

University of Nevada, Reno

SCOTUS 'Decisions on Sentencing Juvenile Offenders: An Examination of Risk and Protective Factors of Juvenile Conduct Disorder and Adult Offending

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Abstract

Conduct disorder is one of the most frequently diagnosed mental illnesses in children in the United States today and consequently, is responsible for a great deal of juvenile delinquency. Extant research and the Supreme Court of the United States (SCOTUS) indicate that juvenile offenders are more easily rehabilitated than adult offenders in that they do not fully appreciate the nature of the crime they have committed due to being psychologically immature. **The current study is an examination of secondary data, with the goal of improving the understanding of whether respondents with a history of a potential diagnosis of conduct disorder have an equal likelihood of offending as adults relative to those who society considers “normal delinquent children”.**

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Introduction

In the 2012 case of *Miller v. Alabama*, the Supreme Court made a decision regarding the sentencing of juvenile offenders. In this case, the Supreme Court ruled that life sentences without the possibility of parole are unconstitutional for juvenile offenders. The majority opinion included the argument that adolescent and juvenile offenders do not have the mental maturity, impetuosity, or the capacity to appreciate the crime that they have committed (“Miller v. Alabama”, n.d.). Individuals sitting on a jury may refute the Supreme Court opinion, in the lay opinion that these minors knew exactly what they were doing and were aware of the fact they were committing a crime at the time, especially if the crime in question was violent. The issue with lay opinions however, is that they are emotionally biased. While the jury may believe that certain punishments fit the crime, there is research that suggests certain punishments such as life in prison without the possibility of parole for a juvenile is in violation of the 8th Amendment of cruel and unusual punishment (“Eighth Amendment”). Potential punishments for juveniles and the sentences they receive will be referred to throughout this paper.

In the United States, criminals are punished according to their level of blameworthiness, or proportionality, rather than the level of harm caused. In simple terms, the American criminal justice system operates according to an adversarial system which essentially means two advocates represent their side of the law. The goal of an adversarial system is for an impartial judge and a jury of the people to make a decision in terms of sentencing the offender during a criminal case after all aspects are accounted for. These aspects include mitigating and aggravating factors prior to passing judgment on a defendant. Following this principle of an adversarial system and according to SCOTUS

majority opinions regarding juvenile sentencing, juveniles are thought to lack the cognitive and emotional controls that are required in the decision making process as well as the ability to evaluate the potential consequences of their actions. The existence of such evaluations could be considered a mitigating factor. Research suggests that juveniles have a thought process such that their levels of risk are less important than the potential reward, meaning that the benefits of an action essentially outweigh the risks associated with those actions. Thus, juveniles subsequently discount future consequences more so than adults do (Steinberg & Scott, 2003). Moreover, conduct disorder (CD) according to the DSM-5, is “a repetitive and persistent pattern of behavior in which the basic rights of others or major age appropriate societal norms or rules are violated, as manifested by the presence of at least three of the following 15 criteria in the past 12 months from any of the categories: aggression to people and animals, destruction of property, deceitfulness or theft, and serious violations of rules” (“American Psychiatric Association”, 2013; Bressert, 2016).

According to researchers who conducted a survey study within the general prison population, CD is theorized to be a precursor for the equivalent adult diagnosis, antisocial personality disorder (APD), of which slightly less than 50 percent of prisoners are diagnosed (Fazel & Danesh, 2002). According to Loeber, Green, and Lahey (2003), children with conduct disorder are 17 percent more likely to be diagnosed with antisocial personality disorder in adulthood. Interestingly, a study done by Lahey, Loeber, Burke, and Applegate (2005) found that not just the diagnosis of CD itself is a risk factor, but that with each individual symptom of CD, children have a 37 percent increase to develop APD as adults per symptom. This finding supports that there is a sliding scale regarding which individuals will be more or less at risk than others.

The current study is an examination of secondary data, with the goal of improving the understanding of whether respondents with a history of a potential diagnosis of conduct disorder have an equal likelihood of offending as adults relative to those who society considers “normal delinquent children”. Using data from The National Longitudinal Study of Adolescent to Adult Health (Add Health), the current study examines the likelihood of adult recidivism of juvenile delinquents with conduct disorder diagnoses and related predictors of adult recidivism.

The current study will look at secondary, longitudinal data collected from The National Longitudinal Study of Adolescent to Adult Health (Add Health) and will be organized and operationalized to address the related concepts and analyzed using logistic regression analysis to answer the primary and secondary hypotheses. Depending on the outcomes of the research conducted, the hypotheses explored will shine a light on a controversial topic that affects the criminal justice system of the United States: the incarceration of adolescent children. The results of this study will add to the pool of research regarding the diagnoses of conduct disorder, as it will provide additional insight as to how to more appropriately sentence juvenile delinquents. It will also determine whether juveniles should be held solely responsible for their actions or if their actions should be considered in the context of a potential conduct disorder diagnosis, thus receiving rehabilitation in lieu of juvenile or adult incarceration. These results will also add to scholarly information regarding the unknown correlation between offender victimization and mental health diagnoses and if it could possibly be a causal factor for conduct disorder.

Additionally, future research should examine the comorbidity of additional disorders such as substance abuse disorder, depression, anxiety, bipolar disorder,

oppositional defiant disorder and attention-deficit hyperactive disorder. These variables should be examined on an individual level to control for reification and misdiagnoses.

Literature Review

The involvement of juveniles in the criminal justice system has become a problem in America. An estimated 2.1 million individuals under the age of 18 are arrested every year and 1.7 million cases are disposed of each year in juvenile courts. In less than one percent of the time, juveniles can be tried in adult court for severe crimes. The charges against these individuals usually include crimes against the person, property crimes, drug law violations, and public order offenses (“Youth involved with the juvenile justice system”, n.d.). It is difficult to determine exactly why juveniles become involved in crime, but research suggests several factors such as a poor or unstable home life, parental criminality, and victimization (Renzaho, Mellor, McCabe & Powell, 2013; Hodgins, Cree, Alderton & Mak, 2008; Baglivio, Wolff, Piquero & Epps, 2015; Silva, Larm, Vitaro, Tremblay & Hodgins, 2012).

The nature v. nurture psychological models indicate contesting ideas as to why or how children develop behaviorally. The nature model suggests CD is a result of some type of biological or genetic malfunction (Eme, 2007), while the nurture model suggests CD is caused by environmental triggers, stress, low socio-economic status (SES), and peer-rejection (Steinberg & Scott, 2003). The basis of the current study focuses on the nurture factors in relevance to CD. Research has suggested that a number of different constructs could bring on conduct disorder characteristics in juveniles; therefore, additional research of longitudinal, individual level data must be examined. Using data from The National Longitudinal Study of Adolescent to Adult Health (Add Health), the current study will examine the likelihood of adult recidivism of juvenile delinquents with potential conduct disorder diagnoses and related predictors of adult recidivism.

DSM-5 Conduct Disorder Criteria

Conduct disorder (CD) is a behavioral disorder, according to the Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM-5). CD is defined as: “A. A repetitive and persistent pattern of behavior in which the basic rights of others or major age appropriate societal norms or rules are violated, as manifested by the presence of at least three of the following 15 criteria in the past 12 months from any of the categories below, with at least one criterion present in the past 6 months” (“American Psychiatric Association”, 2013). It includes aggression to people and animals by means of bullying, physical fighting, the use of a weapon, having been physically cruel, having stolen while in confrontation with a victim, and/or has forced sexual activity upon a person. Additionally, CD also includes the destruction of property by intentionally causing damage either by fire or no fire; deceitfulness or theft such as breaking into someone’s house, building, or car, lying to obtain goods or favors, or to avoid obligations, and/or having stolen items of nontrivial value without confronting a victim. It also involves serious violations of rules such as staying out at night against parental rules before 13 years of age, running away from home overnight at least two times while under the care of a parent, and truancy from school beginning before 13 years of age. “B. The disturbance in behavior causes clinically significant impairment in social, academic, or occupational functioning” and “C. If the individual is age 18 years or older, criteria are not met for antisocial personality disorder” (“American Psychiatric Association”, 2013).

Conduct disorder is a behavioral disorder diagnosed in children and adolescents prior to the age of eighteen according to the DSM-5 in which children will be defined as juveniles younger than 10 years old and adolescents defined as juveniles 10-17 years old.

The criteria for conduct disorder remained relatively unchanged between the updates of the fourth and fifth editions of the DSM; therefore, the current study will continue to refer to the fifth edition throughout this research. One major addition between the fourth and fifth editions however, is the inclusion of a specifier for unemotional and callous behavior in order to describe whether the child in question has a more or less severe case of conduct disorder, and ultimately suggests how to go about treatment (Highlights of Changes, 2013; Scheepers, Buitelaar & Matthys, 2011).

Conduct disorder involves deviant behaviors in which the human rights of others are not considered and/or major principles are ignored, especially in reference to age. Examples include immature sexual advances, acts, and references; foul language; and drug or alcohol use. Children with conduct disorder are generally considered to have antisocial tendencies and behaviors including aggression, destruction of property, deceitfulness and stealing, and rule breaking. There are three subtypes of conduct disorder: Childhood-onset, adolescent-onset, and unspecified onset. Childhood-onset CD includes children under the age 10 who show at least one symptom attribute, whereas adolescent-onset includes children who do not have any symptom traits prior to 10 years old. Unspecified onset comprises of children who meet criteria for conduct disorder, but not enough information is available to clinicians as to whether these juveniles did or did not have any symptoms beginning before or after 10 years of age, making it impossible for an exact diagnosis regarding type (Porter, 2016).

There is an 8.5 percent prevalence of conduct disorder at some point in a child's life (Frick, 2016) and while the exact etiology is unknown, there is research supporting both the nature and nurture aspects of society. Childhood-onset CD is thought to be

caused by neurobiological, neuropsychological and cognitive deficits, or a lack of intelligence compared to “normal” children (Frick, 2016). Adolescent-onset CD is thought to be caused by the child’s environment and/or social influences such as childhood maltreatment, harsh parental tactics, neglect, parental criminality, poor socioeconomic status, experience with peer violence, and an overall unstable home environment (Kostic, Nesic, Stankovic, Zikic & Markovic, 2016; Silva, Larm, Vitaro, Tremblay & Hodgins, 2012; Kotch, Lewis, Hussey, English, Thompson, Litrownik & Dubowitz, 2008; Drugli, Larsson, Clifford & Fossum, 2007). In expansion of the nurture debate, two major elements have been studied regarding the etiology of conduct disorder: Parental characteristics and offender past victimization, both of which are referred to as “Risk Factors” below.

As previously stated, conduct disorder pertains to observations of corrupt behavior by juveniles involving theft, violence, sexual assault, and etcetera, therefore, an exploration of Supreme Court cases regarding the criminal sentencing structure of juveniles is necessary in order to understand what happens to individuals who act in ways that could potentially match a diagnosis of CD through the legal system.

Supreme Court Rulings on Juvenile Sentencing

The Supreme Court of the United States (SCOTUS) decided in multiple cases that juvenile offenders are not to be sentenced equivalent to adults. Even in cases of severe and violent acts juveniles cannot be treated the same as adults due to the neurobiology of the human brain, as stated by the court’s majority opinions in the cases *Miller v. Alabama*, 2012, *Graham v. Florida*, 2010, *Montgomery v. Louisiana*, 2016, and *Roper v. Simmons*, 2005.

According to the majority opinions of SCOTUS' decisions regarding juvenile sentencing, juveniles are mentally pliable as well as developmentally and cognitively immature and have the potential for rehabilitation prior the maturation of the brain in early adulthood (Steinberg & Scott, 2003). In other words, a juvenile could commit murder in the first degree containing the aspect of mens rea, or a guilty mind with a plan to kill, but still not receive an equivalent sentence to an adult merely because of his or her age. Through the years, most SCOTUS decisions have been made on the basis of the 8th Amendment in regards to the section concerning cruel and unusual punishments. The court argues that juveniles are too young to receive harsh sentences, specifically those of life in prison without the possibility of parole and capital punishment.

In concerns of capital punishment, also known as the death penalty, SCOTUS decided in *Roper v. Simmons*, 2005 that a death sentence is unconstitutional for a juvenile regardless of the charges. The court ruled in a 5-4 majority that due to the changing and evolving opinions by the American people and evolving standards of decency, sentencing minor individuals to death falls within violations of 8th Amendment rights of cruel and unusual punishment. This ruling affected all 50 "states through the incorporation doctrine of the 14th Amendment" ("*Roper v. Simmons*", n.d.), which states that the federal government can and will impose its laws unto that of the states. The incorporation doctrine declares that most provisions of the Bill of Rights also applies to that of state and local governments. *Roper v. Simmons* was extended from the Missouri Supreme Court in the decision of *Atkins v. Virginia* in which it decided that the execution of the mentally disabled violated both the 8th and 14th Amendments ("*Roper v. Simmons*", n.d.).

SCOTUS decisions on juvenile sentencing cases ultimately began in 2005 with

the decision of *Roper v. Simmons*, however, the expansion in opinion and what is permissible and what is not has been extended through cases of *Graham v. Florida*, 2010, *Miller v. Alabama*, 2012, and *Montgomery v. Louisiana*, 2016. In *Graham v. Florida*, a SCOTUS case involving life sentencing of juveniles, 16-year-old Terrence Graham, was convicted of armed burglary as well as attempted armed robbery and was sentenced to life in prison without parole by Florida's Supreme Court. On May 17, 2010, the Supreme Court of the United States decided that it is unconstitutional and in violation of the 8th Amendment for juveniles who commit non-homicidal crimes to receive a life sentence without the possibility of parole in that the punishment did not match the crime ("Graham v. Florida", n.d.).

Miller v. Alabama, 2012, was based on two separate, but similar cases decided by the states of Alabama and Arkansas regarding juvenile homicide committed by two 14-year-old boys. The first district court case in 2003, *Miller v. Alabama*, decided in the state of Alabama, concerned two adolescent individuals, Evan Miller and Colby Smith. Miller and Smith beat a man named Cole Cannon to death using a baseball bat. The events took place during a robbery within Cannon's trailer after all three individuals allegedly smoked marijuana and drank alcohol together. Smith was the first to hit the victim with the bat and Miller proceeded to beat him until dead. The two boys later returned to the trailer in an attempt to destroy any evidence by burning it down. The second case, another juvenile murder case involving a teen boy, was in reference to *Jackson v. Hobbs*, decided in Arkansas. The juvenile, Kuntrell Jackson, and two acquaintances made the decision to rob a local video game store where the store clerk was shot and killed. In terms of both cases, Miller and Jackson were sentenced as adults by the states of

Alabama and Arkansas and received the sentences of life in prison without the possibility of parole (“Miller v. Alabama”, n.d.)

Both Miller and Jackson’s cases were appealed to their states’ supreme courts; however, their decisions upheld those of the lower courts. SCOTUS took the case and decided in June of 2012 that the Alabama and Arkansas Supreme Courts’ decision need be reversed and remanded. It was stated by Justice Elena Kagan that holding juvenile offenders to the same standard of adults is in violation of the eighth amendment rights in protection from cruel and unusual punishment (“Miller v. Alabama”, n.d.) and thus expanded the *Graham* ruling to include homicidal crimes as well as non-homicidal crimes.

Life in prison without the possibility of parole was ultimately ruled in violation of the 8th Amendment within the most recent SCOTUS case of *Montgomery v. Louisiana*, 2016, an extension of *Miller v. Alabama*, 2012, as it was decided that all juveniles who had previously been sentenced to life in prison without the possibility of parole are to be re-sentenced for the potential of receiving parole in the future regardless of the charges brought against them. The ruling of *Montgomery v. Louisiana*, 2016 is to be applied retroactively and affected close to 2,300 individual cases at the time of the decision (“Montgomery v. Louisiana”, n.d.).

Rehabilitation

Psychosocial research supports SCOTUS’ theory indicating that certain treatments are empirically supported (Kazdin, 2015) such as cognitive-behavioral interventions (Underwood & Washington, 2016) and functional family therapy (Shelton, 2005). Cognitive-behavioral interventions include one-on-one meetings between

psychologists and juveniles in an attempt for the patient to learn healthy behavioral responses to certain scenarios known or thought to induce a negative reaction by the individual. The goal is to change the patient's thinking and behavior in response to disruptive and/or aggressive triggers. Functional family therapy is a family centered approach that attempts to improve family support and communication. The goal is to decrease familial negativity among individuals. The idea behind functional family therapy is that the familial element is the primary environment in which a child learns the majority of their coping skills; therefore, fixing issues within this setting would be the most beneficial for attempting to reduce some types of problem behavior.

Psychological meta-analysis results, on the other hand, suggest otherwise in that there is an issue regarding the misdiagnosis as well as a lack of diagnosis of CD as was found by researchers Kim and Miklowitz, 2002. For instance, a lack of compliance in children is somewhat expected, however, it is difficult for parents and teachers to decide at what point it is necessary to ask for help. CD is misdiagnosed due to the comorbidity with another underlying behavioral disorder (Kim & Miklowitz, 2002).

Risk Factors

Parental Characteristics

Parental characteristics such as marital status, educational attainment, employment status, prior criminality, and mental illness diagnoses are also potentially important to the understanding of childhood behavioral outcomes. The social factors of children with conduct disorder often came from broken homes in which there were high rates of divorce as well as parents with psychiatric disorders (Kostic, Nestic, Stankovic, Zikic & Markovic, 2016). In concurrence with the previous findings, family stability was

found to be protective against conduct disorder even if family configuration involved only a single parent, but a stable one (Foster, Nagin, Hagan, Angold & Costello, 2010) suggesting that contingencies and expectations of strong, authoritative parents is a defense for behavioral disorders.

A study recently done in Australia focused on dependent variables concerning child behavior difficulties, child prosocial behaviors, and parental psychological distress (Renzaho, Mellor, McCabe & Powell, 2013). Similar to the methodology of the proposed study, this study used secondary data from the Victorian Child Health and Wellbeing Study (VCHWS), which consisted of telephone surveys and interviews of the parents/guardians of children between the ages of 4 and 12. These researchers found that children from families of low or poorly functioning households had lower levels of prosocial behavior, higher levels of behavioral difficulties, emotional symptoms, conduct problems, inattention, and peer relationship problems, indicating a possibility of a CD diagnosis as well as issues in terms of potential future offending (Renzaho, Mellor, McCabe & Powell, 2013). Additionally, one study done by researchers at the Department of Forensic Mental Health Science found, “The parents and siblings of patients with CD, as compared to those without, had higher rates of mental illness and of criminality” (Hodgins, Cree, Alderton & Mak, 2008). Relatedly, parents with higher levels of psychological distress have a positive correlation with their children’s behavioral contingencies. The prevalence of such distress increases in underprivileged societies as well as whether the mother, or mother-like individual: is single, has a low education level, low income, less social support, and is the caretaker for an increased amount of children (Martin, Hiscock, Hardy, Davey & Wake, 2007).

Criminality among parents is also a strong predictor of criminal offending in adolescence and early adulthood, as was published in a study (Silva, Larm, Vitaro, Tremblay & Hodgins, 2012). However, there limited research on the criminality of parents who have children with conduct disorder compared to the research done regarding the offending of the children themselves; an issue that will be addressed below.

A major issue regarding parental characteristics is the concept of reification and the misdiagnoses, over-diagnoses, and lack of diagnoses of behavioral disorders. The lack of properly diagnosing behavioral disorders is not only limited to conduct disorder, but other popular behavioral disorders as well such as operational defiant disorder and attention deficit hyperactive disorder. According to researchers at two different university hospitals in Switzerland, parents dramatically underestimated or under reported when it comes to their children and diagnoses of disruptive behavioral disorders, including CD. Without a clear understanding of their child's diagnosis, parents (most often the main caregiver for their children) are both uninformed and uninvolved when it comes to treatment and rehabilitation of childhood disruptive disorders. If left unchecked, these children run the risk of developing an adult diagnosis of antisocial personality disorder at a more likely rate than their controls (Rothen, Vandeleur, Lustenberger, Jeanprêtre, Ayer, Gamma & Preisig, 2009).

An interesting finding regarding parental characteristics, as was found by researchers who participated in a national cohort study from several countries, found that smoking cigarettes during pregnancy leads to an increased risk of behavioral conduct problems. The researchers did not specify that these conduct problems were specifically diagnoses of conduct disorder, but simply related the findings to generalized behavioral

conduct issues. They found that smoking during pregnancy was a statistically significant risk factor for these conduct issues, which reasonably raises questions regarding prenatal actions by other mothers such as illicit drug use (Murray, Irving, Farrington, Colman & Bloxson, 2010). A very important criticism regarding this study however is the ability for confusing causation with correlation. The act of smoking during pregnancy could simply be a spurious variable since researchers do not have the ability to observe an infant exactly “behaving” let alone presenting behavioral problems in relation to criminality. Women who smoke during pregnancy could very well be within a social environment in which it is socially acceptable to be smoking, drinking, and doing many other kinds of arguably unhealthy behaviors or maybe not have the information readily available regarding healthy prenatal care, simply making them ignorant to the proposed dangers. Either and both potential explanations prematurely suggest poverty, which was not ruled out in this study.

Respondent Victimization history

In regards to respondent victimization history, i.e. the victimization of the child with CD, numerous studies state that maltreatment and neglect in early childhood increase the likelihood that the child in question will develop conduct disorder. Maltreatment is the improper physical and/or psychological treatment of a child or referring to improper practice while neglect is considered to mean improper care for the child in a failure to care. They also found that neglect prior to the age of two years old showed a significant increase in the probability of the disorder compared to children taken into Child Protective Services after that age mark (Kotch, Lewis, Hussey, English, Thompson, Litrownik & Dubowitz, 2008). Interestingly, in contrast to neglected children,

maltreated children were later in life more likely to show symptoms of CD in comparison to children prior to the age of four years old, who showed no greater increase of issues in later years (Silva, Larm, Vitaro, Tremblay & Hodgins, 2012). There is limited research published, however, testifying that offender victimization outside of the home and family structure is a causal factor for CD (Chen, Thrane, Whitbeck, Johnson & Hoyt, 2007), however, there are some important correlations amongst numerous variables.

Within the last couple of decades, research has found correlations and important relationships between variables such as violent victimization and psychiatric disorders, as well as violent victimization and mental illness (Silver, Arseneault, Langley, Caspi, & Moffitt, 2005). These are important aspects upon dealing with the concept of conduct disorder, which as explained previously, is considered to be a mental illness according to the DSM-5. The significance however is questionable since Silver et al (2005) yielded results from a sample group of adult men and women of 21 years of age. Conduct disorder is a very precise disorder in that it only affects juveniles prior to the age of 18-years-old and is usually established in early childhood (childhood-onset) or early adolescence (adolescent-onset) which, as clarified previously, states a diagnosis anywhere from 5-years-old to 17-years-old.

It is difficult to establish a causal relationship or even a simple correlation regarding victimization outside of the home since children are for one: a protected group regarding survey data in terms of The National Crime Victimization Survey (NCVS) in that they themselves, cannot report as being a victim of a crime if under the age of 12. Any information into this survey, if collected, would be from the parents and/or guardians as the survey source; and for two: The Unified Crime Report (UCR), which

does collect information regarding crimes against children, however it only measures reported crime. This has its own reliability issues and is not a representative sample when looking at the traditional wedding cake model of crime (“The Nation’s Two Crime Measures,” 2017).

Moreover, violent offending can be considered a precursor for violent victimization. CD is associated with higher rates of violent offending (Hodgins et al., 2008), therefore, it is theoretically feasible to believe that individuals with conduct disorder would have a higher risk of victimization. Youth who act in ways explained by CD, e.g. callous, antisocial, deviant, aggressive, etc., would likely be a victim of some sort of physical crime just by observing how human creatures behave. For instance, when wronged, cheated, stolen from, assaulted, etc., people tend to: call the police, stand their ground and fight back, and/or even pursue the criminal involved, retroactively making the offender now a victim of a different crime. It has also been supported that individuals with CD were shown to have been involved with violence in one way or another from a much younger age than their control groups of individuals without CD (Torok, Darke, Kaye & Ross, 2011).

Finally, an extremely important potential causal factor regarding victimization is the concept of self-victimization through the participation of substance abuse. This variable is rather difficult to control for and needs more attention in future studies since research that indicate significant relationships between substance abuse and CD diagnoses are scarce. According to a study done by researchers at the National Drug and Alcohol Research Centre in Sydney, Australia, drug and alcohol abuse did predict both violent victimization of the individual as well as violent offending, but it did not show

any correlation between a diagnosis of CD and substance abuse (Torok et al., 2011).

Demographics

In an expanded look of children and CD diagnosis, studies have been considered regarding specific and general demographic characteristics including: age, sex, and race. Many studies find that boys have a much higher rate of CD diagnoses than girls (Eme, 2007; Maughan, Rowe, Messer, Goodman & Meltzer, 2004;) however there is no mention of control regarding the diagnoses, indicating potential reification and even misdiagnoses. In opposition to those findings, a broad range of antisocial tendencies were studied and it was found that the gender ratios varied much more greatly regarding childhood-onset CD (10:1 to 15:1, male: female) than among adolescent-onset (1.5:1 to 5:1, male: female) (Fontaine, Carbonneau, Vitaro, Barker, & Tremblay, 2009). In terms of race and ethnicity, researchers R. Lynn, of the University of Ulster, Coleraine, Northern Ireland and H. Cheng of the Institute of Education, University of London, theorized that there are, in fact, racial and ethnic differences in behavioral personalities due to a specific trait rather than a discrete condition. Using data collected from the Millennium Cohort Study, 18,819 children born between 09/2000 and 01/2002 were studied with reports from teachers regarding the children's behavioral difficulties at the young age of seven. They found that Blacks (both African and Caribbean) had higher rates of conduct disorders than White individuals, showing a positive correlation with the incarceration and arrest rates between the two groups. Pakistanis had mildly higher rates of conduct disorder as Whites and Bangladeshis and Whites were about equal. South Asians and Indians had lower rates of conduct disorder than Whites and Chinese individuals had substantially lower rates compared to Whites (Lynn & Cheng, 2014).

To point out an obvious issue with their research, the data used was collected from teacher reports, which in applied behavior analysis, is called an indirect observation. Indirect observations save time and resources, however they are not as effective or accurate as a direct observation done by a licensed behavior analyst or psychologist, therefore the validity of this study is questionable in that it has the potential for biases prior to the analysis of the data.

While there are numerous risk factors regarding the causal attributes of conduct disorder, the previously stated research supports that the majority of children diagnosed with CD seem to, at least in part, develop the disorder due to environmental and social factors. Children with conduct disorder have the potential to build up a resiliency in the case that the disorder was brought on primarily by environmental factors (Foster et al., 2010) and therefore supports the idea of rehabilitation without drug therapy. An additional suggestion would be to rehabilitate and treat the entire family and to cure the home environment through family therapy as well as individual cognitive-behavioral therapy instead of rehabilitating and treating the child solely. If the environment poses half of the problem, then altering it should be half of the solution.

The Current Study

The purpose of the current study is to expand on previous studies and to examine whether parental characteristics and/or prior victimization are potentially causal factors of CD. Results in support of these research questions could expand on how to treat children with conduct disorder and ultimately whether they should be treated with cognitive behavioral therapy or drug therapy. The questions to be studied shine light on a controversial topic that affects the criminal justice system of the United States: the

incarceration of adolescent children. The current study attempts to determine what degree parental characteristics, violent past victimization, and demographic environments have an effect on CD diagnoses as well as attempting to determine whether respondents with a potential CD diagnosis have an increased risk of offending as an adult. Upon obtaining results from this study, it will add to the literature regarding the diagnoses of conduct disorder and could potentially provide additional insight as to how to more appropriately sentence children and adolescents who become delinquent. It will also add to the research regarding whether juvenile delinquents should be solely responsible for their actions or if their actions should be considered within the context of a CD diagnosis. The results will also add to scholarly information regarding the unknown correlation between offender victimization and mental health diagnoses and if it could possibly be a causal factor for conduct disorder and adult offending.

The primary hypothesis of the proposed study is, “Respondents with a potential diagnosis of conduct disorder will have higher odds of offending as adults relative to respondents who did not display conduct disorder characteristics in their youth.” The first set of additional hypotheses (1-9) will assess risk factors associated with childhood CD diagnoses including characteristics of the respondent and their parents.

1. Male respondents will not have higher odds of a possible conduct disorder diagnosis relative to female respondents.
2. Black respondents will have higher odds of possible conduct disorder diagnoses relative to white children.
3. Respondents who have been victimized will have higher odds of a possible conduct disorder diagnosis.

4. Respondents who have been suspended from school will have higher odds of a possible conduct disorder diagnosis.
5. Respondents who perceive negative conditions at home (general unhappiness, having a mother who is not loving, being unsatisfied with mother, and/or having family that does not pay attention) will have increased odds a possible conduct disorder diagnosis.
6. Respondents whose parents are unmarried, divorced, or widowed will have higher odds of a possible conduct disorder diagnosis.
7. Respondents whose parents smoke cigarettes will have higher odds of a possible conduct disorder diagnosis.
8. Respondents whose parents drink alcohol multiple times a week will have a higher possible conduct disorder diagnosis.
9. Respondents who perceive cognitive and behavioral attention problems based on retroactive self-reflection will have higher odds of a possible conduct disorder diagnosis.

The second set of additional hypotheses (10-11) examine risk factors for adult offending, specifically adult respondents who will become incarcerated.

10. Respondents whose parents have ever been incarcerated will have higher odds of offending as adults.
11. Respondents who have received psychological or emotional counseling and/or alcohol abuse programs will have lower odds of offending as adults.

Methodology

The purpose of the current research is to explore the SCOTUS' decision regarding the sentencing of juveniles in the ruling that they are less culpable and less blameworthy than adults who commit similar crimes. The current study will assess the risk of adult offending for respondents diagnosed with a potential conduct disorder relative to respondents without a potential CD diagnosis. The primary research question is to determine whether the Court's decision applies to children diagnosed with conduct disorder and to decide to support or refute the idea that children diagnosed with CD have equal potential for rehabilitation as children without a diagnosis of CD.

Data

The current study analyzes data from the National Longitudinal Study of Adolescent to Adult Health (Add Health), between the years of 1994-2008 ("Add Health Codebook Explorer (ACE)", 2015). Add Health data was originally collected via surveys during school hours and consisting of more than 90,000 potential juvenile participants within the "In-School Questionnaire" instrument, which will be referred to and expanded on below.

To be involved in the Add Health's study, an adolescent's answer to a specific question or questions on the "In-School Questionnaire" determined his or her eligibility for inclusion in an oversample regarding personal information such as age, race, sex, and etcetera. "Add Health participants provided written informed consent for participation in all aspects of Add Health in accordance with the University of North Carolina School of Public Health Institutional Review Board guidelines that are based on the Code of Federal Regulations on the Protection of Human Subjects 45CFR46" ("Questions about

add health — add health,” 2014). The Add Health Data is secondary data, which will not pose risks to participants that are greater than minimal nor is there any possibility of identification of any participants.

The public data collected through the Add Health’s website ("Add Health Codebook Explorer (ACE)", 2015) includes survey data constructed between the years of 1994 and 2008 from instruments recognized and named as such: In-School Questionnaire, Parent Questionnaire, Wave I In-Home Interview, Wave II In-Home Interview, Wave III In-Home Interview, and Wave IV In-Home Interview. The In-School Questionnaire, Parent Questionnaire, and Wave I In-Home Interview were all included within the Add Health Wave I instrument.

The “In-School Questionnaire” consists of data recorded from students between 7th and 12th grade during the 1994-1995 school year beginning in September, and ending in April. One hundred forty-five schools were nationally involved in this data collection and over 90,000 students were interviewed, this process taking between forty-five minutes to one hour to complete per student. The variables studied included demographic and social information as well as education, parent information, health status, friendships, household structures, future expectations, risk behaviors and school activities.

“The Parent Questionnaire” consisted of interviewing one of the parents of the child previously interviewed and accepted for the study in an attempt to gather information regarding marital status and relationships, education, employment, income, neighborhood features, and involvement in the child’s life regarding school activities, communication, and interactions.

“The Wave I In-Home Interview” was also completed in 1995, after the collection

and completing of “The Parent Questionnaire”, between the months of April and December and included over 20,000 individuals. The data were collected from the respondents previously interviewed within the “In-School Questionnaire” instrument, question topics including peer networks, family dynamics, decision-making processes, educational information, criminal activity, and substance abuse. The “Wave II In-Home Interview” was essentially identical to Wave I and included the same respondents in 1995. Wave II included close to 15,000 individuals and was conducted between the months of April and August 1996.

“Wave III In-Home Interview”, conducted in 2001-2002, included over 15,000 of the individuals interviewed in Wave I and aimed to gain knowledge of the histories of those individuals regarding educational attainment, employment, marital and relationship status, and childbearing. The topics in this wave included similar ones as Waves I and II, but also comprised of newly added questions more relevant to the young adult cohort such as sexual activity and histories, arrest/incarceration rates, and employment questions.

Finally, “Wave IV In-Home Interview” was conducted between the years of 2008-2009 making the cohort age of the group of respondents between 24 and 34 years of age. This wave was designed to be a follow-up of those individuals originally included at the beginning of the study and involved many of the same questions as Waves I and II, but also similar questions as Wave III in that these topics were more adult age appropriate during these finalized waves.

Measures

Specific measures from the Add Health Data will examine responses from “The

Parental Questionnaire” as well as the “In-Home” interviews with the children recorded in waves 1-4.

Dependent Variables

The dependent variables in the current study include 1. A potential diagnosis of conduct disorder and 2. Adult incarceration. The primary hypothesis of the proposed study is, “Respondents with a potential diagnosis of conduct disorder will have higher odds of offending as adults relative to respondents who did not display conduct disorder characteristics in their youth.” The first set of additional hypotheses (1-8) will assess risk factors associated with childhood CD diagnoses including characteristics of the respondent and their parents.

In the current study, potential CD diagnosis is measured as an additive scale in terms of conduct disorder attributes presented within the Add Health data. The components of this measure include: damaging property, lying to parents, acting unruly in public, and store theft. It is necessary to code for the potential of a CD diagnosis as opposed to a CD diagnosis by a medical professional for several reasons: 1. Add Health did not assess behavioral diagnoses in their questionnaires, and 2. Using CD attributes functioning together in one variable, according to the DSM-5 criteria, allows this study to control for reification, misdiagnoses, and undiagnosed CD.

The concept of reification concerns the issue of defining and confusing abstract ideas with concrete things. Moreover, in regards to behavior analysis, many behavioral issues and disorders are explained through circular reasoning. For example, an individual has conduct disorder and he has conduct disorder because he acts in a specific way, and the individual acts in this specific way because he has conduct disorder. Due to the idea

of reification, there is a high likelihood of misdiagnosing a juvenile with a behavioral disorder in that other than observation, there is no definitive or universal standards for defining any behavioral disorder, nor can it be identified through clear and precise methods in the same way a broken bone can be identified through an x-ray.

Independent Variables

The independent variables for the current study are recorded within two subsets. Subset 1 will include secondary hypotheses 1-9 which will assess risk factors associated with childhood CD diagnoses in regards to respondent characteristics as well as past violent victimization, and parental characteristics.

The variables of respondent characteristics include sex, age, race, ethnicity, whether he/she was ever suspended from school, if he/she was ever a victim of a violent crime outside of the home through the means of being shot, stabbed, jumped, or having a knife or gun pulled on them, cognitive attention issues through past self-reflection, and behavioral attention issues through past self-reflection and will assess secondary hypotheses 1-9.

1. Male respondents will not have higher odds of a possible conduct disorder diagnosis relative to female respondents.
2. Black respondents will have higher odds of possible conduct disorder diagnoses relative to white children.
3. Respondents who have been victimized will have a higher possible conduct disorder diagnosis.
4. Respondents who have been suspended from school will have a higher possible conduct disorder diagnosis.

5. Respondents who perceive negative conditions at home (general unhappiness, having a mother who is not loving, being unsatisfied with mother, and/or having family that does not pay attention) will have increased odds a possible conduct disorder diagnosis.
6. Respondents whose parents are unmarried, divorced, or widowed will have higher odds of a possible conduct disorder diagnosis.
7. Respondents whose parents smoke cigarettes will have higher odds of a possible conduct disorder diagnosis.
8. Respondents whose parents drink alcohol multiple times a week will have a higher possible conduct disorder diagnosis.
9. Respondents who perceive cognitive and behavioral attention problems based on retroactive self-reflection will have higher odds of a possible conduct disorder diagnosis.

Independent variables included in Subset 2 assess secondary hypotheses 10-11 which examine risk factors for adult offending, specifically adult respondents who become incarcerated. The variables include the conduct disorder dependent variable, respondent: sex, age, race, ethnicity, suspension from school, living conditions, educational attainment, annual household income, a history of psychological or emotional counseling, and alcohol abuse counseling, as well as past incarceration of the parents of the respondent.

10. Respondents whose parents have ever been incarcerated will have higher odds of offending as adults.
11. Respondents who have received psychological or emotional

counseling and/or alcohol abuse programs will have lower odds of offending as adults.

Analytic Technique

The results of the analyses for the current study are organized into two tables: Table 2 presents ordinal logistic regression models analyzing predictor variables for potential conduct disorder diagnoses (Models 1-4) and Table 3 presents binary logistic regression models analyzing predictor variables for adult offending (Models 5-8). The data are analyzed using ordinal logistic regression for Models 1-4, meaning the outcome measure consists of an additive scale representing a potential CD diagnosis calculated by adding together four CD attributes of: damaging property, lying to parents, store theft, and acting unruly in public. In Models 5-8, the current study used binary logistic regression, also known as a two categorical system e.g. yes or no answers, due to the binary dependent variables being examined in the research. These four models predict whether respondents became incarcerated as adults.

In Table 2 - Ordinal Logistic Regression Model: Analyzing Predictor Variables for Potential Conduct Disorder Diagnoses, four models were generated to predict a potential diagnosis of CD. Model 1 is the baseline model, which includes demographic characteristics of the respondents as well as a measure indicating whether or not he or she was ever suspended from school as predictors of potential CD diagnosis. Model 2 includes the respondents' perceptions of their home life as well as parent characteristics, in addition to the demographic characteristics and suspension measure included in Model 1. Model 3 includes the measures examined in the first two models in addition to the respondents' victimization history. Finally, Model 4, the full model, examines

respondents' past self-reflections of cognitive and behavioral attention issues in addition to all the measures assessed in the previous three models.

In Table 3 - Binary Logistic Regression: Analyzing Predictor Variables for Adult Offending, four different models were generated predict adult incarceration. Model 5, the baseline model, assesses only whether a potential CD diagnosis predicts adult incarceration. Model 6 examines respondent characteristics, age, sex, and race in addition to the potential CD diagnosis measure. Model 7 examines whether the respondents attended counseling services (psychological, emotional, and/or alcohol abuse counseling) in addition to the predictors examined in the previous two models. Model 8, the full model, examines respondents' parents' past incarceration in addition to the measures assessed in Models 5, 6, and 7.

Results

Descriptive Statistics

Means, standard deviations, and sample sizes (N) for measures included in the current research are presented in Table 1 Descriptive Statistics.

Dependent Variables

Nearly 70 percent of respondents displayed at least one characteristic indicative of a potential conduct disorder diagnosis and over 15 percent of respondents ultimately became incarcerated as adults at some point in their lives. According to the cumulative results, located on page 34 of this study, 27.57 percent of respondents displayed at least one conduct disorder attribute, 49.64 percent displayed at least one of two conduct disorder attributes, 63.25 percent displayed at least one of three overlapping attributes, and 69.78 percent displayed at least one of the four CD attributes included in the additive scale measure. In regards to the mean percentages of CD attributes, as attributes two, three, and four were added to the measured scale, the ratio of an overall potential diagnosis decreased. Moreover, 27.57 percent of individuals met criteria for the first attribute, 22.07 percent met the criteria for two of the included attributes, 13.61 percent met the criteria for three of the included attributes, and 6.53 percent met the criteria for all four of the included attributes.

Predictor Variables

On Table 1 Descriptive Statistics, the first set of predictor variables comprised of respondent demographic characteristics including: sex (male=1, and female=0); race/ethnicity, coded as a series of dichotomous measures including: “non-Hispanic white” (the reference group), “non-Hispanic black”, “Hispanic”,

and “Other”; and age, coded as a continuous measure from the “Wave I In-Home Interview” of Add Health. Table 1 shows male respondents made up 48.39 percent of the study in reference to females; non-Hispanic white respondents made up 57.74 percent; non-Hispanic blacks made up 24.58 percent; Hispanic made up 13.53 percent; and Other made up 3.30 percent. The average age of the children in regards to subset 1 of secondary hypotheses, which assessed risk factors associated with childhood CD diagnoses, was 16 years of age, and within the second set of predictor variables, 27.76 percent of all respondents were suspended at least once from school.

The third set of predictor variables located in Table 1 Descriptive Statistics recorded respondents’ perceptions of home-life. These perceptions were recorded from the child respondents’ answers to specific questions about whether their mother and father are loving, whether they are satisfied with their mother and father as a parent, and whether they believe that their family pays attention to them. 95.93 percent of respondents indicated that their mother was loving, 93.71 percent indicated that they were satisfied with their mother, and 71.04 percent indicated that their family pays well enough attention to them. The current study also coded for identical questions in reference to the father figure, however, there were too many missing cases to include these measures in the analysis.

The fourth set of predictor variables located in Table 1 referenced parent characteristics which consisted of: whether the parent is generally happy with his or her life; if he or she smokes cigarettes; if he or she drinks alcohol excessively; the parents’ age; the parents’ marital status such as being married (the reference

group), having never been married, being divorced or separated, and being widowed; the parents' past criminality in terms of whether the mother had ever been incarcerated and whether the father had ever been incarcerated. The results recorded in Table 1 indicated that 96.30 percent of parents agreed that they were generally happy with their lives; 45.12 percent smoked cigarettes; 13.65 percent excessively drank alcohol; the average age of the parent was 41 years of age; 70.15 percent were currently married; 6.35 percent had never been married; 20.26 percent were divorced or separated; 3.25 percent were widowed; 3.49 percent of mothers were ever incarcerated; and 15.08 percent of fathers were ever incarcerated.

In the fifth set of predictor variables concerning respondent victimization history, located in Table 1, 29.95 percent of respondents indicated that they had ever been a victim of some kind of violent crime involving: having ever been shot, stabbed, jumped, and/or having a knife/gun pulled on them.

Finally, the sixth and final set of predictor variables were comprised respondent characteristics as an adult including: cognitive and behavioral self-reflections of attention issues; Living situations in terms of living with a parent, living on their own, or other; Educational attainment such as less than a high school degree, a high school graduate, or greater than high school; Annual household income of less than \$30,000; and any counseling services such as psychological and/or emotional counseling or alcohol abuse counseling. In regards to cognitive self-reflection, 47.99 percent of respondents indicated that they perceived themselves to have had some kind of cognitive attention issue

between the ages of 5 to 12; 39.06 percent indicated that they perceived some kind of behavioral attention issue between the ages of 5 and 12. 15.36 percent of respondents lived with a parent; 77.19 percent lived on their own; and 6.98 percent lived with someone else, within dormitories, or were homeless. 7.8 percent had less than a high school diploma; 93.29 percent had graduated high school; and 75.87 percent had some sort of educational attainment beyond high school. In regards to annual household income, 21.16 percent made less than \$30,000. 10.29 percent had received either psychological or emotional counseling at some point within their lives; and 37.99 percent had received alcohol abuse counseling at some point within their lives.

Table 1 Descriptive Statistics

	<u>N</u>	<u>Means</u>	<u>Standard Deviations</u>
Dependent Variables:			
1 Potential Conduct Disorder Diagnosis	6460	38.67%	1.227
Respondent displayed 0 Attributes	1952	30.22	Cumulative % 27.57 49.64 63.25 69.78
Respondent displayed 1 Attributes	1781	27.57	
Respondent displayed 2 Attributes	1426	22.07	
Respondent displayed 3 Attributes	879	13.61	
Respondent displayed 4 Attributes	422	6.53	
2 Adult Incarceration	5107	15.37%	0.361
Predictor Variables:			
1 Respondent Demographic Characteristics:			
Sex (male=1)	6503	48.39%	0.500
Race			
Non-Hispanic White (ref)	4751	57.74%	0.494
Non-Hispanic Black	4751	24.58%	0.431
Hispanic	4147	13.53%	0.342
Other	4751	3.30%	0.179
Age (Wave I)	6501	16	1.773
2 Respondent ever Suspended	6488	27.76%	0.448
3 Respondent Perceptions of Homelife:			
Mother is Loving	5793	95.93%	0.198
Satisfied with Mother	5767	93.71%	0.243
Family Pays Attention to Me	6467	71.04%	0.454
4 Parent Characteristics:			
Parent is Happy	5619	96.30%	0.189
Parent Smokes	5630	45.12%	0.498
Parent Excessively Drinks Alcohol	5625	13.65%	0.343
Parent's Age	5613	41	6.535
Parents' Marital Status:			
Married (ref)	5638	70.15%	0.458
Never Married	5638	6.35%	0.244
Divorced/Separated	5638	20.26%	0.402
Widowed	5638	3.25%	0.177
Parental Criminality:			
Mother ever Incarcerated	5065	3.49%	0.184
Father ever Incarcerated	4820	15.08%	0.358
5 Respondent Victimization History		29.95%	0.682
6 Respondent Characteristics as an Adult:			
Cognitive & Behavioral Self-Reflection:			
Cognitive Self-Reflection	4872	47.99%	2.244
Behavioral Self-Reflection	4872	39.06%	1.575
Adult Respondent Living Situation:			
Lives with Parents	5112	15.36%	0.361
Lives on Own (ref)	5112	77.19%	0.420
Other	5112	6.98%	0.255
Educational Attainment:			
Less than High School	5113	7.8%	0.268
High School Graduate (ref)	5113	93.29%	0.250
Greater than High School	5113	75.87%	0.428
Income Less than \$30,000/year	4640	21.16%	0.409
Counseling:			
Psychological and/or Emotional	5113	10.29%	0.304
Alcohol Abuse	4077	37.99%	0.485

Analytical Models

Analyzing Predictor Variables for Potential Conduct Disorder

Models 1-4, located within Table 2 Ordinal Logistic Regression Model:

Analyzing Predictor Variables for Potential Conduct Disorder, estimated the effect of this study's predictor variables on potential conduct disorder diagnoses using ordinal logistic regression models. These models contain the following variables: Respondent characteristics of sex, race, ethnicity, age, and school suspension; Respondent perceptions of home-life of whether the mother was loving, if the respondent was satisfied with the mother as a parent, and if the respondent felt like the family paid attention to him/her; Parental characteristics including whether the parent(s) are happy, if the parent(s) smokes cigarettes, if the parent(s) drink alcohol excessively, the parent(s) average age, the parent(s) marital status, and whether the parent(s) had ever been incarcerated; Respondent victimization history; and cognitive/behavioral self-reflection.

In Model 1, the effects of respondent characteristics, including the variables of sex, race, ethnicity, age, and school suspension were examined. Being a non-Hispanic black individual decreased the odds of a potential diagnosis (OR = 0.738, $p < .001$), thus failing to support hypothesis 2, which predicted that black respondents would have higher odds of potential conduct disorder diagnoses. Having ever been suspended from school, however, did increase the odds of a potential CD diagnosis (OR = 1.983, $p < 0.001$), providing support for hypothesis 4 in that respondents who have been suspended from school will have a higher possible conduct disorder diagnosis.

In Model 2, the respondents' perceptions of home-life and the respondents' parents' characteristics were included in the analysis. The added variables measured:

whether the mother was loving, whether the respondent was satisfied with their mother as a parent, and whether the respondent felt that their family paid attention to them; if the parent was overall happy with his/her life, if they smoked, if they drank alcohol excessively, their age, marital status, and past criminality. Significant predictors within Model 2 include: the child's reflections of maternal attributes in terms of whether the child was overall satisfied with her as a mother, (OR = 0.418, $p < .001$), indicating a decrease in odds of a potential CD diagnosis; whether their family pays enough attention to them, (OR = 0.528, $p < .001$), also indicating a decrease in odds of a potential CD diagnosis; and whether the parent in question drank alcohol excessively, (OR = 1.519, $p < .001$) showing an increase in odds of a potential CD diagnosis. These three findings provide support for hypothesis 5, which predicted that respondents who perceive negative conditions at home will have increased odds a possible conduct disorder diagnosis. The suspension measure continued to hold its significance in this model (OR = 2.125, $p < .001$).

In Model 3, respondent victimization history was included in the regression model and increased the likelihood of a potential CD diagnosis by over 75 percent (OR = 1.753, $p < .001$) providing support for hypothesis 3, which predicted that respondents who had ever been victimized would have increased odds of diagnoses. Respondents with parents who drink alcohol in excess increase the odds of a potential CD diagnosis by over 58 percent (OR=1.586, $p < .001$) providing support for hypothesis 8, which predicted that respondents whose parents drink alcohol multiple times a week will have a higher possible conduct disorder diagnosis. This model also shows that if the parent was widowed, the respondent will have slightly higher odds of a potential CD diagnosis (OR

= 1.008, $p < .01$) providing partial support for hypothesis 6, which predicted that respondents with parents who are unmarried, divorced, or widowed will have higher odds of a possible conduct disorder diagnosis. The previously identified suspension measure (OR = 1.821, $p < .001$) and parental characteristic measures continued to hold their significance values (OR = 0.410, $p < .001$; OR = 0.554, $p < .001$; and OR = 1.586, $p < .001$ respectively) as did non-Hispanic Blacks (OR = 0.709, $p < .001$).

Finally, in Model 4, retroactive self-reflections of cognitive and behavioral attention problems between the ages of 5 and 12 were included in the analysis, neither of which showed any significant value, thus failing to provide support for hypothesis 9, which predicted that respondents who perceive cognitive and behavioral attention problems based on retroactive self-reflection will have higher odds of a possible conduct disorder diagnosis.

The overall results show that the odds of being male did not show a significant result within any of the models in terms of increasing or decreasing the odds of a potential diagnosis of CD, thus providing support for hypothesis 1, which predicted that males would not have greater odds of potential conduct disorder diagnoses. In regards to hypothesis 7, predicting that respondents whose parents smoke cigarettes will have higher odds of a possible conduct disorder diagnosis, none of the four models found any significance within this measure, thus failing to provide support for this hypothesis.

Table 2 Ordinal Logistic Regression Model: Analyzing Predictor Variables for Potential Conduct Disorder Diagnoses

	Model 1	Model 2	Model 3	Model 4
Sex (male=1)	1.029 (0.057)	1.058 (0.076)	0.951 (0.077)	0.975 (0.085)
Race				
Non-Hispanic Black	0.738 *** (0.068)	0.748 * (0.097)	0.709 *** (0.090)	0.694 *** (0.108)
Hispanic	1.022 (0.085)	0.992 (0.121)	0.936 (0.122)	0.981 (0.136)
Other	1.119 (0.169)	1.418 (0.246)	1.387 (0.246)	1.427 (0.272)
Age (Wave 1)	1.000 (0.016)	1.004 (0.023)	0.997 (0.023)	1.014 (0.025)
Respondent ever Suspended	1.983 *** (0.068)	2.125 *** (0.098)	1.821 *** (0.099)	1.786 *** (0.110)
Mother is Loving		1.530 (0.243)	1.594 (0.243)	1.575 (0.261)
Satisfied with Mother		0.418 *** (0.216)	0.410 *** (0.216)	0.490 ** (0.230)
Family Pays Attention to Me		0.528 *** (0.091)	0.554 *** (0.092)	0.544 *** (0.101)
Parent is Happy		0.979 (0.208)	0.951 (0.208)	0.990 (0.225)
Parent Smokes		0.998 (0.078)	0.986 (0.078)	0.938 (0.085)
Parent Excessively Drinks Alcohol		1.519 *** (0.109)	1.586 *** (0.110)	1.455 ** (0.122)
Parent's Age		1.006 (0.007)	1.007 (0.007)	1.009 (0.007)
Parents' Marital Status:				
Never Married		0.973 (0.188)	1.006 (0.189)	1.058 (0.205)
Divorced/Separated		0.595 (0.230)	0.532 (0.232)	0.520 (0.267)
Widowed		1.007 (0.107)	1.008 ** (0.107)	1.040 * (0.119)
Parental Criminality:				
Mother ever Incarcerated		0.734 (0.247)	0.773 (0.247)	0.715 (0.273)
Father ever Incarcerated		1.214 (0.116)	1.182 (0.116)	1.199 (0.131)
Respondent Victimization History			1.753 *** (0.067)	1.692 *** (0.075)
Cognitive Self-Reflection				1.014 (0.026)
Behavioral Self-Reflection				1.049 (0.036)

*p≤0.05, **p≤0.01, ***p≤0.001. Values presented are odds ratios, standard errors in parentheses.

Analyzing Predictor Variables for Adult Offending

In Table 3, which provides results for Models 5-7, binary logistic regression was used for analyzing predictor variables for adult incarceration. Table 3 examined risk factors for adult incarceration Model 5 solely included the conduct disorder variable, which indicated a 36 percent increase of odds that a respondent who has CD attributes will be incarcerated as an adult (OR = 1.364, $p < .001$) thus supporting this study's primary hypothesis in that respondents with a potential diagnosis of conduct disorder will have higher odds of offending as adults relative to respondents who did not display conduct disorder characteristics in their youth.

In Model 6, respondent characteristics, living conditions, and educational status were included with the CD variable. This model continued to show a potential past CD diagnosis as significantly increasing the odds of adult incarceration, however, once the additional variables were included, the statistical percentage decreased to 25.60 percent. Several of the he additional variables predicted an increase in odds that the respondent will commit some type of crime as an adult. Specifically whether the respondent is male (OR = 2.910, $p < .001$), Hispanic (OR = 1.391, $p < .05$), if they were ever suspended (OR = 4.005, $p < .001$), and if their overall household income was under \$30,000 annually (OR = 1.885, $p < .001$). If the respondent had an educational attainment beyond high school graduation, however, the odds of adult incarceration decreased (OR = 0.451, $p < .001$).

Model 7 included psychological and/or emotional counseling and alcohol abuse counseling measures to the previous models. These data, however, do not support hypothesis 11, which predicted that respondents who had ever received psychological

and/or emotional counseling and having ever attended alcohol abuse programs will have lower odds of incarceration as adults. The current model actually shows the opposite, in that any type of counseling increases the odds of adult incarceration (OR = 1.780, $p < .01$ and OR = 1.612, $p < .001$ respectively).

Lastly, Model 8 included parental past incarceration for both mothers and fathers. It displayed statistical significance in that respondents whose parents had ever been incarcerated will have higher odds of being incarcerated as adults for both mothers (OR = 2.635, $p < .01$) and fathers (OR = 1.918, $p < .001$), thus providing support for hypothesis 10.

Table 3 Binary Logistic Regression: Analyzing Predictor Variables for Adult

	Model 5	Model 6	Model 7	Model 8
Potential Conduct Disorder Diagnos:	1.364 *** (0.031)	1.256 *** (0.047)	1.212 *** (0.052)	1.199 *** (0.054)
Sex (male=1)	2.910 *** (0.129)	2.400 *** (0.145)	2.453 *** (0.153)	
Race				
Non-Hispanic Black	1.006 (0.148)	1.064 (0.167)	1.022 (0.174)	
Hispanic	1.391 * (0.168)	1.471 * (0.186)	1.329 (0.196)	
Other	1.524 (0.348)	1.521 (0.361)	1.470 (0.399)	
Age (Wave 1)	0.979 (0.035)	0.987 (0.039)	0.997 (0.040)	
Respondent ever Suspended	4.005 *** (0.125)	4.627 *** (0.137)	4.382 *** (0.144)	
Lives with Parents	1.309 (0.162)	1.343 (0.184)	1.391 (0.190)	
Other	1.061 (0.241)	1.045 (0.270)	1.009 (0.285)	
Less than High School	0.971 (0.238)	1.011 (0.281)	1.061 (0.294)	
Greater than High School	0.451 *** (0.146)	0.433 *** (0.167)	0.447 *** (0.176)	
Income Less than \$30,000/year	1.885 *** (0.141)	1.998 *** (0.158)	1.829 *** (0.167)	
Psychological and/or Emotional Coun.		1.836 ** (0.199)	1.836 ** (0.208)	
Alcohol Abuse Coun.		1.684 *** (0.135)	1.693 *** (0.141)	
Mother ever Incarcerated			2.781 ** (0.331)	
Father ever Incarcerated			1.775 *** (0.171)	

*p≤0.05, **p≤0.01, ***p≤0.001. Values presented are odds ratios, standard errors in parentheses.

Discussion of Results

The current study attempted to further the understanding of potential diagnoses of conduct disorder (CD) and how the findings could theoretically relate to the SCOTUS decisions regarding the criminal sentencing of juvenile offenders prior to adult offending. Given the previous research done on the concept of conduct disorder in terms of the disparities between males and females (Eme, 2007; Maughan et al., 2004), it was surprising to find refuting evidence within Table 2, Models 1-4, in that males did not have higher odds of receiving a potential diagnosis of CD. This finding was interesting in that this particular research was not based on actual diagnoses of CD by medical professionals or psychologists, but rather an assumed diagnosis in regards to four additive factors that may make up a diagnosis according to the DSM-5 conduct disorder attributes. Finding that males do not have increased odds of a potential diagnosis of CD suggests that the concept of reification is essentially non-existent and gender may not be as important of a variable as most literature suggests. The second variable set to be included was suspension from school and, as expected, showed increased odds of receiving a diagnosis of CD. The causal order of this measure, however, was unfortunately unable to determine whether suspension was a causal factor of CD or if CD was a causal factor of suspension.

In terms of race, and in contrast with the literature reviewed throughout this paper (Lynn & Cheng, 2014), the odds of being a non-Hispanic Black respondent was, in fact, a protective factor against a potential diagnosis of CD and this effect remained across Models 1-4. Lynn and Cheng's Millennium cohort study indicated that the data were

collected by teachers through indirect observations within the classroom setting, therefore, personal biases could have potentially played a part.

Once Models 2-4, containing measures of respondent perceptions of their mothers and family as well as parental characteristics, were included within Table 1, the data suggested that a generally good and stable home life was also protective against CD. These data revealed that having a mother figure who perceptually came off as warm and loving and whether the family at home paid attention to the respondent decreased the odds of receiving a potential diagnosis of CD. These data also suggested that parents who drank alcohol excessively, coded as several times a week for the purpose of this study, increased the odds by close to 40 percent that their child would receive a CD diagnosis. Interestingly, these models did not indicate a significant relationship between parents smoking cigarettes and CD diagnosis as Murray et al.'s, (2010) findings suggested.

Finally, in terms of parental characteristics, the data suggested that widowed parents seemed to increase the odds that their child would develop a possible diagnosis of CD relative to respondents with married parents, whereas divorce, separation, and unmarried parents did not show any significant relationship with potential CD diagnosis. This finding indicates that a family death can seriously impact the child to the degree of acting out and developing CD after the fact.

Models 3 and 4 in Table 1 show that respondent victimization significantly increases the odds of a possible CD diagnosis, which was expected. Unfortunately, this study was unable to determine whether victimization by a parent or caregiver increased or decreased the odds of a CD diagnosis. The results did however indicate that criminal victimization outside of the home in terms of being shot, stabbed, jumped, and/or having

a knife or gun pulled on them did show to increase the odds of a diagnosis. Similar criticisms as the suspension measure exist here, suggesting that criminal victimization could be a cause or an outcome of potential CD diagnosis, as the order that events occurred cannot be determined with these data. Individuals who were victims on the street could have had behavioral issues prior to the victimization, just the same as repeat victimization could have increased the issues of behavioral temperament.

In Table 3, Models 5-7, this research attempted to address predictor variables for adult incarceration in regards to potential CD diagnoses. Model 1 included only the CD variable as a predictor of adult incarceration, which was constructed using four possible CD attributes according to the DSM-5: damaging property, lying to parents, store theft, and acting unruly in public. Based on this variable, respondents who met this constraint were at a 36.4 percent increased risk for incarceration as an adult.

Model 6 included demographic information of the respondents as adults including: sex; race, coded as non-Hispanic blacks, Hispanic, and other; age; whether he/she was ever suspended from school; the respondents' living conditions, such as living with parents and other; and educational attainment and annual household income, less than high school, greater than high school, and income less than \$30,000 per year. In this model, the CD variable continued to show significance at the .001 level, however the odds of adult incarceration, once additional variables were included, decreased to 25.60 percent. The results of Model 6 indicate that being male and/or Hispanic increase the odds of adult incarceration across the board, as does having been suspended from school. In expansion of the suspension variable, future research should examine whether being suspended causes a labeling and/or negative stigmatization issue, therefore, conceivably

demonstrating the high potential for offending as an adult. Additionally, respondents with educational attainment greater than high school had decreased odds adult offending.

In Model 7, this research included variables that incorporated psychological, emotional, and alcohol abuse counseling that the respondent was a participant in at some point in their lives. All three of these measures indicated an increase of odds of future offending. One would reasonably think that counseling services would decrease the odds of offending unless the quality of the service was less than ideal; however, the quality of care was not recorded in these data. Upon a deeper reflection, it is reasonable to consider the same argument previously identified regarding victimization and suspension in that those individuals who are attending counseling are there for one reason or another, therefore, there may be an issue in terms of confusing causation with correlation. The reason for participating in counseling could be many. For instance, a diversionary court program, requirements from work so as one does not lose his/her job, and/or attending to make someone else happy. Merely attending services does not necessarily indicate proper treatment or newly found skills or cognitive learning, but only a checkmark that one attended as they said they would.

Finally, Model 8 included the history of incarceration of the mother and the father. The results indicated a significant increase of the risk of the future offending of the respondent. Both variables showed levels of significance, however the incarceration of the mother showed a much greater impact in terms of the respondent offending in the future, than whether the father was incarcerated. A possible explanation for the difference in significance levels follows the traditional family structure in which the mother is the

main caregiver, therefore, having a larger impact on the child's immediate environment than the father.

These findings make sense in that if the parent(s) are not around or involved, it is reasonable to assume that the respondent has higher odds of becoming a byproduct of his or her past social structure and he or she will imitate individuals, especially parents, within their immediate environments.

Conclusion

Overall, the current study has made an important contribution to the literature examining the factors affecting both the potential of being diagnosed with conduct disorder as a child and the potential of criminally offending as an adult. In respects to the findings of the current research, potential legal policy implications can be made within the American justice system. For instance, the current research found that contrary to previous literature, neither gender or race led to an increase in the odds of a CD diagnosis. In fact, race actually unexpectedly indicated a decrease of odds of a potential diagnosis. Most literature suggests that juvenile males and juvenile blacks have the highest rates of conduct disorder, however, the current study found this to be false in that neither variable had any significant increase in odds.

In regards to the Supreme Court decisions on juvenile sentencing in *Roper v. Simmons*, *Graham v. Florida*, *Miller v. Alabama*, and *Montgomery v. Louisiana*, the court ruled that juveniles are more mentally pliable and so will reap the benefits of rehabilitative techniques more so than their adult counterparts. Rehabilitative treatments empirically supported for juveniles with behavioral disorders include cognitive-behavioral interventions and functional family therapy in an attempt to change the problem behavior through healthy coping skills, promoting acceptable response strategies in potentially triggering situations, and addressing interpersonal issues in terms of problem solving, anger management, and prosocial skills (Kazdin, 2015; Underwood & Washington, 2016; Shelton, 2005).

Past research from psychological meta-analyses has also found issues concerning misdiagnoses of behavioral disorders including that of conduct disorder (Kim &

Miklowitz, 2002). Future research should attempt to use direct observations in terms of psychological assessments rather than relying on indirect observations from untrained individuals, as is often times used. Teachers, for instance, are often the first individuals to notice a child having antisocial tendencies or problem behavior. Teachers, however, are rarely trained to medically observe these behaviors and make decisions regarding behavioral disorders in that many factors could be causing this behavior. Male and female juveniles are different in many ways as are individuals from different backgrounds, some of those differences portrayed through activity and behaviors. These variances should not be automatically attributed to disorders prior to an in depth assessment.

Moreover, courts could potentially implement individual psychological assessments for each juvenile entering the system, especially if he or she is entering the system as a repeat offender. For serious violent juveniles (SVJ), some research advocates for various safeguard techniques within the court systems, specifically in regards to the defense attorneys and strategies. For instance, under the decision of *Miller v. Alabama*, juveniles facing life imprisonment without parole were afforded the same rights as adult offenders facing capital punishment under the enforced protections from the decisions of *Williams v. Taylor* and *Wiggins v. Smith*. *Williams* and *Wiggins* were cases involving defendants who did not receive adequate defense counsel in their cases concerning their attorneys' investigative responsibilities about potentially mitigating factors. According to SCOTUS, mitigating factors could have included the defendant's past experiences including childhood victimization, abuse, neglect, and other environmental factors that could have potentially played a role in how he or she become involved within the court system initially. Under these decisions, juvenile offenders should be afforded protections

provided by adequate counsel (Drinan, 2015).

Drinan (2015) also suggests that juvenile offenders should be offered co-counsel in aid of their primary defense attorney. This counsel should consist of a factual investigator, a mitigation specialist, and an individual who is trained to assess for mental illnesses particularly to determine the existence of any mitigating factors prior to trial and/or the sentencing of any juvenile. The court system could also look into ridding the juvenile system of mandatory minimum sentences for the mere purpose of providing each individual with a very fair and individualistic trial, containing as much information as possible prior to creating a hardened criminal through society's labels (Buchen, 2014).

Limitations

The current study is limited in its examination of CD diagnoses since the diagnoses in this study were based on an additive, hypothetical variable consisting of CD attributes rather than using concrete diagnoses made by psychological or medical professionals. While creating a new variable to use has its own strengths, such as eliminating the possibility of reification, it does still present space for error. For instance, the current study only used four variables within the additive scale of CD attributes (damaging property, lying to parents, acting unruly in public, and store theft), but the DSM-5 indicates many more than four characteristics for a psychological professional to choose from in making a diagnosis. According to the DSM-5 and in order to diagnosis a child or adolescent with CD, at least three characteristics of the defined 15 criteria by the DSM-5 need to be present within the past year before the day of the psychological assessment, with at least one criteria present within the last six months.

The current study was unable to indicate exactly when any of the four attributes of damaging property, lying to parents, acting unruly in public, and/or store theft occurred or whether they occurred concurrently in the respondents' life. The results of this study could therefore have even higher odds of potential diagnoses if more precise measures of conduct disorder diagnoses were used and controlled for with other combinations of CD attributes.

Future Research

Future research should assess the causal order of variables such as suspension, counseling, victimization, and parental smoking and alcohol use. It is difficult to indicate whether these variables in this study show a causal relationship of conduct disorder diagnoses and future adult criminal offending since they are conceptually able to: cause another result, to be the result of another factor, and to simply be a byproduct of additional variables. Possibilities of the comorbidity, also known as the simultaneous occurrence of two or more mental illnesses, of additional disorders should also be taken into account such as: substance abuse, depression, anxiety, bipolar disorder as well as oppositional defiant disorder (ODD) and attention-deficit hyperactive disorder (ADHD). These variables should be examined on an individual level to control for reification and misdiagnoses as well.

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