mind, qualified forensic juvenile mental health examiners need to know the intricacies of adolescent development to provide an accurate opinion to the court during adjudicative competence evaluations. There is support for additional research into the factors that influence brain development, with limited research on prenatal substance exposure and its impact on juveniles' adjudicative competence. The original study would have added to the research on how neurological factors impact juvenile adjudicative competence. In Chapter 3, I provided the methodology and research methods that would have been used in the original study to answer the research questions.

Chapter 3: Research Method

Introduction

There is a need to study the impact of neurological and cognitive factors on juvenile adjudicative competence. The original study would have used non-experimental correlational quantitative research methods to answer the research questions through a review of archival data from juvenile adjudicative competence evaluations. The purpose of the original study would have been to explore the impact of neurological factors, including prenatal substance exposure, and intellectual functioning on juveniles' ability to understand charges against them and participate in legal proceedings. I address how the control variables (Full Scale IQ, type of intellectual functioning instrument, chronological age, biological sex, and offense type) of the original study would have been used in the hierarchical regression. In the following chapter, I provide information regarding the research design and rationale for using the quantitative method. I provide information regarding the sample population, sampling strategy, data collection methods, instrumentation, and statistical analysis of the original study. The chapter concludes with threats to validity and ethical concerns.

Research Design and Rationale

I would have used a nonexperimental correlational quantitative research design to answer the research questions for the original study. A quantitative research method would have been supported because the study required gathering quantifiable data and performing statistical analysis (Gelman & Hill, 2007). The original study would have explored the influence of the independent variables on the dependent variables while

controlling for variables found in the literature to determine whether there would have been support for the research hypotheses. The independent variables of the study would have been intellectual functioning and prenatal substance exposure. The dependent variables for the study would have been a rational understanding of the psycholegal capacities on the JACI and retention of information learned on the Capacity Check items of the JACI. The controlling variables for this study would have been Full Scale IQ, type of intellectual functioning instrument, biological sex, chronological age, and offense type.

A correlational research design for the original study was supported because it would have explored the relationship between the independent and dependent variables (Gelman & Hill, 2007). The study would have used a between-subjects design, with the differences of the independent variable on the dependent variables examined at a single point in time. A quantitative nonexperimental design was most appropriate for the original study. It was an archival study and explored the impact of the independent variables on the dependent variable while controlling for variables found in the literature (Gelman & Hill, 2007). The study would not have supported an experimental research design as there was no manipulation of variables. It would have been unethical and impractical to expose fetuses to substances during gestation to determine the potential impact on their adjudicative competence during adolescence.

Methodology

Population

The original study's target population was juveniles referred for adjudicative competence evaluations between 11 and 17. Juvenile adjudicative competence

evaluations are completed as necessary for adjudication proceedings when there is concern that a juvenile lacks sufficient psycholegal abilities to participate in court proceedings (1939 PA 288 MCL 712A.18n; Grisso, 2005). In this study, adjudicative competence evaluations would have been completed by qualified forensic mental health examiners using the JACI as part of a court order. The quantitative research study would have used archival data collected from juvenile adjudicative competence evaluations completed in Michigan circuit courts between 2006 and 2020. The estimated population of juveniles between the ages of 10 to 16 in Michigan in 2017 was 881,092 (Puzzanchera et al., 2018). The sample population for the original study would have represented the broader population.

Sample Size and Power Analysis

G*Power 3.1 software was used to estimate the sample size for the original study. This software is available for free download through Heinrich-Heine University in Dusseldorf. Samples would have consisted of evaluations that met specific criteria needed for variables. This study would have involved a between-subjects hierarchical multiple regression with 0.80 power and effect size of 0.15, with five predictors. The effect size of 0.15 would have been used for a medium effect estimate in terms of number of participants needed to conduct the study. At 80% power, analyses suggest 92 participants for an effect size of 0.15. At 99% power, analyses suggest 184 participants for an effect size of 0.15. The study would have required between 92 and 184 participants, emphasizing collecting the most evaluations as possible to increase reliability.

Sampling and Sampling Procedures

The original study would have involved using a stratified sampling of juveniles between the ages of 11 and 17 referred to qualified forensic mental health examiners within the Michigan juvenile court system for the evaluation of adjudicative competence between 2006 and 2020. The adjudicative competence statute in Michigan was updated in 2006 to include the current adjudicative competence standards that ensure that the JACI or an equivalent adjudicative competence instrument is used during the juvenile competence evaluations (1939 PA 288 MCL 712A.18).

I would have sent email requests to Michigan counties' Family Division Administrators for delinquency matters. Family Division Administrators can grant access to evaluation data for court data. I would have logged and saved emails to keep documentation of my emails sent to administrators in surrounding counties until the needed number of evaluation data would have been collected. Emails would have stated that data would be anonymized to protect the identities of participants. Letters of cooperation would have included that information included the date of the evaluation, age, biological sex , and Full Scale IQ of juveniles, type of intellectual functioning instrument used during evaluations, types of offense leading to adjudication proceedings, whether there was prenatal substance exposure (and type), whether the juvenile was provided Capacity Check information and whether they retained the information, and opinions of juveniles' adjudicative competence according to qualified forensic mental health examiners.

I would have used an Excel spreadsheet to collect data from court evaluations, with information remaining deidentified and confidential. Archival evaluation data would have been reviewed to determine whether the evaluation documented the variables needed for the study. Individuals outside of the age range of 11 to 17 and those with no documentation of Full Scale IQ or prenatal substance exposure were excluded. The study would have attempted to include the representation of both juveniles with prenatal substance exposure and without prenatal substance exposure.

Data from the juvenile court evaluations would have been used to assess the impact of prenatal substance exposure on the rational understanding prong of the *Dusky* standard and the retention abilities with the Capacity Check items on the JACI. Additionally, data would have been collected to assess the overall impact of Full Scale IQ on adjudicative competence when there is prenatal substance exposure.

Instrumentation and Operationalization of Constructs

The archival records review would have identified the variables under study, including the intellectual functioning, biological sex, chronological age, offense type leading to referral for competence, and exposure to prenatal substance exposure. The independent variables would have included prenatal substance exposure and Full Scale IQ, the dependent variables would have comprised the opinion of adjudicative competence and retention of information learned on Capacity Check items, and control variables would have been Full Scale IQ, type of intellectual functioning instrument, biological sex, chronological age, and offense type.

Biological sex would have been measured as a dichotomous variable of either biological female or biological male, as indicated in the evaluation. Chronological age would have been measured as a continuous ratio variable for the juvenile's age at the time of the evaluation. The offense type would have been measured as a categorical variable, with the five categories of violent crime, property crime, substance possession, status offense, or 'more than one offense,' as identified in the referral for the evaluation. In the case that there would have been more than one offense leading to adjudication, the offense would have been listed as 'more than one offense' and analyzed to determine significance. Exposure to prenatal substance exposure would have been measured as a dichotomous variable as known exposure or no known exposure as identified in the adjudicative competence evaluation.

The impact of intellectual functioning on adjudicative competence has been demonstrated within the literature. To conduct a study on adjudicative competence without acknowledging the juvenile's intellectual functioning could lead to misrepresentation of the potential impact of prenatal substance exposure. Information on the juvenile's intellectual functioning from the psychological measures would have helped inform this study. Full Scale IQ would have been measured as a continuous interval value as identified in the adjudicative competence evaluation and would have served as both an independent variable and a control variable in different research questions. The numerical value of the juvenile's intellectual functioning identified on a standard intellectual functioning measure would have been used for the Full Scale IQ.

The Wechsler Scale of Intelligence (Wechsler, 2003, 2011, 2014) batteries are psychological tools used to obtain an assessment of general intellectual functioning. The intellectual functioning assessments provide subtest scores for various areas of intellectual abilities and an overall score (i.e., Full Scale IQ). The intellectual functioning/Full Scale IQ would have been measured with either the Wechsler Abbreviated Scale of Intelligence-Second Edition (WASI-II), the Wechsler Intelligence Scale for Children-Fourth Edition (WISC-IV), or the Wechsler Intelligence Scale for Children-Fifth Edition (WISC-V). The Wechsler Scale of Intelligence assessments are well established as psychological tools to obtain an assessment of intellectual functioning, with the Wechsler batteries appropriate for the age range of the juveniles within this study (Wechsler, 2003, 2011, 2014). The WISC-IV and WISC-V were developed with 2,200 children between the ages of 6 to 16, with equal representation of biological sex, educational functioning, and geographical locations (Wechsler, 2003, 2014). The Wechsler Scale of Intelligence batteries listed were developed by David Wechsler, with updated editions of the psychological tool released over the years.

Given the 2006-2020 timespan of the data collection, the various editions of the Wechsler would have been included to capture the standard intellectual functioning measure of the time. The WASI-II is a standard intellectual functioning measure for individuals between the chronological age of 6 through 90 (Wechsler, 2011). The WASI-II provides scores on the Verbal Comprehension and Perceptual Reasoning subtests, which factor into the Full Scale IQ (Wechsler, 2011). The WISC-IV (published 2003) and WISC-V (published 2014) are intellectual functioning measures for individuals

between the chronological age of 6 to 16:11 years (Wechsler, 2003, 2014). The WISC editions provide individual scores for various abilities related to intellectual functioning, with subtests leading to a Full Scale IQ score representative of the individual's general intellectual functioning (Wechsler, 2003, 2014). The Wechsler intellectual functioning measures are identified as a valid and reliable measure to assess intellectual functioning (Wechsler, 2003, 2011, 2014). Given the potential for different intellectual functioning instruments, a control variable of type of intellectual functioning instrument would have been used and measured as a nominal variable.

The dependent variable of opinion on adjudicative competence would have been measured as a dichotomous variable (competent to proceed with adjudication or not competent to proceed with adjudication) and be identified within the qualified forensic mental health examiner's report on the adjudicative competence of the juvenile. The JACI would have been the standard instrument used to assess for the opinion of competent to proceed with adjudication or not competent to proceed with adjudication for the study. The JACI the standard instrument listed in the Michigan statute to assess juvenile adjudicative competence (1939 PA 288 MCL 712A.18p). Given that the JACI is designed for use with juveniles within the age range for this study and accurately assesses for psycholegal abilities of adjudicative competence, the JACI would have been the best measure for the study.

Thomas Grisso developed the JACI in 2005 as a psycholegal assessment measure designed for children and adolescents to assess for adjudicative competence abilities (Grisso, 2005). The JACI was normed with individuals between the ages of 11 and 24,

with Grisso designing the instrument as a semistructured interview to align with the developmental needs of the age group (Grisso, 2005). The JACI assesses a psycholegal understanding of the various roles within the courtroom (i.e., the judge, the defense attorney, the prosecutor, the defendant, witnesses, and the victim: Grisso, 2005). The JACI also assesses juveniles' decision-making abilities through various scenarios related to decisions defendants might make during legal proceedings (i.e., the plea bargain process and information to share with attorneys: Grisso, 2005). The instrument was designed to factor in that juveniles, due to the documented developmental maturity abilities, might need information provided to them about the legal proceedings (Grisso, 2005). In addition to the archival review of the juvenile's records, the qualified forensic mental health examiner uses the information from the JACI and the observations of the juvenile to help form their opinion about the juvenile's adjudicative competence with the background information provided on the juvenile (Grisso, 2005).

The second dependent variable used in the study would have been the teaching items on the JACI. The JACI has Capacity Check items. The qualified forensic mental health examiner provides the juvenile with prompted information on the defense attorney, the prosecutor, or the plea bargain process, as needed (Grisso, 2005). The juvenile is then asked questions related to the prompted information to assess the juvenile's ability to retain the information and use it in a meaningful way to make decisions related to their legal proceedings (Grisso, 2005). Following the complete administration of the JACI, the juvenile is assessed again with a sample of the Capacity Check items provided to see if the juvenile can demonstrate continued understanding and ability to use the information

in a meaningful way (Grisso, 2005). If the juvenile can retain the information and use it in a meaningful way to inform their decision-making process, the juvenile will be said to retain the information. If the juvenile is not able to retain the information and use it in a meaningful way to inform their decision-making process, the juvenile will be said not to demonstrate the retention of information learned. The retention of information learned on the Capacity Check items variable would have been dichotomous.

Data Analysis Plan

The use of hierarchical logistic regression would have been supported by the original research questions and would have aligned to determine the impact of prenatal substance exposure and intellectual functioning on adjudicative competence. By eliminating the established variables found to impact adjudicative competence, the research design would have been able to answer the research questions on whether the predictor variables significantly impact juveniles' adjudicative competence and juveniles' ability to retain information learned during competency evaluations. The ordering of the control variables would have allowed for individual analysis of the impact of the predictor variables to answer the research questions (Gelman & Hill, 2007). Hierarchical logistic regression would have been a theoretically and statistically valid method to examine the research questions and hypotheses for the original study (Gelman & Hill, 2007).

The data collected from the archival records would have been analyzed using the International Business Machine's (IBM) Statistical Package for the Social Sciences version 25. Descriptive statistics would have been performed with the data collected,

including the age, biological sex, intellectual functioning, type of intellectual functioning instrument, offense type, opinion of adjudicative competence, and identified prenatal substance exposure. The data would have been entered into IBM SPSS and analyzed using hierarchical multiple regression methods. Hierarchical research design is recommended when the research questions seek to identify the impact of predictor variables on dependent variables when controlling for other variables (Gelman & Hill, 2007). Hierarchical regression is a linear regression method that allows the examination of the effects of an independent variable on a dependent variable by entering the control variables in hierarchical order (Gravetter & Wallnau, 2005). I would have used regression methods to answer the hypothesis research questions, with support given to the null hypotheses or the alternative hypotheses. The original study would have been able to answer the three research hypotheses.

Research Questions and Hypotheses

Three research questions that would have guided the original study:

RQ1: Does prenatal substance exposure influence the rational understanding prong of the *Dusky* standard for juvenile adjudicative competence evaluations when controlling for Full Scale IQ, type of intellectual functioning instrument, biological sex, age, and offense type?

H01: Prenatal substance exposure does not influence the rational understanding prong of the *Dusky* standard for juvenile adjudicative competence evaluations when controlling for Full Scale IQ, type of intellectual functioning instrument, biological sex, age, and offense type.

Ha1: Prenatal substance exposure does influence the rational understanding prong of the *Dusky* standard for juvenile adjudicative competence evaluations when controlling for Full Scale IQ, type of intellectual functioning instrument, biological sex, age, and offense type.

To answer this research question, I would have conducted a hierarchical multiple regression, where prenatal substance exposure would have been the independent variable, Full Scale IQ, type of intellectual functioning instrument, biological sex, age, and offense type would have been the control variables, and rational understanding would have been the dependent variable.

RQ2: Does juvenile offenders' prenatal substance exposure influence retention of information provided through the Capacity Check items of the JACI when controlling for Full Scale IQ, type of intellectual functioning instrument, biological sex, age, and offense type?

H02: Juvenile offenders' prenatal substance exposure does not influence retention of information provided through the Capacity Check items of the JACI when controlling for Full Scale IQ, type of intellectual functioning instrument, biological sex, age, and offense type.

Ha2: Juvenile offenders' prenatal substance exposure does influence retention of information provided through the Capacity Check items of the JACI when controlling for Full Scale IQ, type of intellectual functioning instrument, biological sex, age, and offense type.

To answer this research question, I would have conducted a hierarchical multiple regression, where prenatal substance exposure would have been the independent variable, Full Scale IQ, type of intellectual functioning instrument, biological sex, age, and offense type would have been the control variables, and retention of information on the JACI's Capacity Check items would have been the dependent variable.

RQ3: Does juveniles' Full Scale IQ influence their adjudicative competence rational understanding when assessed using the JACI when controlling for type of intellectual functioning instrument, biological sex, age, and offense type?

H03 Juveniles' Full Scale IQ does not influence their adjudicative competence rational understanding when assessed using the JACI when controlling for type of intellectual functioning instrument, biological sex, age, and offense type.

Ha3: Juveniles' Full Scale IQ does influence their adjudicative competence rational understanding when assessed using the JACI when controlling for type of intellectual functioning instrument, biological sex, age, and offense type.

To answer this research question, I would have conducted a hierarchical multiple regression, where Full Scale IQ will be the independent variable, type of intellectual functioning instrument, biological sex, age, and offense type would have been the control variables, and rational understanding would have been the dependent variable.

Threats to Validity

Internal Validity

Internal validity is the degree to which the results are associated with the effect of the independent variables on the dependent variables and were not caused by unknown confounding variables (Goodwin, 2005; Gravetter & Wallnau, 2005). When archival data is used, the threats to internal validity may include access to the data, how the original data was documented, and that the original data was not collected for research purposes (Gravetter & Wallnau, 2005). There might have been additional information not included in the initial evaluations that might have impacted the results of this study. There would have also been the concern that information within the evaluations was not accurate. There would have been a potential concern for sampling procedures errors for the original study.

Additionally, the study would have been a nonexperimental archival study, which is less controlled than an experimental design study, and there may be unknown extraneous or confounding variables that caused the results rather than the impact of the independent variables on the dependent variables (Goodwin, 2005; Gravetter & Wallnau, 2005). Despite internal validity concerns, this research design would have been the best to analyze data without potential harm to the participants or the court proceedings.

External Validity

External validity is the degree to which the results of the sample population can be generalized to the general population (Goodwin, 2005; Gravetter & Wallnau, 2005). Exact external validity is when the study results can be generalized to other populations,

other environments, and other times (Goodwin, 2005). Nonexperimental studies are conducted in natural, uncontrolled environments and typically meet the threshold for sufficient external validity (Goodwin, 2005; Gravetter & Wallnau, 2005). The archival data would have used data collected from Michigan juvenile court settings. There would have been potential that the results would have generalized to juveniles inside the parameters of the participant characteristics similar in location, socioeconomic status, and juvenile court standards. However, the results may not have generalized to juveniles outside the particular variables of this study.

Ethical Procedures

Before the switch to the qualitative study, permission was obtained from the Walden International Review Board (IRB), IRB approval #09-02-20-0722155. Juvenile offenders are a vulnerable population. This research study used archival data, with limited risk to the participants due to no direct contact with the participants. The information from the evaluations was deidentified, and personal information that would cause harm to the juvenile from the original adjudicative competence evaluation was not included. The adjudicative competence evaluations were obtained through my work site; however, these evaluations were completed with two previously qualified forensic mental health examiners who were no longer employed at the worksite. The previous examiners worked at the site before my employment. Due to the adjudicative competence information obtained through secondary data sources and no actual data collection conducted for this study, the juvenile's informed consent was not required.

I will follow the requirements for the retention of information collected set forth by the Institutional Review Board. I will keep the data in a flash drive that only I can access with a strong password. Additionally, I will follow the guidelines from the county courts to keep the information confidential and non-identifiable. Following the five years set forth by the Institutional Review Board, I will shred the hard copies of the data and permanently delete the flash drive per Walden University's protocol. Results from this study will be disseminated to the research community to help inform further studies.

Summary

The original study and its design would have intended to examine the relationship between prenatal substance exposure and intellectual functioning on juvenile defendants' psycholegal abilities while controlling variables found within the literature. This chapter provided the methodology and research design for the original study. A nonexperimental correlational quantitative research design would have been used to answer the research questions. Hierarchical regression would have been conducted to answer RQ1 to determine if intellectual functioning, type of intellectual functioning instrument, age, biological sex, or offense type impacted the relationship between prenatal substance exposure and opinion of adjudicative competence. Hierarchical regression would have been conducted to answer RQ2 to determine if intellectual functioning, type of intellectual functioning instrument, biological sex, age, or offense type impacted the relationship between prenatal substance exposure and retention of information learned on the JACI Capacity Check items. Additionally, a separate hierarchical regression would have been conducted to answer RQ3 to determine whether the type of intellectual

functioning instrument, biological sex, age, and offense type impacted the relationship between intellectual functioning and opinion of adjudicative competence. In Chapter 4, I provide the rational for the research design change and the findings of the completed qualitative research design.

Chapter 4: Results

Introduction

The purpose of this qualitative study was to gain greater insight into the role of prenatal substance exposure on juvenile adjudicative competence abilities. There is a need to study the impact of neurological and cognitive factors on juvenile adjudicative competence. This study involved using an exploratory multiple case study research method to understand how prenatal substance exposure interacts with adjudicative competence through a review of archival data from juvenile adjudicative competency evaluations. The research goal was to explore the influence of prenatal substance exposure on juveniles' ability to understand and participate in legal proceedings against them. I used information from the literature review and Piaget's cognitive development theory to analyze data. In the following chapter, I provide information regarding research methods and research design and the rationale for using the qualitative method. I will provide information regarding the role of the researcher, sample population, sampling strategies, data collection methods, instrumentation, and data analysis plan. The chapter concludes with issues of trustworthiness and ethical concerns.

Research Method Change

The research method was changed from quantitative to qualitative study due to limited access to additional juvenile adjudicative competence evaluations. The original data collection plan for the quantitative study was to gain access to multiple Michigan circuit courts that would allow the collection of the 92 to 184 adjudicative competence evaluations. Between 92 and 184 adjudicative competence evaluations would have been

needed to perform the between-subjects hierarchical multiple regression with 0.80 power and effect size of 0.15, with five predictors. However, this plan needed to be modified due to COVID-19 pandemic orders from the MDHHS that limited access to circuit court facilities. I had access to 14 juvenile adjudicative competence evaluations with documented prenatal substance exposure from the circuit court that employs me. Fourteen adjudicative competence evaluations would not have been enough to perform adequate statistical analysis with quantitative methods. With the number of adjudicative competence evaluations available, the research method was changed to a qualitative multiple case analysis study.

Furthermore, the previous three research questions could not be answered with the number of adjudicative competence evaluations available. With a qualitative method, the research question was updated to a broader question. The new research question was: What is the role of prenatal substance exposure in juvenile adjudicative competence? Information on the new research method and rationale is provided within this section.

For this study, I used an archival multiple case study analysis and qualitative research design to explore relationships between juveniles' prenatal substance exposure and psycholegal abilities related to juvenile adjudicative competence. The qualitative research method was supported because the study involved exploring the how and why of contemporary events that I had limited control over (Bloomberg & Volpe, 2019; Yin, 2009). The research design allowed for exploration of data to perform both within-case and cross-case analyses of adjudicative competence evaluations. A cross-case synthesis is the preferred method for data analysis for multiple case study research because it allows

for the organization of large amounts of data (Yin, 2009). Exploration of within-case and cross-case analysis allowed for analysis of the research question and an increase in the trustworthiness of the results (Bloomberg & Volpe, 2019; Miles et al., 2020). The case study design aligned with the qualitative research question and data analysis methods used in this study.

Adjudicative competence evaluations are essentially single case qualitative studies that contain background information regarding juveniles' psycholegal abilities (Kruh & Grisso, 2009). Detailed information regarding juveniles' psychosocial histories included biological sex, chronological age, intellectual functioning, physical health concerns, type of prenatal substance exposure, developmental functioning, academic functioning, psychotropic medications, and mental health diagnoses. Adjudicative competence evaluations provided thorough descriptions of offenses leading to adjudication, juveniles' previous history in the legal system, reasons questions of adjudicative competence were raised, findings from psychological assessments completed during evaluations, detailed responses from juveniles related to JACI questions (i.e., transcripts of the questions and exact responses from the juveniles), and a full description of qualified forensic mental health examiners' opinions and underlying reasoning. This review of adjudicative competence evaluations was used to provide comprehensive information on juveniles, forensic instruments used during evaluation processes, and adjudicative competence opinions.

Setting

This qualitative study involved an archival review of juvenile adjudicative competence evaluations obtained from a Michigan circuit court from 2006 to 2016. Adjudicative competence evaluations are court-ordered evaluations related to juveniles' psycholegal abilities and completed by a qualified forensic mental health examiner. No personal or organizational conditions influenced participants, as this study was an archival review of court documents.

Demographics

This qualitative study had different chronological ages, prenatal substance exposures, offense types leading to adjudication, and Full Scale IQs. There were two females and twelve males in this study. The demographics of this study are provided in Table 1.

Table 1*Demographics*

Cases	PSE	Bio sex	Age	Full Scale IQ	Offense type	Opinion
1	Substance exposure	Male	15	66	Property	NCTP
2	Cocaine	Male	15	59	Property	NCTP
3	Nicotine (1/2 pack per day)	Male	12	62	Property	CTP
4	Nicotine and alcohol	Male	14	96	CSC	CTP
5	Crack cocaine	Male	15	85	CSC	CTP
6	Drugs	Male	11	69	Property	CTP
7	Heavy alcohol	Male	14	82	Property	CTP
8	FASD	Male	15	58	CSC	NCTP
9	Nicotine	Male	13	80	Violent	CTP
10	Alcohol and crack cocaine	Male	13	84	Property	CTP
11	Alcohol, cocaine, Xanax, Lexapro	Male	12	61	Violent	NCTP
12	Alcohol and drugs	Female	15	76	False report of a felony	NCTP
13	Nicotine	Female	11	76	Violent	NCTP
14	FAS	Male	14	91	CSC	CTP

Note. PSE= prenatal substance exposure. FASD= fetal alcohol spectrum disorder. FAS= fetal alcohol syndrome. Property= an offense related to damage of property. CSC= criminal sexual conduct. Violent= an offense related to violence toward another person. NCTP= not competent to proceed with adjudication. CTP= competent to proceed with adjudication.

Within the review of the adjudicative competence evaluations from 2006 to 2016, juveniles' ages ranged from 11 to 15. Overall, 14 adjudicative competence evaluations contained documentation of prenatal substance exposure. In this study, there were two 11-year-olds, two 12-year-olds, two 13-year-olds, three 14-year-olds, and five 15-year-olds. Of the 14 evaluations, eight were opined competent to proceed with adjudication by the juvenile qualified forensic mental health examiner. Six were opined not competent to proceed with adjudication by the juvenile qualified forensic mental health examiner.

There were two females and twelve males. Two juveniles had documented prenatal cocaine exposure. One juvenile had prenatal alcohol exposure. Three juveniles had prenatal nicotine exposure, a type of prenatal substance exposure that has been identified to lower intellectual functioning. One juvenile had prenatal cocaine and alcohol exposure. One juvenile had prenatal nicotine and alcohol exposure. One juvenile had prenatal exposure to alcohol, cocaine, Xanax, and Lexapro. Furthermore, five juveniles were listed as having prenatal substance exposure; however, there was no documentation of the specific substance.

Of the juveniles opined not competent to proceed with adjudication, there were four 15 year olds, one 12 year old, and one 11 year old. There were four males and two females. For the Full Scale IQ, two fell within the 70-79 IQ range, two fell within the 60-69 IQ range, and two fell within the 50-59 IQ range. One of the juveniles had legal involvement due to a criminal sexual conduct offense. Two had property offenses, two had violent offenses, and one had a false report of a felony.

Of the juveniles opined competent to proceed with adjudication, there was one 15 year old, three 14 year olds, two 13 year olds, one 12 year old, and one 11 year old. All eight of the juveniles were males. For the Full Scale IQ, two juveniles fell within the 90-99 IQ range, four fell within the 80-89 IQ range, and two fell within the 60-69 IQ range. There were three juveniles with criminal sexual conduct offenses, one juvenile with a violent offense, and four juveniles with property offenses.

Within the review of the 14 cases, there were commonalities and discrepancies. The data collected from the 14 adjudicative competence evaluations were used to explore themes and conclusions related to the research question. This study was framed by the research question of how prenatal substance exposure influences juvenile adjudicative competence. Additional information on the themes and conclusions will be provided later in this chapter.

Data Collection

I collected the evaluations following approval from Walden IRB and the Family Division Administrator for delinquency matters. A data use agreement with the Family Division Administrator was signed, allowing me to review the evaluations completed from two juvenile qualified forensic mental health examiners that previously held the court position that I currently hold (Appendix). I collected the data from the clinical services office of a Michigan circuit court. The setting used for data collection was my office, an office that holds the original juvenile adjudicative competence files for the circuit court. The office was used during off-work hours and did not interfere with my work obligations.

A purposeful sampling method was used to identify the target population for analysis for this study to explore the research question. Within-case and cross-case analysis with juveniles with diverse backgrounds and prenatal substance exposure allows for a more in-depth analysis of the phenomenon (Bloomberg & Volpe, 2019; Miles et al., 2020). The data collection process was approximately eight hours. The process included reviewing the adjudicative competence evaluations from 2006 to 2016. I reviewed a total of 70 evaluations. The adjudicative competence evaluations were in general file folders, and I reviewed the files for mention of prenatal substance exposure. If the adjudicative competence evaluation mentioned prenatal substance exposure or a diagnosis of fetal alcohol spectrum disorder (or fetal alcohol syndrome), the file was reviewed further for inclusion in the study. Further inclusion was met if there was mention of the juvenile's psycholegal abilities related to their adjudicative competence and the qualified forensic mental health examiner's overall opinion. Of the total of 70 adjudicative competence evaluations that I reviewed for mention of prenatal substance exposure, there were 14 evaluations found that met the criteria for this study.

In reviewing the 14 adjudicative competence evaluations, the specific information from the evaluations was separated first with the age of the participant, biological sex of the participant, chronological age, Full Scale IQ, type of substance exposure, developmental milestones, physical health conditions, medications during time of evaluation, mental health diagnoses, academic struggles, offense type, Capacity Check items used, retention of information, assessment of rational understanding, and forensic

opinion. Additional information from the evaluations was further reviewed during the coding process and data analysis.

Data Analysis

The literature review on juvenile adjudicative competence identified common themes of chronological age, developmental maturity, intellectual functioning, and rational understanding. This study allowed for both inductive and deductive methods to explore and describe the themes related to juveniles with prenatal substance exposure and their psycholegal abilities related to adjudicative competence evaluations. Deductive methods were developed from the review of the literature and the research question (Bloomberg & Volpe, 2019; Miles et al., 2020). Inductive methods were used when using open coding within the adjudicative competence evaluations (Bloomberg & Volpe, 2019; Miles et al., 2020). For data analysis with multiple case study design, cross-case synthesis is the recommended standard to gather insight into the phenomenon (Miles et al., 2020; Yin, 2009). Cross-case synthesis allows for support for the validity and trustworthiness of the analysis process and conclusions of the study (Miles et al., 2020; Yin, 2009). The literature review information helped inform the initial analysis of the data with these elements documented from the evaluations.

The research question that guided this study:

RQ: What is the role of prenatal substance exposure in juvenile adjudicative competence?

I reviewed the JACI's adjudicative competence administration transcripts using thematic analysis. Thematic analysis is a method that allows the researcher to organize

and reduce large amounts of data into meaningful patterns and themes guided by the literature (Bloomberg & Volpe, 2019; Miles et al., 2020). Thematic analysis also allows the researcher to explore additional themes within the data that might be specific to the study and advance the collective literature on the topic (Bloomberg & Volpe, 2019; Miles et al., 2020). The adjudicative competence evaluations reviewed had detailed transcripts of the questions asked on the JACI and the juveniles' responses. Thematic analysis allowed for the comparison within and across the individual cases to determine whether there were similarities or differences.

I reviewed each JACI transcript for common words and phrases with within-case analysis. After entering the juveniles' JACI responses into Excel spreadsheets, I compared the responses among the 14 evaluations with cross-case analysis. I explored how prenatal substance exposure appeared to influence the juveniles' factual understanding, rational understanding, reasoning and decision-making abilities, and retention abilities. The 14 evaluations analyzed had similar themes related to the literature and had discrepant themes that did not support the literature. I used open coding as well to analyze the data for additional themes. I explored the commonalities and differences among the chronological ages, biological sex, offense type leading to adjudication, and the specific type of prenatal substance exposure to identify additional themes. The commonalities and differences among the evaluations were used to develop the results and findings of this study.

I analyzed the data following the theoretical framework of Piaget's cognitive stages of development. I associated concrete operational themes with the logical thought

processes within the coding process, and themes related to formal operational would be associated with abstract thought processes (Piaget, 2008/1972; Piaget 2009/1928). I documented and analyzed words and phrases relating to both concrete operational and formal operational stages of cognitive development within the responses from the JACI for comparison to the themes of factual understanding, rational understanding, reasoning and decision-making, and retention abilities, as well as the ability to help assist in the legal defense. I completed a cross-case analysis to explore similarities and differences. I documented and explored qualities related to discrepant cases for further analysis of the themes. This data analysis process, guided by the literature, yielded insightful themes among the 14 cases used in this study.

Evidence of Trustworthiness

Trustworthiness is established with the transparency of the data collection and data analysis process (Bloomberg & Volpe, 2019). Adequate and informed data collection builds trustworthiness in the analysis and interpretation process, and therefore, the conclusions of a qualitative study (Bloomberg & Volpe, 2019). With trustworthy conclusions, the researcher can then provide recommendations for future areas of inquiry (Bloomberg & Volpe, 2019). Multiple adjudicative competence evaluations were used to increase the transferability, credibility, dependability, and confirmability of the results (Bloomberg & Volpe, 2019). This study adhered to transparent data collection and data analysis to enhance the findings of this study.

Credibility

Credibility within qualitative research is whether the representation of the data would align with the participants' actual experiences and abilities (Bloomberg & Volpe, 2019). A multiple study case analysis approach allowed for a rich, in-depth review of the demographics and psycholegal abilities of juveniles with prenatal substance exposure. The case study method allows for the collection of complex phenomenon and reduction to workable themes and conclusions (Bloomberg & Volpe, 2019; Yin, 2009). In this study, my role was data collection, analysis, and interpretation of the relationships between the themes and issues. The researcher is the key instrument in the data collection and data analysis process with qualitative research studies (Creswell, 2014). My work experience and education allowed me to collect and analyze the data through an educated and professional lens.

Within my professional position, I complete juvenile adjudicative competence evaluations. I am the juvenile qualified forensic mental health examiner court ordered to complete adjudicative competence evaluations with delinquent youth within the county. I have certification from the MDHHS as having completed the Evaluating Juveniles for Competency to Proceed in Delinquency Matters course. The MDHHS certification for juvenile forensic evaluation is stated within the Michigan Legislature as a qualification to complete adjudicative competence evaluations. I have completed 63 juvenile adjudicative competence evaluations within my four years in the qualified forensic mental health examiner position. I have a master's degree in forensic psychology and have been working as a limited licensed psychologist for nine years.

Within my role as the juvenile qualified forensic mental health examiner, I have documented multiple cases of prenatal substance exposure with adjudicative competence referrals. I especially note the potential impact of prenatal substance exposure on rational understanding and reasoning and decision-making abilities per the requirements of the statute for adjudicative competence. In my review of the adjudicative competence evaluations for this study, I brought my expertise and personal bias. Before engaging in the study, I had the suspicion that prenatal substance exposure would likely influence juvenile offenders' rational understanding and reasoning and decision-making abilities. However, I reviewed the evaluations with an open mind and documented the information presented within the evaluation.

Due to my role, I may have brought bias due to my personal beliefs and prejudices through my experience completing juvenile adjudicative competence evaluations. Due to concern with misinterpretation, I conducted several reviews of the data within the evaluations to obtain accurate coding and reduce concern for bias (Bloomberg & Volpe, 2019; Yin, 2009). I kept detailed notes on the cases and the relationship between cases and completed regular self-checks to adhere to the process (Bloomberg & Volpe, 2019; Yin, 2009). To increase credibility, I provided information on discrepant cases and provided potential reasons for the discrepancies. Following my data collection and interpretation, I had independent raters review the codes to assess interrater reliability. I attempted triangulation by comparing the qualified forensic mental health examiner's observations of the juveniles, my review of the data within the

adjudicative competence evaluation, and the independent raters' observations to confirm or dispel information.

Transferability

Transferability within qualitative research is demonstrated when information from the specific study enhances the general field of research on the topic (Bloomberg & Volpe, 2019). Qualitative research is specific to the research site and individuals used within the sample (Bloomberg & Volpe, 2019). Purposeful sampling and thick description of the information on the study increase transferability by allowing the reader to understand the research study's full context and its results (Bloomberg & Volpe, 2019). I provided detailed information on the location of the site and the information within the adjudicative competence evaluations to enhance the transferability of the findings of this study.

To increase trustworthiness, a reputable source was used to gather information on juvenile adjudicative competence abilities. The Michigan Constitution grants judicial power to circuit courts (1939 PA 288 MCL 712A.18n), and the Michigan circuit court in this study follows the Michigan Legislature for juvenile adjudicative competence standards. The adjudicative competence evaluations were provided from a reputable source, a circuit court that is granted judicial power from the Michigan Constitution. In this study, the circuit court represented the general jurisdictions within the state of Michigan, and the evaluations collected used the JACI and provided detailed information on the juvenile defendant ordered for the adjudicative competence evaluation.

The county that the adjudicative competence evaluations were obtained is representative of a Michigan county. There was a ten year timespan allowed for this study to gather a diverse dataset. This study had a nine year timespan following the review of eligible adjudicative competence evaluations. There is a range of chronological ages within the evaluations, with the ages between 11 and 15 represented within the study. The estimated population for juveniles between the ages of 10 to 16 in the State of Michigan captured in 2017 was 881,092 (Puzzanchera et al., 2018). The sample population represented the broader population to help increase the transferability of the findings. Purposeful sampling continued until the review of the available evaluations were exhausted, with 14 evaluations identified that met the criteria for this study.

There was a variety of prenatal substance exposure found within the evaluations, with documentation from nicotine exposure to unknown substance exposure. The juvenile justice system primarily has male offenders (Grisso et al., 2003; Hockenberry, 2019). This study represents the juvenile justice system (12 male juveniles and two female juveniles). This study represented an almost equal opinion of competent to proceed with adjudication and not competent to proceed with adjudication. The cross-case analysis of the data allows for a complex exploration of the information (Miles et al., 2020). The analysis method also allowed for examining discrepant cases to strengthen the findings (Miles et al., 2020). The results of this study provide a detailed description of the evaluations and themes found within the data. Information from this study could be applied in other settings to enhance knowledge of the influence of prenatal substance exposure on juvenile adjudicative competence.

Dependability

Dependability within qualitative research is achieved with a detailed description and documentation of the data collection and interpretation process to ensure that the research questions are answered (Bloomberg & Volpe, 2019). This study provided detailed descriptions of the data collection and interpretation process leading to the conclusions. I provided information on how the data was collected and its representative sample. I provided information on the relevant themes and psycholegal concepts documented within the 14 adjudicative competence evaluations. Following the coding system's development, I had independent raters review the deidentified data to confirm that the coding system is relevant for this study. Bloomberg and Volpe (2019) suggest that qualitative researchers have independent raters complete an external audit of the data and findings to confirm the results further. I had independent raters (one master's level social worker, one limited licensed psychologist, and two non-clinical individuals) conduct an external audit of the results and findings of this study to confirm the adequate interpretation.

The data collected in this study was not produced for research purposes. There was potential that the adjudicative competence evaluations might have lacked information that would impact this study's results. There might have been inaccuracies in the information collected or documented for the original adjudicative competence evaluations. This study was an archival analysis of the contents of juvenile adjudicative competence evaluations collected from a Michigan circuit court, and the data was collected and analyzed in good faith.

Confirmability

Confirmability within qualitative research is demonstrated when the study results match the study's data and not merely personal bias (Bloomberg & Volpe, 2019).

Detailed and transparent discussion of personal bias and how it impacts the data analysis provide transparency and increase the conclusions' confirmability (Bloomberg & Volpe, 2019). I was reflexive with my data collection and analysis process. Following the first interpretation, a second analysis was conducted to explore deeper themes related to the information collected. This study provided detailed information on the findings and how the data analysis matched the study's conclusions.

There was transparency with the personal bias of my professional position and educational background relative to the interpretation process of the juvenile adjudicative competence evaluations. I reviewed the data and the interpretation of my findings through a confirmation audit (Bloomberg & Volpe, 2019) to determine whether I would make similar conclusions based on the information obtained. I provided detailed reflections of my personal bias and the subjectivity of the interpretation when needed. I analyzed for themes with a deductive process relating to the common themes found within the literature review. I also used an inductive process to explore additional themes not found within the literature review. I kept detailed notes and spreadsheets of the data collection process and analysis to add to the confirmability of the findings of this study.

Study Results

The data analysis in this study identified the themes of psychosocial history commonalities, developmental maturity, and psycholegal abilities. Within the themes,

there were subthemes suggested. Table 2 provides an overview of the themes and subthemes of this study. The themes and subthemes identified in this study related to the literature review on juvenile adjudicative competence and prenatal substance exposure on adolescent cognitive functioning. Piaget's cognitive stages of development were the theoretical framework used to analyze the data. I provided a table with the themes and subthemes of this study.

Table 2

Themes and Subthemes

Theme	Subtheme
Psychosocial History Commonalities	Mental Health Diagnoses Prescription Medication Special Education Services Type of Prenatal Substance Exposure
Developmental Maturity	Intellectual Functioning Chronological Age
Psycholegal Abilities	Factual Understanding Rational Understanding Reasoning and Decision-Making Abilities Retention Abilities Ability to Assist in Defense

Psychosocial History Commonalities

The data within this study suggested that juveniles with prenatal substance exposure have commonalities in their psychosocial histories. The majority of juveniles within this study had a history of significant mental health diagnoses, often multiple mental health diagnoses, were prescribed psychotropic medication, were in special education services, and had similar prenatal substances exposures during gestation. These commonalities suggest that prenatal substance exposure influenced brain development

during gestation for the juveniles in this study. Additionally, the findings suggest that prenatal exposure led to mental health and academic struggles as the juvenile aged.

Mental Health Diagnoses

The majority of juveniles within this study had multiple mental health diagnoses. Table 3 provides information on the juveniles' diagnoses in relation to the adjudicative competence opinion. The most common diagnosis was attention-deficit/hyperactivity disorder (ADHD). Of the juveniles opined competent to proceed with adjudication, seven were diagnosed with ADHD. Of the juveniles opined not competent to proceed with adjudication, five were diagnosed with ADHD. The second most common diagnosis was a diagnosis related to intellectual functioning deficits, cognitive deficits, or a special learning disability. Of the juveniles opined competent to proceed with adjudication, seven were diagnosed with intellectual functioning disorders. Of the juveniles opined not competent to proceed with adjudication, four were diagnosed with intellectual functioning disorder. The third most common diagnosis was a diagnosis related to posttraumatic stress disorder, adjustment disorder, or other specified trauma- and stressor-related disorder. Of the juveniles opined competent to proceed with adjudication, six were diagnosed with a trauma-related disorder. Of the juveniles opined not competent to proceed with adjudication, four were diagnosed with a trauma disorder. The fourth most common diagnosis was a behavior disorder. Of the juveniles opined competent to proceed with adjudication, five were diagnosed with a behavior disorder. Of the juveniles opined not competent to proceed with adjudication, four were diagnosed with a behavior disorder.

Table 3*Mental Health Diagnosis and Adjudicative Competence Opinion*

Mental Health Diagnosis	Adjudicative Competence Opinion	
	CTP	NCTP
ADHD	7	5
Intellectual Functioning Disorder	7	4
Trauma-Related Disorder	6	4
Behavior Disorder	5	4

Anxiety disorders, mood disorders, autism spectrum disorders, and FASD were also identified within the review of the adjudicative competence evaluations. Of the juveniles opined competent to proceed with adjudication, four were diagnosed with a mood disorder, two were diagnosed with an anxiety disorder, and one was diagnosed with FASD. Of the juveniles opined not competent to proceed with adjudication, two were diagnosed with a mood disorder, one was diagnosed with an anxiety disorder, two were diagnosed with an autism spectrum disorder, and one was diagnosed with FASD.

Prescription Medication

Nine of the juveniles within the adjudicative competence evaluations were listed as prescribed psychotropic medication(s) to help manage their symptoms. There were some evaluations where the medications were not documented, and there were some evaluations where it was not clear whether the question of whether the juvenile was on medication(s) during the time of the evaluation was asked.

Of the juveniles opined competent to proceed with adjudication, five were documented as prescribed psychotropic medications during the time of the evaluation. The review identified the medications were listed as Seroquel, Concerta, Concerta and Ability, and Adderall. One juvenile was prescribed medication; however, the specific psychotropic medication was not listed. Additionally, one juvenile was listed as having a history of psychotropic medication but none currently prescribed.

Of the juveniles opined not competent to proceed with adjudication, four were documented as on psychotropic medications during the evaluation. The review identified Ability and Clonidine, Focalin and Depakote, and Vistaril, Intuniv ER, Ritalin LA, and Zoloft. One juvenile was documented as prescribed multiple medications; however, they were not listed. Another juvenile was identified as having a history of psychotropic medications; however, she was not currently prescribed due to pregnancy.

Special Education Services

All juveniles within the adjudicative competence evaluations were documented as having special education services due to academic struggles, mental health diagnoses, and specific learning disabilities. The most common academic concern identified was reading struggles. Eight juveniles were identified as having an Individualized Education Program (IEP) with special education services. The other juveniles were identified as having either general academic struggles or issues with inattention and written expression.

Type of Prenatal Substance Exposure

In the review of the adjudicative competence evaluations, the juveniles were exposed during gestation to various substances. The most common substance was alcohol; however, there were also two juveniles with either FASD or FAS diagnosis, yet alcohol exposure was not explicitly stated. Four juveniles were documented as having been exposed to cocaine or crack cocaine. Four juveniles were documented as having been exposed to nicotine. Additionally, two other juveniles were documented as having been exposed to substances and drugs, yet the specific substance(s) were not documented.

Of the juveniles opined competent to proceed with adjudication, the majority were prenatally exposed to only one substance. There were two juveniles with two substances listed. The most common types of prenatal substance exposure were alcohol and nicotine. There were two juveniles with prenatal substance exposure to crack cocaine and one juvenile diagnosed with FAS. Overall, the findings of this small sample size study did not suggest a common substance associated with the opinion of competent to proceed with adjudication.

Of the juveniles opined not competent to proceed with adjudication, there were more variations than the group opined competent to proceed with adjudication. The most common substances documented were alcohol and cocaine. There was one juvenile documented as having been exposed to substances without the specific substances listed. There was one juvenile exposed to nicotine and one juvenile diagnosed with FASD. Additionally, there was one juvenile that was exposed to alcohol, cocaine, Xanax, and Lexapro. Overall, the findings from this small sample size study did not suggest a

common substance associated with the opinion of not competent to proceed with adjudication.

Developmental Maturity

The data within this study suggested that juveniles with prenatal substance exposure have developmental maturity concerns related to their adjudicative competence abilities. This study suggests that the intellectual functioning of the juvenile had an impact on their adjudicative competence. However, this study's results do not suggest that chronological age substantially impacted adjudicative competence.

Intellectual Functioning

When the juveniles' intellectual functioning is assessed with their JACI responses, the juveniles with lower intellectual functioning typically were opined as not competent to proceed with adjudication. Table 4 reflects the findings of the connection between Full Scale IQ and the adjudicative opinions with this study. Within this study, juveniles with Full Scale IQs above 80 were opined competent to proceed with adjudication.

Table 4

*Full Scale IQ Compared with Competent to Proceed with Adjudication and Not
Competent to Proceed with Adjudication*

IQ	Total	CTP	NCTP
58	1	0	1
59	1	0	1
61	1	0	1
62	1	1	0
66	1	0	1
69	1	1	0
76	2	0	2
80	1	1	0
82	1	1	0
84	1	1	0
85	1	1	0
91	1	1	0
96	1	1	0

There were two discrepant cases related to intellectual functioning. There were two juveniles with lower than average intellectual functioning that were opined competent to proceed with adjudication. Two juveniles had Full Scale IQs of 62 and 69 yet were able to demonstrate adequate adjudicative competence on the JACI and within the review of their records.

Chronological Age

This study results found that chronological age had no specific findings in the opinion of adjudicative competence. Table 5 provides information on the findings of the connection between chronological age and the adjudicative competence opinions of this study. The majority of juveniles within this study who were opined not competent to proceed with adjudication were age 15 (n = 4). The majority of juveniles opined competent to proceed with adjudication were under 15 (n = 7).

Table 5

Ages Compared with Competent to Proceed With Adjudication and Not Competent to Proceed With Adjudication

Age	Total	CTP	NCTP
11	2	1	1
12	2	1	1
13	2	2	0
14	3	3	0
15	5	1	4
16	0	0	0
17	0	0	0
Total	14	6	8

There were two discrepant cases identified under the subtheme of chronological age, ages 12:8 and 11:11. These two discrepant cases were the same identified within the subtheme of intellectual functioning, Full Scale IQ of 62 and 69, respectively of their chronological age.

Psycholegal Abilities

The JACI was designed to assess the adjudicative competence abilities listed within the *Dusky* standard. The Michigan statute identifies that qualified forensic mental health examiners must assess for factual understanding, rational understanding, reasoning and decision-making abilities, and ability to assist in their defense as identified within the *Dusky* standard (*Dusky v. United States*, 1960). The JACI specifically inquires about the roles of the courtroom workers and typical legal decisions that might present during juvenile legal proceedings (Grisso, 2005).

Factual Understanding

In this study, I analyzed the factual understanding data collected with the JACI responses. Table 6 provides information on the comparison between the demonstration of factual understanding and the adjudicative competence opinions in this study. I used the factual understanding items on the JACI to compare the juveniles' responses to the questions and analyzed their responses. I coded the individual responses to each factual understanding item as either adequate or not adequate. I then totaled the overall adequate and not adequate responses to perform a cross-case analysis. This study suggests that juveniles with prenatal substance exposure struggle with providing information on the factual understanding requirement in the *Dusky* standard. Juveniles opined not competent

to proceed with adjudication struggled more than juveniles opined competent to proceed with adjudication on the factual understanding requirement of the *Dusky* standard.

Table 6

Factual Understanding Competent to Proceed With Adjudication and Not Competent to Proceed With Adjudication Compared At Least 50% Adequate and More Than 50% Adequate

Opinion	At Least 50%		More Than 50%	
	Adequate	Not Adequate	Adequate	Not Adequate
Competent to Proceed with Adjudication	8	0	5	3
Not Competent to Proceed with Adjudication	4	2	3	3

This study suggested that juveniles that struggle to demonstrate factual rational understanding would demonstrate the concrete operational stage of cognitive development or below. The following case responses are provided as examples of concrete operational thoughts. When asked if they knew the offense they were being charged with, Case 4, 11, and 13 were unable to provide a response to the question. When asked the purpose of a juvenile court trial: Case 3 stated, “To prove your innocence.” Case 4 stated, “Talking to the judge.” Case 11 stated, “I don’t know.” Case 13 response was documented as “shrugged shoulders.” When asked the role of the judge: Case 10 stated, “The referee is the assistant judge. He tries to get information for the real judge to

go against me.” When asked about the plea bargain/agreement: Nine cases stated they did not understand.

This study suggested that juveniles that demonstrate adequate factual understanding would demonstrate the formal operational stage of cognitive development. The following case responses are provided as examples of formal operational thoughts. When asked if they knew the offense they were being charged with, Case 1, 2, 3, 5, 6, 7, 8, 9, 10, 12, and 14 were able to provide an adequate response. When asked the purpose of a juvenile court trial, Case 2 stated, “They let you stay at home and then go back to court to use what the decision is and what they are going to do- put you in detention or keep you in in-home detention.” When asked the role of the judge: Case 4 stated, “Listens to both sides of the story and figures out if a person is guilty or not.” Case 7 stated, “[The judge will] decide what he wants to say and what he wants to do after he has heard from the prosecutor, the lawyer, and the PO and the defendant.” When asked about the plea bargain/agreement: Case 3 stated, “When you say what you did and admit that you did it so you can get in less trouble.” Case 5 stated, “[The] lawyer talks to [the] judge to work out a deal where I won’t get as long as I’m expected to get...do less time.”

Rational Understanding

In this study, I analyzed the rational understanding data collected with the JACI responses. Table 7 provides information on the comparison between the demonstration of rational understanding and the adjudicative competence opinions in this study. I used the JACI’s rational understanding items to compare the juveniles’ responses to the questions and analyzed their responses. I coded the individual responses to each rational

understanding item as either adequate or not adequate. I then totaled the overall adequate and not adequate responses to perform a cross-case analysis. This study suggests that juveniles with prenatal substance exposure struggle with providing information on the rational understanding requirement in the *Dusky* standard. Juveniles opined not competent to proceed with adjudication struggled more than juveniles opined competent to proceed with adjudication on the rational understanding requirement of the *Dusky* standard.

Table 7

Rational Understanding Competent to Proceed With Adjudication and Not Competent to Proceed With Adjudication Compared At Least 50% Adequate and More Than 50% Adequate

Opinion	At Least 50%		More Than 50%	
	Adequate	Not Adequate	Adequate	Not Adequate
Competent to Proceed with Adjudication	6	2	4	4
Not Competent to Proceed with Adjudication	4	2	0	6

This study suggested that juveniles that struggle to demonstrate adequate rational understanding would demonstrate the concrete operational stage of cognitive development or below. The following case responses are provided as examples of concrete operational thoughts. When asked what might happen if they plead “not guilty:” Case 2 stated, “They could just let me be free and make sure that I don’t get in any more trouble.” Case 7 stated, “Probably see a better side [of me] and probably give me another

chance.” When asked if they could plead “not guilty” if they actually did the offense: Case 2 stated, “No.” Why: “Because I already did it. Because they have it wrote up, they have a record of when you did it- the day and the month.” Case 8 stated, “No, you have to tell the truth.” When asked if a judge could order someone to testify about himself or herself: Case 2 stated, “Tell the truth...if you don’t, you get in a lot of trouble.” Case 6 stated, “I would have to tell the Court...because the judge told me to...if I don’t tell the truth, the judge would sentence me.”

This study suggested that juveniles that demonstrate adequate rational understanding would demonstrate the formal operational stage of cognitive development. The following case responses are provided as examples of formal operational thoughts. When asked if they could plead “not guilty” if they actually did the offense: Case 14 stated, “I guess if no one knows for sure if you did it...because it is your choice.” When asked if a judge could order someone to testify about himself or herself: Case 1 stated, “Don’t gotta [sic] listen to the judge- it depends- some you did and some you didn’t do.” Case 14 stated, “You don’t have to, you don’t have to talk in court.”

Reasoning and Decision-Making Abilities

In this study, I analyzed the reasoning and decision-making abilities data collected with the JACI responses. Table 8 provides information on the comparison between the demonstration of reasoning and decision-making abilities and the adjudicative competence opinions in this study. I used the JACI reasoning and decision-making items to compare the juveniles’ responses to the questions and analyzed their responses. I coded the individual responses to each reasoning and decision-making items as either adequate

or not adequate. I then totaled the overall adequate and not adequate responses to perform a cross-case analysis. The results of this study suggest that juveniles with prenatal substance exposure that struggle with demonstrating adequate reasoning and decision-making abilities would be opined not competent to proceed with adjudication more than opined competent to proceed with adjudication.

Table 8

Reasoning and Decision-Making Abilities Competent to Proceed With Adjudication and Not Competent to Proceed With Adjudication Compared At Least 50% Adequate and More Than 50% Adequate

Opinion	At Least 50%		More Than 50%	
	Adequate	Not Adequate	Adequate	Not Adequate
Competent to Proceed with Adjudication	7	1	7	1
Not Competent to Proceed with Adjudication	2	4	2	4

This study suggested that juveniles that struggle to demonstrate adequate reasoning and decision-making abilities would demonstrate the concrete operational stage of cognitive development or below. The following case responses are provided as examples of concrete operational thoughts. When asked if there were anything they would not want to tell their lawyer: Case 10 stated, “If I am guilty.” Case 12 stated, “Why I got in trouble because I feel bad.” Case 14 stated, “That they did the crime because they just don’t want to tell anyone that they did it; they want to keep it going...the lying.”

When asked why they might want to tell their lawyer if someone else was involved in the offense: Case 12 stated, “No, I don’t like tattle telling.”

This study suggested that juveniles that demonstrate adequate reasoning and decision-making abilities would demonstrate the formal operational stage of cognitive development. The following case responses are provided as examples of formal operational thoughts. When asked if there were anything they would not want to tell their lawyer: Case 1 stated, “No.” Case 6 stated, “I would probably tell her as much as I can.” When asked why they might want to tell their lawyer if someone else was involved in the offense: Case 3 stated, “Because I want him to get in trouble too, it’s not fair [otherwise]...if I tell everything, I get a lower sentence. If I tell the truth.” Case 8 stated, “I would tell if [he] was involved so I won’t get into trouble.” Case 14 stated, “So they can get in trouble too, so you don’t get in as much trouble.”

Retention Abilities

The JACI was designed for use with juvenile defendants who are not expected to have ultimate knowledge of the legal system and the potential decisions they will need to make during court proceedings. The JACI allows the qualified forensic mental health examiner to provide prompted information in the form of Capacity Checks as needed throughout the assessment. The juvenile is assessed for both short-term retention and long term-retention of the information following the Capacity Checks.

In this study, I analyzed the retention abilities data collected with the JACI responses. I used the responses from the Capacity Check items on the JACI to perform both within-case analysis and cross-case analysis. I coded the individual responses to

each retention items as either adequate or not adequate. Table 9 provides information on the retention abilities compared among the various prenatal substances and adjudicative competence opinions. I then compared the responses for patterns. The results of this small sample size study suggest that juveniles with prenatal substance exposure are able to demonstrate adequate retention abilities across the Capacity Check items.

When analyzing the data, there were two discrepant cases, Case 8 and Case 13, which did not demonstrate adequate retention abilities for the Capacity Check items. Case 8 had a diagnosis of FASD and struggled to demonstrate adequate retention ability for the Plea Bargain/Agreement Capacity Check item. Case 8 had a Full Scale IQ of 58 and was 15 years old. Case 13 struggled throughout the JACI and was identified as having prenatal substance exposure to nicotine and a Full Scale IQ of 76. Case 13's Full Scale IQ and chronological age (11) appeared to impact her ability to demonstrate adequate retention of the information provided on the JACI.

Table 9*Retention Abilities With JACI Capacity Check Items*

Cases	Role of the Defense Attorney	Role of the Prosecutor	Plea Bargain/ Agreement	PSE	Age	IQ	Opinion
1	Adequate	Adequate	Adequate	Substance exposure	15	66	NCTP
2	Adequate	Adequate	Adequate	Cocaine	15	59	NCTP
3	Adequate	Adequate	Adequate	Nicotine (1/2 pack per day)	12	62	CTP
4	Adequate	Adequate	Adequate	Nicotine and alcohol	14	96	CTP
5	Adequate	Adequate	Adequate	Crack cocaine	15	85	CTP
6	Adequate	Adequate	Adequate	Drugs	11	69	CTP
7	Adequate	Adequate	Adequate	Heavy alcohol	14	82	CTP
8	Adequate	Adequate	Not Adequate	FASD	15	58	NCTP
9	Adequate	Adequate	Adequate	Nicotine	13	80	CTP
10	Adequate	Adequate	Adequate	Alcohol and crack cocaine	13	84	CTP
11	Adequate	Adequate	Adequate	Alcohol, cocaine, Xanax, Lexapro	12	61	NCTP
12	Adequate	Adequate	Adequate	Alcohol and drugs	15	76	NCTP
13	Not Adequate	Not Adequate	Not Adequate	Nicotine	11	76	NCTP
14	Adequate	Adequate	Adequate	FAS	14	91	CTP

This study suggested that juveniles that struggle to demonstrate adequate retention abilities would demonstrate the concrete operational stage of cognitive development or below. The following case responses are provided as examples of concrete operational thoughts. When asked the Role of the Defense Attorney: Following the completion of the JACI, Case 13 stated, "On the police side." When asked the Role of the Prosecutor: Following the completion of the JACI, Case 13 stated, "They talk in court. To tell people stuff." When asked who side of the story the Prosecutor would say in court, Case 13 stated, "Mine." The Plea Bargain/Agreement Concept: Following the completion of the JACI, Case 13 stated, "You make a deal for something you didn't do, but you say you did. I don't know." Following the completion of the JACI, Case 8 stated:

If you are not guilty and not confident [sic] the lady will drop the charges and drop the restrictions and put you on probation and let you be free and then you behave and think and use your brain so you don't get into trouble.

This study suggested that juveniles that demonstrate adequate retention abilities would demonstrate the formal operational stage of cognitive development. The following case responses are provided as examples of formal operational thoughts. When asked the Role of the Defense Attorney: Following the completion of the JACI, Case 3 stated, "Defends you, gets you less time in juvie sometimes, she explains things." When asked the Role of the Prosecutor: Following the completion of the JACI, Case 3 stated, "Does your sentence, actually decide where you go, kind of like a judge [but] does the opposite; tries to get you in the juvenile home so I can do time for my actions." The Plea Bargain/Agreement Concept: Following the completion of the JACI, Case 3 stated:

The judge offers you a plea bargain when you can get a lower sentence. If you take a trial you are going to wind up in the juvenile home waiting for it. Most likely you are going to be [found] guilty.

Ability to Assist in Defense

The ability to assist in their defense is a requirement within the *Dusky* standard. Juvenile defendants need to provide information to their defense attorneys, attend to courtroom events, maintain self-control, and potentially provide testimony to the court. The qualified forensic mental health examiner assesses these abilities with the JACI, with the qualified forensic mental health examiner providing information on the ability to assist in the juvenile's defense as a basis for the adjudicative competence opinion.

I reviewed the qualified forensic mental health examiners' documentation of the juveniles' ability to assist in their defense within the adjudicative competence evaluations and recorded the findings. Table 10 provides information on the juveniles opined competent to proceed with adjudication and on the juveniles opined not competent to proceed with adjudication. I compared the juveniles' responses to assess for patterns. The data analysis suggests that the majority of juveniles with adequate abilities to assist in their defense were opined competent to proceed with adjudication. Alternatively, the data analysis also suggests that the majority of juveniles with inadequate abilities to assist in their defense were opined not competent to proceed with adjudication.

Table 10

Ability to Assist in Defense Compared Among Competent to Proceed With Adjudication and Not Competent to Proceed With Adjudication

Cases	Insight and judgment	Ability to attend to events	Ability to maintain self control	Ability to testify
Competent to Proceed With Adjudication				
3	Fair	Fair	Limited	Adequate
4	Fair	Adequate	Adequate	Concern
5	Fair	Adequate	Adequate	Adequate
6	Fair	Adequate	Adequate	Adequate
7	Fair	Adequate	Adequate	Adequate
9	Poor	Adequate	Adequate	Adequate
10	Fair	Adequate	Adequate	Adequate
14	Poor	Adequate	Adequate	Adequate
Not Competent to Proceed With Adjudication				
1	Poor	Compromised	Compromised	Compromised
2	Poor	Compromised	Adequate	Compromised
8	Poor	Limited	Adequate	Limited
11	Poor	Inadequate	Inconsistent	Inadequate
12	Minimal	Minimal	Moderate	Inconsistent
13	Poor	Poor	Poor	Poor

Summary

The results of the data collection and data analysis for the exploratory multiple case analysis identified themes related to the influence of prenatal substance exposure on juvenile adjudicative competence psycholegal abilities. I used thematic analysis and open coding to identify and explore the common themes related to the research question. I completed both the within-case and cross-case analysis of the data to identify themes. Following the analysis process, the following themes were identified: psychosocial

history commonalities, developmental maturity, and psycholegal abilities. Within the themes, subthemes were identified related to intellectual functioning, chronological age, factual understanding, rational understanding, reasoning and decision-making, and ability to assist in their defense. The findings of this study suggest that lower intellectual functioning, difficulties with rational understanding, difficulties with reasoning and decision-making, and difficulties in the ability to assist in defense had a substantial relationship with the opinion of not competent to proceed with adjudication. Overall, there was no substantial difference identified among the type of prenatal substance exposure, chronological age, factual understanding, or retention abilities of information learned on the JACI. In Chapter 5, these themes and findings are further explored along with conclusions of this study and recommendations for future research.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

This exploratory multiple case analysis involved reviewing 14 adjudicative competence evaluations from a Michigan circuit court. There were common themes identified during the evaluations that are consistent with the themes identified in the literature. I provided thematic analysis and open coding results and identified psychosocial history commonalities, developmental maturity issues, and psycholegal abilities. I identified subthemes from data. This chapter includes interpretations, limitations, recommendations, and implications for the findings, and a conclusion.

Interpretation of the Findings

This qualitative study's findings add to research related to the influence of prenatal substance exposure on juvenile adjudicative competence. Juvenile adjudicative competence is a developing field with documented themes and concerns. I assessed common themes in the literature through deductive coding methods. There were also inductive coding methods to identified potential themes not found within the review of the literature. The JACI instrument review adds to the limited literature about the juvenile adjudicative competence instrument. Most studies with juvenile defendants use the MacCAT-CA, FIT-R, or other forensic instruments designed for adult defendants.

The multiple case study design allows for comparison of similarities and differences within individual and across separate cases (Bloomberg & Volpe, 2019; Miles et al., 2020; Yin, 2009). From these comparisons, patterns and themes emerged that added to the research topic. Due to the depth of the information provided in adjudicative

competence evaluations, they are essentially single case qualitative studies (Kruh & Grisso, 2009). Qualified forensic mental health examiners use information within evaluations to synthesize and provide findings to the court.

In this study, juveniles with prenatal substance exposure demonstrated limited psycholegal abilities related to adjudicative competence. This study's findings support the concept that juveniles with prenatal substance exposure might struggle to demonstrate an adequate understanding of legal proceedings against them and ability to help assist in their defense. Prenatal substance exposure appears to exacerbate issues with developmental immaturity in terms of psycholegal abilities.

Psychosocial History Commonalities

Among the juveniles referred to adjudicative competence evaluations, the majority had multiple mental health diagnoses (Armstrong & Friedman, 2016; Bath et al., 2015; Chien et al., 2016). Limited studies were exploring the influence of FASD or other prenatal substance exposure on adjudicative competence. This study is unique in terms of its inclusion of various substances a juvenile might have been prenatally exposed to during gestation.

Fourteen juveniles in this study had more than one mental health diagnosis. McLachlan et al. (2014) said that a diagnosis of FASD is often comorbid, and juveniles with FASD are typically diagnosed with disorders related to depression, psychosis, and substance use. McLachlan et al. also said that a diagnosis of FASD is often not as apparent as other mental health diagnoses. Brown et al. (2017) said that a court could refer someone for an adjudicative competence evaluation who does not have a history of

FASD diagnosis; however, the individual could have the diagnostic features and be either misdiagnosed or never assessed for an FASD diagnosis. Twelve juveniles in this study were not diagnosed with or had a history of assessment for FASD.

The most common diagnoses within this study were ADHD, intellectual functioning disorder, a trauma-related disorder, and a behavior disorder. Diagnoses most likely leading to an opinion of not competent to proceed with adjudication were intellectual disabilities, ASD, and ADHD (Armstrong & Friedman, 2016; Bath et al., 2015; McCormick et al., 2020). The findings of this study are consistent with the literature. There were four juveniles with an intellectual functioning disability that were opined not competent to proceed with adjudication. However, five juveniles in this study had an ADHD diagnosis and the opinion of not competent to proceed with adjudication. McCormick et al. (2020) said the diagnosis of a neurological disorder (i.e., ADHD or ASD) led to a 71.8% chance of being opined not competent to proceed with adjudication. Children with prenatal substance exposure are more likely to have diagnoses of ADHD than children without prenatal substance exposure (Minnes et al., 2017; Sutin et al., 2017; Waldie et al., 2014).

In this study, diagnoses among juveniles showed commonalities. Bath et al. (2015) said juveniles with substance use, mood disorder, or psychosis disorder were most likely to be opined competent to proceed with adjudication. In this study, diagnoses of ADHD and an intellectual functioning disorder were the most common among juveniles opined competent to proceed with adjudication. A trauma-related disorder and behavior disorder were the third and fourth most common diagnoses for juveniles opined

competent to proceed with adjudication in this study. McCormick et al. (2020) said substance use and conduct disorders were the diagnoses most associated with an opinion of competent to proceed with adjudication. However, Armstrong and Friedman (2016), Grisso et al. (2013), and Viljoen, Odgers, et al. (2007) reported that mental health diagnoses are not as significant as the developmental maturity of the juvenile when assessing for adjudicative competence capacities.

There were limited studies focusing on the impact of psychotropic medications and adjudicative competence abilities of juveniles. Chien et al. (2016) said psychotropic medications did not increase the restoration of adjudicative competence with juveniles who had psychosis and severe ADHD symptoms. Chien et al. said that juveniles' intellectual functioning was the only significant predictor of their ability to be remediated in terms of adjudicative competence through logistical regression of data. Chien et al. said that the use of psychotropic medications had no significant predictive properties. The current study included nine juveniles with prescription medications. Six juveniles were on medication and opined competent to proceed with adjudication, and four juveniles were on medication and opined not competent to proceed with adjudication. Given the low number of juveniles in this study, this needs additional research to determine the influence of psychotropic medications on adjudicative competence abilities with juveniles in terms of prenatal substance exposure.

The presence of academic struggles leading to special education services was consistent with the literature review. All 14 juveniles within this study had special education services. The need for special education services is consistent with the research

that identifies prenatal substance exposure impacts brain development during gestation (Konrad et al., 2013; Minnes et al., 2017; Ross et al., 2015). Ross et al. (2015) and Minnes et al. (2017) both found that alcohol exposure during gestation impacted higher level thinking abilities. Konrad et al. (2013) found that prenatal substance exposure impacts brain development and can cause cognitive functioning delays. This study's findings support the impact of prenatal substance exposure on brain development and cognitive abilities within the academic environment.

The specific type of prenatal substance exposure appeared to have no apparent impact on the opinion of adjudication competence in this study. However, the study had a small sample size, and the results are limited to the adjudicative competence evaluations included in this study. All juveniles in this study were documented with prenatal substance exposure, with various substances in each group. Different substance exposure was found in the competent to proceed with adjudication and not competent to proceed with adjudication groups. For the group opined not competent to proceed with adjudication, there was one juvenile with nicotine exposure, one juvenile was cocaine exposure, two juveniles with alcohol and another substance exposure, and two that were provided with a mental health diagnosis related to FASD. For the group opined competent to proceed with adjudication, two had nicotine exposure, one had cocaine exposure, one had alcohol exposure, one had nicotine and alcohol exposure, one had alcohol and cocaine exposure, one had documentation of drug exposure, and one had a diagnosis of FASD.

This study had a wide range of substances and multiple substances identified across the juveniles. Juveniles with prenatal exposure to several different substances were most associated with not competent to proceed with adjudication. This finding is consistent with the research that identified prenatal substance exposure can lead to psycholegal deficits needed for adequate adjudicative competence (Brown et al., 2017; McLachlan et al., 2014). There were two juveniles in this study who had prenatal cocaine exposure and were not competent to proceed with adjudication. This finding is consistent with Grewen et al. (2014) findings that found children exposed to cocaine during gestation had abnormal development of the prefrontal and frontal cortex. Grewen et al. stated that abnormal brain development could lead to executive functioning and behavior control issues as the child ages.

Brown et al. (2017) and Chien et al. (2016) stated that the presence of prenatal substance exposure is not a guarantee that someone will have psycholegal deficits leading to an opinion of not competent to proceed with adjudication. The most common prenatal substance associated with being opined competent to proceed with adjudication in this study was nicotine. Waldie et al. (2014) identified that prenatal substance exposure to nicotine could lower than average intellectual functioning. For this study, the two juveniles with prenatal substance exposure to nicotine that were opined competent to proceed with adjudication had IQs of 62 and 80. Additionally, the one juvenile with prenatal nicotine exposure that was opined not competent to proceed with adjudication had an IQ of 76. One juvenile with prenatal exposure to alcohol and nicotine was opined competent to proceed with adjudication and had an IQ of 96. Therefore, based on the

analysis of this study, the findings suggest that prenatal substance exposure does not guarantee psycholegal deficits, and the influence of multiple neurological factors likely leads to adjudicative competence deficits.

There were two biological females in this study and 12 biological males. While there were a low number of female defendants, the literature review supports a lower number of female adjudicated youth within the juvenile justice system than male adjudicated youth (Hockenberry, 2019). This study found the two females were opined as not competent to proceed with adjudication compared to four males. There were eight males and zero females opined competent to proceed with adjudication. There were no significant inferences for biological sex and adjudicative competence based on this study's results; however, the number of female juveniles in this study was not comparable to that of the male juveniles. This study supports the literature that biological sex is not a reliable predictor of adjudicative competence.

In this small sample size study, no consistent patterns emerged when comparing offense type leading to adjudication and opinion on adjudicative competence. The most common offense leading to adjudication in this study was a property offense. Four opined competent to proceed with adjudication and two opined not competent to proceed with adjudication. The second most common offense in this study was a CSC offense, with three opined competent to proceed with adjudication and one opined not competent to proceed with adjudication. There were three violent offenses, with one opined competent to proceed with adjudication, and two opined not competent to proceed with adjudication. There was one false report of a felony, with the juvenile opined not competent to proceed

with adjudication. There were no significant inferences for offense type and adjudicative competence based on the results of this study. This finding is consistent with the Armstrong and Friedman (2016) and the McCormick et al. (2020) studies that found no significant difference between adjudicative competence findings when assessing based on offense type leading to adjudication.

Developmental Maturity

Developmental maturity is a common theme within the literature review. Qualified forensic mental health examiners need to assess juvenile defendants for their adjudicative competence abilities with juveniles' age and brain development in mind. Adolescent development is not a consistent and linear path, with chronological age not determining developmental maturity (Broekman et al., 2014; Konrad et al., 2013; Ross et al., 2015). Within the review of the literature, intellectual functioning and chronological age of juvenile defendants have been identified as having predictive properties for the opinion of adjudicative competence (Chien et al., 2016; Cox et al., 2012; Fogel et al., 2013; Grisso et al., 2003; Panza & Fraser, 2015).

The concept that appeared the most relevant to this study was the intellectual functioning of the juvenile. For this study, the results support juveniles with Full Scale IQs underneath 76 most likely to be opined not competent to proceed with adjudication. Additionally, for this study, juveniles with Full Scale IQs above 80 were most likely to be opined competent to proceed with adjudication. This finding supports the literature review identifying the idea that juveniles with lower than average intellectual functioning struggle to demonstrate adequate psycholegal abilities to be determined competent to

proceed with adjudication (Armstrong & Friedman, 2016; Bath et al., 2015; Chien et al., 2016; Grisso et al., 2003; McLachlan et al., 2014; Panza & Fraser, 2015). The juveniles opined competent to proceed with adjudication typically had Full Scale IQs above 80; however, there were two discrepant cases where the juveniles had IQs of 62 and 69 yet were opined competent to proceed with adjudication. Despite their lower intellectual functioning for the discrepant cases, the juveniles demonstrated adequate factual understanding, rational understanding, and ability to assist in their defense.

Within the literature review, the theme of intellectual functioning was common when assessing juvenile adjudicative competence. Overall, the research suggests that individuals with lower intellectual functioning, regardless of chronological age or biological sex, struggle to demonstrate the psycholegal abilities needed for adjudicative competence (Armstrong & Friedman, 2016; Bath et al., 2015; Chien et al., 2016; Grisso et al., 2003; McLachlan et al., 2014; Panza & Fraser, 2015). Juveniles with lower than average intellectual functioning generally have more factual understanding, rational understanding, and reasoning and decision-making deficits than juveniles with high intellectual functioning (Armstrong & Friedman, 2016; Bath et al., 2015; Chien et al., 2016; Grisso et al., 2003; McLachlan et al., 2014; Panza & Fraser, 2015). When analyzed within the theoretical framework, the juveniles in this study with lower than average intellectual functioning provided concrete operational cognitive stage of development understanding responses. In this study, the juveniles with higher intellectual functioning provided responses that suggest a formal operational cognitive stage of development understanding. This study provides support for the findings in the literature.

Within the review of the literature, the theme of chronological age is common. Panza and Fraser (2015) theorized that chronological age was the best predictor of adjudicative competence. Bath et al. (2015) found that juveniles aged 15 and younger were most likely to be opined not competent to proceed with adjudication. Additionally, Piaget's cognitive stage of development theory suggests that juveniles that are more immature would demonstrate concrete operational thinking abilities that would interfere with demonstrating adequate psycholegal abilities for adjudicative competence (Piaget 2008/1972; Piaget 2009/1928).

The majority of juveniles in this study that were opined not competent to proceed with adjudication were age 15. The majority of juveniles in this study that were opined competent to proceed with adjudication were age 14. There was a range of ages from 11 to 15 in this study; however, this study had a small sample size. The findings might be limited due to the limited number of adjudicative competence evaluations reviewed. The literature review identified a concern with younger juveniles under the age of 15 struggling to demonstrate adequate psycholegal abilities related to adjudicative competence (Bath et al., 2015; Grisso et al., 2003; Panza & Fraser, 2015; Viljoen, Odgers, et al., 2007). McCormick et al. (2020) found that juveniles under the age of 12 were the most likely to be opined not competent to proceed with adjudication due to developmental maturity concerns.

This study's findings support and challenge the literature review findings as there were a total of 14 juveniles in this study, and all were 15 years old and younger. However, eight juveniles in this study were opined competent to proceed with

adjudication. Additionally, four juveniles opined not competent to proceed with adjudication were 15 years old. Of the juveniles age 15 and opined not competent to proceed with adjudication, their intellectual functioning appeared to influence their adjudicative competence. All four 15 year olds had IQs underneath 76. This finding is consistent with the literature that supports older juveniles might struggle with higher-level thinking abilities due to lack of developmental maturity (Chien et al., 2016; Cox et al., 2012; Fogel et al., 2013; Grisso et al., 2003; Panza & Fraser, 2015). Furthermore, there were four juveniles in this study age 13 and younger that were opined competent to proceed with adjudication. There was one 11 year old, one 12 year old, and two 13 year olds. This study had a low sample size, and the findings might reflect the limited number of cases.

Psycholegal Abilities

The literature review identified the rational understanding component as the most impacted by developmental limitations (Ragatz et al., 2015). Prenatal substance exposure affects brain development during gestation and long-term thinking abilities (Minnes et al., 2017; Ross et al., 2015). Therefore, the need to focus on rational understanding or appreciation of juveniles' psycholegal abilities with prenatal substance exposure is supported by the literature review. This study's findings suggested that the opinion of adjudicative competence is influenced by the juveniles' abilities to demonstrate adequate rational understanding, reasoning and decision-making abilities, and demonstrate adequate abilities to assist in their defense.

For this study, I analyzed the juveniles who were opined competent to proceed with adjudication for commonalities and themes. Among the juveniles opined competent to proceed with adjudication, there were common JACI concepts that were marked as not meeting the criteria for factual understanding and rational understanding. The *Dusky* standard's rational understanding requirement appeared the most influenced by prenatal substance exposure in this study. The majority of the eight juveniles opined competent to proceed with adjudication demonstrated more rational understanding deficits rather than factual understanding deficits. However, the juveniles' reasoning and decision-making abilities and ability to assist in their defense appeared to have more influence over the opinion of adjudicative competence in this study than their factual understanding and rational understanding components.

Of the juveniles opined not competent to proceed with adjudication in this study, there were common JACI concepts that were marked as not meeting the criteria for factual understanding and rational understanding. Three juveniles opined not competent to proceed with adjudication demonstrated factual understanding deficits. All of the six juveniles opined not competent to proceed with adjudication demonstrated rational understanding deficits. This study's findings are supported within the review of the literature. Grisso et al. (2003) identified that lower than average intellectual functioning would most impact the rational understanding prong of the *Dusky* standard. This finding is consistent with the McLachlan et al. (2014) study that identified juveniles with FASD are more likely to demonstrate deficits in their understanding and appreciation abilities than juveniles without FASD. In this study, as with the juveniles opined competent to

proceed with adjudication, the juveniles opined not competent to proceed with adjudication appeared to have more deficits with reasoning and decision making and ability to assist in their defense than deficits in their factual and rational understanding abilities.

For comparison of retention abilities and adjudicative competence, all eight juveniles opined competent to proceed with adjudication demonstrated adequate retention abilities. Similar to juveniles opined competent to proceed with adjudication, five juveniles opined not competent to proceed with adjudication also demonstrated adequate retention abilities. Retention abilities with juveniles with prenatal substance exposure appear adequate based on the findings of this study. This study's findings do not support Ficke et al. (2006) findings that juveniles do not benefit from teaching components on adjudicative competence assessments. Chien et al. (2016) and Viljoen, Odgers, et al. (2007) findings identified that juveniles with lower than average IQs would not benefit from instruction on the MacCAT-CA; however, the findings of this study suggest that juveniles with lower than average IQs might benefit from instruction during the JACI.

Theoretical Framework

In this study, I analyzed the content of adjudicative competence evaluations through the theoretical framework of Piaget's cognitive developmental theory. In the cognitive developmental theory, there are four stages of human development that emerge as the individual interacts with their environment (Piaget 2008/1972; Piaget 2009/1928). The concrete operational and formal operational are the two stages relevant to adjudicative competence. The concrete operational stage of cognitive development is

demonstrated when children begin to think logically and apply reason to their decision making (Piaget 2008/1972; Piaget 2009/1928). As the child is able to demonstrate the ability to use abstract reasoning and deductive logic, the child would demonstrate the formal operational stage of cognitive development (Piaget 2008/1972; Piaget 2009/1928). To satisfy the legal requirements of competent to proceed with adjudication, juvenile defendants identified within the formal operational stage of cognitive development would demonstrate adequate factual understanding, rational understanding, and ability to help assist in their defense.

When analyzed through the theoretical framework of Piaget's cognitive stage of cognitive development, this study's data suggested the juveniles opined competent to proceed with adjudication mostly functioned within the formal operational stage of development. These juveniles, overall, had higher intellectual functioning and reasoning and decision-making abilities. The juveniles opined competent to proceed with adjudication in this study were better able to assist in their defense by attending to court proceedings, maintaining self control during court proceedings, and having the ability to provide adequate testimony when compared to the juveniles opined not competent to proceed with adjudication.

This study's data suggested that juveniles opined not competent to proceed with adjudication mostly functioned within Piaget's concrete operational stage of cognitive development. These juveniles demonstrated poor reasoning and decision-making ability, poor retention of information learned on the JACI, limited ability to attend to court proceedings events, limited ability to maintain self control during court proceedings, and

limited ability to provide testimony during court proceedings. Overall, these juveniles would be more likely to lack adequate psycholegal abilities to be opined competent to proceed with adjudication. However, this study is not a statistical analysis, and, given the small sample size of this study, the findings might be limited to this particular group of juveniles.

Limitations of the Study

This study was an exploratory qualitative multiple case study analysis of 14 juvenile adjudicative competence evaluations from a Michigan circuit court. This study was limited to the number of evaluations available between the time span of 2006 to 2016. There is no specific requirement for the number of cases needed for qualitative research (Bloomberg & Volpe, 2019; Miles et al., 2020); however, to increase credibility, dependability, transferability, and confirmability of the study, all evaluations that met the criteria for this study were included to help establish saturation of the data. The 2006 year was selected due to the Michigan statute for adjudicative competence evaluations updated to reflect the current standards of using a forensic instrument designed for juvenile defendants (i.e., the JACI) and qualified forensic mental health examiner with expertise in adolescent development complete the evaluations with the juveniles. The year 2016 was selected due to access to records that I had not completed, as the previous psychologist that held my position within the circuit court ended their employment in 2016.

Within the 10 year time span, I was granted access to 70 adjudicative competence evaluations. There were 14 documented prenatal substance exposure cases within the 70

adjudicative competence evaluations. However, given the number of evaluations available to me, I cannot confirm if saturation was met. Furthermore, given that this was an archival review, I could not ask additional questions of the juveniles or confirm whether other juveniles within the 70 I had access to might have had prenatal substance exposure that was not documented by the qualified forensic mental health examiner completing the evaluation. I could not confirm that there was actual prenatal substance exposure other than the documentation in the archival records. In some adjudicative competence evaluations, it was documented that someone other than the biological mother provided the information.

This study was initially designed as a quantitative research study, and my goal was to gain access to multiple Michigan circuit courts' adjudicative competence data. Increasing the number of adjudicative competence evaluations to review would add to this study's credibility, transformability, dependability, and confirmability. However, due to the MDHHS COVID-19 pandemic safety precautions against travel and visitors within court facilities, the research design was changed to a qualitative study. With access to additional circuit courts' adjudicative competence data, whether with a quantitative study or a qualitative study, I would have compared the results of different circuit courts and cases to increase this study's strength. This study's findings are generalizable to similar circuit courts and participants; however, the specific findings are limited to this qualitative study.

Triangulation was limited for this study due to the design. This study was an archival review of adjudicative competence evaluations, and I did not have access to the

participants to confirm my analysis findings or to seek additional information. I reviewed my findings against the information provided in the adjudicative competence evaluations and the independent raters. Credibility concerns surround my role as the qualified forensic mental health examiner conducting adjudicative competence evaluations with the juveniles in the county that I reviewed. The transferability concerns surrounding this study's results are that the findings can only be transferred to similar Michigan circuit courts. The results of this study are as dependable as the data collected. As stated, this study was an archival review of records, and additional information on the participants and procedures of the original data collection was not available. There were limited confirmability concerns with this study as I was transparent with my personal bias, and I provided detailed information on the data collection and data analysis process leading to the findings.

Recommendations

Within the literature review, there were common themes identified related to issues surrounding juvenile adjudicative competence. However, juvenile adjudicative competence is a developing field with a need for additional research to determine standards of practice and topics for the qualified forensic mental health examiner to address when offering their expert opinion to the trier of the fact. The juveniles with prenatal substance exposure in this study presented with similar adjudicative competence psycholegal deficits found in the literature. This study's findings can address the literature gap regarding the influence of prenatal substance exposure on juveniles ordered to complete adjudicative competence evaluations.

It is recommended that further studies explore the influence of prenatal substance exposure on the psycholegal abilities of juvenile defendants court ordered to complete adjudicative competence evaluations. One recommendation would be to follow the original plan for this study, with researchers gaining access to multiple different research sites and additional adjudicative competence evaluations to confirm or disaffirm this study's findings to add to the collective research. With access to more diverse data sets, there could have been additional themes identified that would add to the research.

This study was limited in the number of ages, biological sexes, and forensic instruments. Additional studies with an equal number of ages and biological sexes with prenatal substance exposure might identify additional themes or differences between the participants. Replication of this study with another forensic instrument might provide additional findings related to prenatal substance exposure and juvenile adjudicative competence. Additionally, other qualitative researchers could conduct similar studies to this research design to compare the findings. Future qualitative studies could add interview questions with the juvenile defendants or the qualified forensic mental health examiners to explore additional themes related to prenatal substance exposure and adjudicative competence. Questions related to rational understanding, reasoning and decision making, and ability to assist in defense might provide additional information on the common themes associated with an opinion of not competent to proceed with adjudication found in this study. There are multiple research possibilities within the field of juvenile adjudicative competence to add to the collective knowledge. Additionally, the

influence of prenatal substance exposure on adult adjudicative competence is an area for additional research.

The strength of this study was the addition to the research on juvenile adjudicative competence. There is limited research on the influence of prenatal substance exposure on juvenile adjudicative competence. Additionally, there are limited studies on using the JACI with juvenile defendants and limited qualitative studies related to adjudicative competence. This qualitative multiple case analysis study adds to the research and provides additional themes to explore in future research designs.

Juvenile qualified forensic mental health examiners completing adjudicative competence evaluations with juvenile defendants can use this study's findings to add to the support for assessment standards. This study is a multiple case analysis of 14 adjudicative competence evaluations with documented prenatal substance exposure. This study's findings support the need for qualified forensic mental health examiners to assess for prenatal substance exposure and its potential impact on the juveniles' current neurological functioning. With the results from this study, there is support to evaluate further juveniles' rational understanding, reasoning and decision-making abilities, and ability to assist in defense with prenatal substance exposure.

Implications

This study enhances positive social change for the juvenile justice system and the juvenile defendants involved in legal proceedings. The juvenile system justice was developed to ensure adolescents' due process rights and provide equal rights under the law (Grisso et al., 2003; Scott et al., 2016). Juvenile defendants are a vulnerable

population, and juvenile defendants with prenatal substance exposure have an increased vulnerability to misunderstanding the legal proceedings against them due to their brain development (Bath et al., 2015; Chien et al., 2016; Cox et al., 2012; Grisso et al., 2003; Panza & Fraser, 2015; Viljoen, Odgers, et al., 2007). McLachlan et al. (2014) identified that FASD is often a disorder that presents with different complications for the juvenile; however, the diagnosis might not always be apparent. This study adds to the research on the influence of prenatal substance exposure on adjudicative competence and supports the standard of practice to inquire about prenatal substance exposure during adjudicative competence evaluations. This study promotes positive social change by providing insight into the effect of prenatal substance exposure on juveniles' psycholegal abilities assessed with the JACI instrument.

Qualified forensic mental health examiners completing juvenile adjudicative competence evaluations need to have expertise in adolescent development and adjudicative competence concepts. Researchers have documented issues of developmental maturity and intellectual functioning on adjudicative competence within their studies (Armstrong & Friedman, 2016; Bath et al., 2015; Chien et al., 2016; Fogel et al., 2013; Grisso et al., 2003; McLachlan et al., 2014; Panza & Fraser, 2015). Prenatal substance exposure can impact developmental maturity and intellectual functioning based on the review of the literature and the findings of this archival review of adjudicative competence evaluations (Konrad et al., 2013; Minnes et al., 2017; Ross et al., 2015). This study promotes positive social change by adding to juvenile qualified forensic mental health examiners' standards of practice.

Juveniles with prenatal substance exposure might need additional instruction on the JACI and careful consideration of their ability to retain information learned on the JACI. Juvenile defendants that can retain information and use the information in a meaningful way would theoretically have better interactions with their defense attorneys and demonstrate the legal understanding necessary to make informed decisions about their case throughout the court process. Otherwise, in the detailed report to the court, the qualified forensic mental health examiner could provide information on the limitations of the juvenile and relate that information to the juvenile's developmental history. The report could include the juvenile's prenatal substance exposure and how the courtroom workers would be best able to support the juvenile. Examples could consist of using developmentally appropriate language and assessing the juvenile to understand the information provided to them. This study's findings support the need for the qualified forensic mental health examiner to provide information on the juvenile's ability to assist in their defense within the report.

This study's findings support the need to document the influence of prenatal substance exposure on adjudicative competence abilities and use the information to provide support for the opinion of adjudicative competence. Juvenile qualified forensic mental health examiners complete thorough investigations of juvenile defendants and provide information on the juvenile's factual understanding, rational understanding, reasoning and decision-making ability, and ability to assist in their defense. The trier of the fact, typically the judge, then uses that expert opinion to form a legal ruling of the juvenile's adjudicative competence. The influence of prenatal substance exposure and the

stage of cognitive development would add to the support of the adjudicative competence opinion. Recommendations given to the court regarding the juveniles' functioning abilities and the expert opinion should reflect the juvenile defendant's full neurological functioning. The influence of prenatal substance exposure can influence all aspects of adjudicative competence for juvenile defendants. The results of this study confirm the need to explore the impact of prenatal substance exposure to ensure proper standards of practice.

This study's results enhance positive social change with juveniles involved in the legal system and the forensic psychology field in ensuring due process rights of young offenders. This study allowed for greater insight into the influence of prenatal substance exposure on adjudicative competence psycholegal abilities of juvenile defendants. The results of this study will be distributed to the stakeholders and the research community to add to the understanding of adjudicative competence and the influence of prenatal substance exposure on juvenile adjudicative competence psycholegal abilities. Juveniles with prenatal substance exposure are a vulnerable population that needs protective measures to ensure their constitutional rights.

Conclusion

This exploratory multiple case analysis study provided support for additional research into the influence of prenatal substance exposure on juvenile adjudicative competence. This study suggests that juveniles with prenatal substance exposure need additional assessment of their rational understanding, reasoning and decision-making abilities, and their ability to help assist in their defense during adjudicative competence

evaluations. This study suggested that with juveniles with prenatal substance exposure, the juvenile's intellectual functioning is the best predictor of adjudicative competence abilities. With prenatal substance exposure, juveniles that were opined competent to proceed with adjudication mostly demonstrated thought processes suggesting a formal operational stage of cognitive development. Additionally, juveniles that were opined not competent to proceed with adjudication mostly demonstrated thought processes suggesting a concrete operational stage of cognitive development. There is a recommendation for further research to compare this study's findings with other juvenile adjudicative competence studies. This study enhances positive social change by adding to the research on prenatal substance exposure and juvenile adjudicative competence.

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Appendix: Data Use Agreement

DATA USE AGREEMENT

This Data Use Agreement (“Agreement”), effective as of (Enter date.) (“Effective Date”), is entered into by and between (Enter researcher's name.) (“Data Recipient”) and (Enter community partner name.) (“Data Provider”). The purpose of this Agreement is to provide Data Recipient with access to a Limited Data Set (“LDS”) for use in research in accord with the HIPAA and FERPA Regulations.

1. Definitions. Unless otherwise specified in this Agreement, all capitalized terms used in this Agreement not otherwise defined have the meaning established for purposes of the “HIPAA Regulations” codified at Title 45 parts 160 through 164 of the United States Code of Federal Regulations, as amended from time to time.
2. Preparation of the LDS. Data Provider shall prepare and furnish to Data Recipient a LDS in accord with any applicable HIPAA or FERPA Regulations

Data Fields in the LDS. No direct identifiers such as names may be included in the Limited Data Set (LDS). The researcher will also not name the organization in the doctoral project report that is published in Proquest. In preparing the LDS, Data Provider or shall include the **data fields specified as follows**, which are the minimum necessary to accomplish the research: (List the datapoints essential to the research that will be released.).

3. Responsibilities of Data Recipient. Data Recipient agrees to:
 - a. Use or disclose the LDS only as permitted by this Agreement or as required by law;
 - b. Use appropriate safeguards to prevent use or disclosure of the LDS other than as permitted by this Agreement or required by law;
 - c. Report to Data Provider any use or disclosure of the LDS of which it becomes aware that is not permitted by this Agreement or required by law;
 - d. Require any of its subcontractors or agents that receive or have access to the LDS to agree to the same restrictions and conditions on the use and/or disclosure of the LDS that apply to Data Recipient under this Agreement; and
 - e. Not use the information in the LDS to identify or contact the individuals who are data subjects.
4. Permitted Uses and Disclosures of the LDS. Data Recipient may use and/or disclose the LDS for its research activities only.

5. Term and Termination.

- a. Term. The term of this Agreement shall commence as of the Effective Date and shall continue for so long as Data Recipient retains the LDS, unless sooner terminated as set forth in this Agreement.
- b. Termination by Data Recipient. Data Recipient may terminate this agreement at any time by notifying the Data Provider and returning or destroying the LDS.
- c. Termination by Data Provider. Data Provider may terminate this agreement at any time by providing thirty (30) days prior written notice to Data Recipient.
- d. For Breach. Data Provider shall provide written notice to Data Recipient within ten (10) days of any determination that Data Recipient has breached a material term of this Agreement. Data Provider shall afford Data Recipient an opportunity to cure said alleged material breach upon mutually agreeable terms. Failure to agree on mutually agreeable terms for cure within thirty (30) days shall be grounds for the immediate termination of this Agreement by Data Provider.
- e. Effect of Termination. Sections 1, 4, 5, 6(e) and 7 of this Agreement shall survive any termination of this Agreement under subsections c or d.

6. Miscellaneous.

- a. Change in Law. The parties agree to negotiate in good faith to amend this Agreement to comport with changes in federal law that materially alter either or both parties' obligations under this Agreement. Provided however, that if the parties are unable to agree to mutually acceptable amendment(s) by the compliance date of the change in applicable law or regulations, either Party may terminate this Agreement as provided in section 6.
- b. Construction of Terms. The terms of this Agreement shall be construed to give effect to applicable federal interpretative guidance regarding the HIPAA Regulations.
- c. No Third Party Beneficiaries. Nothing in this Agreement shall confer upon any person other than the parties and their respective successors or assigns, any rights, remedies, obligations, or liabilities whatsoever.
- d. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.
- e. Headings. The headings and other captions in this Agreement are for convenience and reference only and shall not be used in interpreting, construing or enforcing any of the provisions of this Agreement.

IN WITNESS WHEREOF, each of the undersigned has caused this Agreement to be duly executed in its name and on its behalf.

DATA PROVIDER

DATA RECIPIENT

Signed: _____

Print Name: _____

Print Title: _____

Signed:

Print Name:

Print Title: