DELINQUENCY PREDICTORS: OFFENDING TO COMMITMENT

by

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ABSTRACT

The United States processes millions of adolescents through the juvenile court system annually. Throughout these hearings and upon adjudication, it is ultimately up to a judge to decide the juvenile's disposition. Although research on juvenile delinquency has identified a variety of factors linked to youth offending, research is limited in terms of variables predicting a juvenile's dispositional outcome. The current study examined number of predictive variables for youth offending to determine if they also influence a juvenile being committed to state custody in Idaho. This analysis consists of pre-screen evaluations obtained by the Idaho Department of Juvenile Corrections. The factors acquired from these reports are evaluated in terms of their effect on adolescent disposition. Findings partially support the hypothesis, revealing three statistically significant predictive factors of juvenile state commitment.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF ABBREVIATIONS

ATOD	Alcohol, Tobacco, and Other Drugs
IDCJ	Idaho Department of Juvenile Corrections
I.J.R. 19	Idaho Juvenile Rule-19
JFP	Juvenile Forensic Profile
ProDES	The Program Development and Evaluation System
SUD	Substance Use Disorder

CHAPTER ONE: INTRODUCTION

In 2010, United States law enforcement made over 1.6 million arrests of juveniles under 18 years of age (Sickmund & Puzzanchera, 2014). Of those 1.6 million cases, the juvenile court handled 1.4 million, which is equivalent to 3,700 delinquency cases a day (Sickmund & Puzzanchera, 2014). With thousands of juveniles filtered through court daily, judges are left to make decisions regarding juveniles' sentence. The court may decide to divert the juvenile away from the formal justice system or the case may be adjudicated, therefore resulting in other outcomes. Typically, when the juvenile is high-risk, the court orders the juvenile to be placed in a residential placement facility. Judges, therefore, have to determine what makes a juvenile high-risk (Hockenberry & Puzzanchera, 2017; Idaho Department of Juvenile Corrections, 2017).

The purpose of this study is to examine predictive variables for juvenile state commitment. Specifically, this analysis will focus on Idaho's Juvenile Rule 19 state custody hearings. The Idaho Department of Juvenile Corrections (IDJC) reserves their state facilities for the highest risk juveniles in the state (Idaho Department of Juvenile Corrections, 2017). In other words, there are various standards and procedures required to permit commitment to the Department of Juvenile Corrections. In Idaho, most juvenile cases are managed by seven judicial districts. These districts manage court hearings, detention centers, probation, and re-entry programs. When the community can no longer adequately address the risk and needs of the juvenile, the court may order a Rule 19

screening, which serves to assist the judge in determining if an adolescent should get sent to a state facility (Idaho Department of Juvenile Corrections, 2017).

In 2015, the state of Idaho handled 9,264 juvenile arrests (Harrigfeld, 2017). Out of the juveniles arrested, 5,801 were booked into a county detention facility. This same year, there were approximately 5,147 additional youth under probation. In 2016, 5,010 juveniles served time in their communities with IDJC state and federal funds. Furthermore, 433 juveniles served time at the IDJC state facility, with an average daily count of 266 (Harrigfeld, 2017).

The present study is important because, although predictive variables of juvenile offending have been empirically examined, the predictive variables of juvenile court sentencing have been ignored. Thus far, research focusing on juvenile sentencing decisions has been limited due to: obtaining data from official records, restricting focus on demographic characteristics, and presenting results based on perceptual data. Additionally, research on high risk juvenile offenders has been minimal. Another reason this research is important is because the IDJC not only funds treatment in their state correctional facilities, but they are also responsible for distributing funding to the seven county districts (Idaho Department of Juvenile Corrections, 2017). Therefore, identifying variables associated with juvenile state commitment can help establish areas of focus for funding.

In the next chapter, literature is presented on a general overview of juveniles and offending. This summary includes predictive variables of juvenile offending that have been empirically established over the years. The literature review also includes a broad examination of juveniles in court as well as studies on judicial decisions within juvenile

court. Chapter three presents the research methods used in the current study. This study involves the examination of data that was collected by the IDJC. Pre-screen reports were used to determine significant predictors of the decision to commit a juvenile to state custody in Idaho. Chapter four presents the findings from the complete binary logistic model series as well as descriptives for the sample included. The final chapter discusses these findings and presents limitations, policy implications, and future research.

CHAPTER TWO: LITERATURE REVIEW

Juvenile Offending

In 2010, the U.S. population of juveniles ages 10-17 was 33,599,246 (Sickmund & Puzzanchera, 2014). The estimated number of juvenile arrests in that same year was 1,642,500.Most juveniles arrested are 16 and 17 year olds, accounting for three-fourths (73%) of the 1.6 million arrests occurring in 2010. Furthermore, the *Juvenile Offenders and Victims: 2014 National Report* revealed that the number of young juveniles in the system had decreased. More specifically, there was a 38% decrease, between the years of 1980-2010, in total arrests for juveniles under the age of 13 years. Although, when this statistic is examined by sex, there was a 46% decrease in juvenile male offenders, but females inversely had a 3% increase (Sickmund & Puzzanchera, 2014).

When specifically examining violent crimes, which include murder/non-negligent manslaughter, forcible rape, robbery, and aggravated assault, the gap between male and female juveniles has diminished (Sickmund & Puzzanchera, 2014). In 1980, male violent arrest rates were eight times greater than female offenders. In 2010, this difference decreased to just four times greater. A similar reduction in the arrest rate gender gap occurred for property crimes (burglary, larceny-theft, motor vehicle theft, and arson). When reviewing arrest rates as a whole, female adolescents still only committed 29% of all crime (Sickmund & Puzzanchera, 2014).

Aside from age and gender differences, there were also many racial differences in juvenile arrests. White adolescents were reportedly arrested more often than any other

race, accounting for 66% of total arrests, while Blacks comprised 31%, American Indians 1%, and Asians 1% of arrests (Sickmund & Puzzanchera, 2014). However, Black juveniles were involved in some offenses substantially more often than Whites. For example, Black youth were arrested in 67% of robberies, 56% of murders, 42% of motor vehicle thefts, and 41% of aggravated assaults. Although these rates seem naturally inflated, the disparity is noteworthy considering Black juveniles only accounted for 17% of the juvenile population in 2010. Building on the racial imbalance, when examining the UCR Violent Crime Index, Black adolescents had an arrest rate five times that of White adolescents, six times that of American Indian juveniles, and fifteen times the rate of Asian teenagers (Sickmund & Puzzanchera, 2014).

Predictive Variables of Juvenile Offending

Apart from demographic variables, research has evaluated various predictors of juvenile offending. The following section discusses these predictors including prior offending, age of first offense, educational factors, family factors, mental health, and substance use.

Prior Offenses

A juvenile's offense history is one of the strongest predictors of future criminal activity. Although the United States does not record national level statistics on juvenile recidivism (Sickmund & Puzzanchera, 2014), an examination of 15,265 juveniles with a mean age of 14.7 years revealed a recidivism rate of 48%, over a six month follow-up period (Jung & Rawana, 1999). This recidivism rate displays high reoccurring offending among juveniles. In an analysis by Herz, Ryan, and Bilchik (2010) using data collected from Los Angeles County (N=581), predictors for adolescent new arrests were examined.

The largest effect variables presented in their study were prior detention status and prior offense history. In this case, if a juvenile had been in detention previously, their odds of re-offending increased by more than four times. Additionally, if an adolescent had a prior offense record, their odds of a new offense increased by 2.8 times (Herz et al., 2010). Moreover, a study conducted by Mulder, Brand, Bullens, and Marle (2011) examining risk factors for juvenile recidivism found comparable results. In this analysis, 728 serious juvenile offenders were assessed using the Juvenile Forensic Profile (JFP), which is an instrument designed for risk assessment and measuring behavioral problems. This research provided evidence that prior offense history was significant to recidivism; a high number of past offenses predicted an overall risk for reoffending. Furthermore, an increase in previous offending also was a significant risk factor for violent recidivism and severity of recidivism (more risk and more serious new offenses) as well (Mulder et al., 2011). Additional support was found in the Cottle, Lee, and Heilbrun (2001) analysis, discussed in greater detail later, which found that a larger number of prior arrests and/or more previous commitments were associated with recidivism.

Age at First Offense

Aside from a juvenile's past criminal record of future offending, age of first offense and/or commitment has also been shown to be a predictor of juvenile offending. A national average for age of first arrest has not been established, but according to the *Juvenile Offenders and Victims: 2014 National Report*, arrest rates for young juveniles have considerably decreased since 2001, from 10% to 7% for youth younger than 13 for a UCR Violent Crime Index arrest and 16% to 7% for UCR Property Crime Index arrests. Specifically, adolescents aged 10-12 years comprised 783 arrests per 100,000 in 2010

with those 16-17 years old accounting for the majority of arrests (73%) (Sickmund & Puzzanchera, 2014). Cottle et al. (2001) and Mulder et al. (2011) also included these variables in their analyses. Cottle and colleagues (2001) determined that juveniles with an earlier age at first contact with law enforcement and/or an early age at first commitment were both at an increased risk for recidivism. A young age at first offense is predictive of not only recidivism, but also the severity of recidivism (more risk and more serious new offenses) and of violent recidivism as well (Mulder et al., 2011). Two other studies examined this association between age of first offense and/or commitment and juvenile offending risk.

Myner, Santman, Cappelletty, and Perlmutter (1998) reviewed 138 males who had been adjudicated for criminal conduct as juveniles. In this study, they analyzed multiple variables and determined which were predictive of recidivism. Their analysis found that the strongest predictor of recidivism was age at first offense. The younger the juvenile was at the time of their first offense, the higher their likelihood of re-offending (Myner, 1998). Katsiyannis and Archwamety (1997) discovered similar findings when they compared 147 juvenile recidivists to 147 non-recidivists. Their conclusions resulted in three predictors of recidivism, with the primary predictor, once again, being age at first offense (Katsiyannis &Archwamety, 1997).

Educational Factors

In addition, educational factors also have shown to influence criminal involvement in juveniles. A national examination of incarcerated youth with a median age of 15.5 years discovered that one-third of the youth read below the 4th grade level (Project READ, 1978). Additionally, the proportion of youth with disabilities who

required special education was three to five times higher in juvenile corrections when compared to the public school population (Casey & Keilitz, 1990; Murphy, 1986). Not surprisingly, educational factors have consistently shown a significant relationship with juvenile delinquency. Juveniles involved in the system are typically between the ages of 12-18 years, an essential time for their education. Research has shown that factors such as academic deficiency, learning disabilities, and disciplinary problems may increase a juvenile's likelihood of criminal involvement (Cottle et al., 2001; Cuellar& Markowitz, 2015; Glueck & Glueck, 1940; Hemphill, Toumbourou, Herrenkohl, McMorris, &Catalano, 2006; Katsiyannis & Archwamety, 1997; Meltzer, Levine, Karniski, Palfrey, & Clarke, 1984;Skiba, Reynold, Graham, Sheras, Conoley, & Garcia-Vazquez, 2006;Wang, Blomberg, & Li, 2005).

Academic Deficiency

Glueck and Glueck (1940), in their 10-year analysis of 1,000 male juvenile delinquents, found that the majority (85%) of offenders ranked lower in academic levels compared to their non-delinquent peers. This academic deficiency typically expands to encompass an array of educational skills. Meltzer et al (1984), in an examination of 53 delinquent adolescent learning profiles, observed, when compared to 51 average junior high school students, delinquents were inadequate in areas such as reading accuracy and comprehension rates, spelling, mathematics, and written expression. Educational dysfunction in juvenile delinquents was identified in the early stages of school, even before the second grade. These educational difficulties however did become more substantial in higher grades. For example, in kindergarten through the second grade, 45% of delinquents showed a reading delay, while only 14% of non-delinquents showed this

same reading deficiency. When comparing these measures to grades 6-9, there was an increase to 66% of delinquents exhibiting a reading delay and a decrease in the comparison group of only 12% of students experiencing difficulties. Furthermore, these other educational factors revealed similar findings of an increase in deficiency prevalence (Meltzer et al., 1984). Not only has a relationship been revealed between juvenile delinquency and a lack of education, but educational problems may go even deeper to include learning disabilities.

Learning Disabilities

As previously mentioned, Katsiyannis and Archwamety (1997) compared 147 recidivists to 147 non-recidivists committed to a state correctional facility and found that a factor separating recidivists from non-recidivists was a history of special education services. Similarly, a meta-analysis, conducted by Cottle et al. (2001) to identify predictive factors for juvenile recidivism, uncovered a significant association between a history of special education and recidivism. This meta-analysis contained 23 published studies, which included a total of 15,265 juveniles in the sample. These findings reiterated the relationship between academic insufficiency and offending and also discovered that a low standardized achievement score was the 12th highest predictor of an individual recidivating. But, they also identified that low scores on the full scale IQ test and verbal IQ (e.g., comprehension, arithmetic, vocabulary, number sequencing) test were also predictive. However, a low score on the performance IQ (e.g., picture completion, picture arrangement, and object assembly) test was not shown to not be a significant predictor of individual recidivism (Cottle et al., 2001).

Disciplinary Problems

School disciplinary problems may also predict an increase in offending (Cuellar& Markowitz, 2015; Hemphill et al., 2006; Wang et al., 2005; Skiba et al., 2006). In a study conducted by Wang et al. (2005), school variable differences in delinquent students (N=5,187) were compared to a matched group of non-delinquent students (N=5,187). They measured disciplinary problems by the number of out-of-school suspensions and in-school suspensions. In-school suspensions are when a student is suspended from a school program for up to 10 days, while an out-of-school suspension is when an adolescent is temporarily removed from the school for up to 10 days. Findings of this study revealed that delinquent students were suspended from school considerably more often than non-delinquent students. When examining in-school suspensions, the results for one in-school suspension were 13% of the delinquents and 10.4% of non-delinquents falling in this category. Although, 14.5% of delinquents reported having more than three in-school suspensions, while only 7.8% of non-delinquents reported three or more in-school suspensions. Results were parallel when reviewing out-of-school suspensions with 18.2% of delinquents and 13.7% of non-delinquents reporting one out-of-school suspension and 18.9% of delinquents compared to only 8.4% of non-delinquents reporting three or more out-of-school suspensions (Wang et al., 2005).

Similarly, Hemphill and associates (2006) examined arrest effects on antisocial behavior, including school suspensions. In examining approximately 4,000 students, they revealed that school suspension was a predictor of subsequent antisocial behavior (Hemphill et al., 2006). Furthermore, Cuellar and Markowitz (2015) analyzed 2,049 juvenile justice referrals that took place between 2002-2009 and found that juveniles who

were suspended out of school on days when school was in session were significantly more likely to engage in crime than students who were in school. Not only did school suspensions increase the juvenile's probability of offending, it more than doubled the students' likelihood of committing an offense (Cuellar & Markowitz, 2015).

The act of suspending a juvenile from school becomes a concern in developing the school to prison pipeline. This is the idea that, when we create *zero tolerance* policies in school and suspend adolescents from school, we are then pushing these kids out of classrooms and into the juvenile justice system (Cuellar& Markowitz, 2015). School suspension releases the juvenile out into the community with little to no supervision, diminishes the students' connections with school, increases alienation, produces conflict with adults, and overall, increases a juvenile's inclination to engage in criminal conduct (Skiba et al., 2006).

Family Factors

Aside from the educational factors discussed above, family factors have also been examined in their relations to juvenile delinquency. These family factors include experiencing abuse and neglect, a juvenile's living arrangements, and family criminality.

History of Abuse and Neglect

The *Juvenile Offenders and Victims: 2014 National Report* included statistics on adolescents who were involved in both child welfare and the juvenile justice system (Sickmund & Puzzanchera, 2014). Nine out of 10 teenagers who had been referred for an offense previously had a history with child welfare. Additionally, youth who had an extensive past with child welfare were three times more likely to be referred for an offense compared to adolescents who had no history with child welfare (Sickmund &

Puzzanchera, 2014). Smith and Thornberry (1995) examined this relationship between early childhood maltreatment and delinquency. In this analysis, seven types of maltreatment were included in the conceptualization: physical abuse, sexual abuse, emotional maltreatment, moral/legal maltreatment, educational maltreatment, physical neglect, and lack of supervision. Data from the Rochester Youth Development Study, a four-year interview inquiry, were reviewed on variables of maltreatment, official police records, and self-report delinquency. When comparing maltreated and non-maltreated individuals on their official juvenile records, they discovered that childhood maltreatment significantly increased a juvenile's likelihood of offending. Specifically, 45% of maltreated participants had an arrest record while only 31.7% of non-maltreated juveniles had a record. Additionally, they found that, not only were official arrest records correlated with maltreatment, but self-reported offending was as well. Although, these results differed in that maltreatment was related to more serious forms of self-reported offending, while minor delinquency showed no significant relationship with childhood maltreatment (Smith & Thornberry, 1995).

Furthermore, in the study presented earlier by Mulder and associates (2011) examining static and dynamic risk factors for juvenile offenders, they discovered additional evidence of the relationship between juvenile offending and maltreatment. They identified that a history of physical abuse was a risk factor for more severe recidivism (more risk and more serious offense). They also revealed a relationship between a history of neglect and being at risk for violent recidivism (Mulder et al., 2011). Similar results were established as well in Cottle et al.'s (2001) meta-analysis with results showing a history of sexual and/or physical abuse was a strong predictor of recidivism.

Finally, in a previously conducted meta-analysis, Loeber and Stouthamer-Loeber (1986) found that neglect had a strong relationship with delinquency, but a general factor of lack of parental involvement alone also resulted in an increased risk for juvenile offending.

Living Arrangements

Additional family/social factors correlated with offending are living situations such as single-parent home, out-of-home placement, and/or foster care. In the Cottle et al. (2001) analysis, a significant association was discovered between growing up in a single-parent home and recidivism. A significant relationship was also found between a juvenile having a higher number of out-of-home placements and recidivism. In Myner et al.'s study (1998), the relationship between a single-parent family and recidivism was not significant, but group home placements were the third strongest correlate to recidivism in this analysis. Furthermore, Barrett, Katsiyannis, Zhang, and Zhang (2014) established that living in foster care increased the odds of delinquency (to be discussed in greater detail later).

Family Criminality

In 2017, 52% of state adult inmates and 63% federal inmates had children (Glaze & Maruschak, 2010). Combined, there are an estimated 1,706,600 children who have parents behind bars (Glaze & Maruschak, 2010). The effect of family criminality on juvenile offending has been studied for many years. One of the earliest studies conducted on family offending was published by Ferguson (1952). This analysis was a cross-sectional comparison of delinquent and non-delinquent juveniles. A sample of 1,329 boys was measured on their criminal offending as well as their families. The findings revealed that, as the number of convicted family members increased, the proportion of juveniles

who were involved in criminal activity themselves also increased. To enumerate, the proportion of juveniles who had no other family members with convictions was only at 9%; with an increase to one family member with convictions, it became 15%, then 30% with two members, and 44% with three or more family members with convictions (Ferguson, 1952).

A more recent study examining data from the Pittsburgh Youth Survey reported similar findings to Ferguson (1952). Farrington, Jolliffe, Loeber, Stouthamer-Loeber, and Kalb (2001) used longitudinal data of 1,517 boys to examine the effects of family criminal arrests on the juveniles' own arrest histories. Overall, 44.4% of families contained at least one arrested member. Out of the eight family member types (brothers, sisters, fathers, mothers, uncles, aunts, grandfathers, and grandmothers) examined, all showed to be significant predictors of the boys' delinquency. Above all, the most influential relative on a juvenile's arrest, was their offending fathers' arrest. Ultimately, arrested persons were distinctly concentrated in families, and if one relative had been arrested, the probability of another relative having also been arrested was high (Farrington et al., 2001). Furthermore, not only did a history of family criminality increase the likelihood of a juvenile offending, it has also been shown to be a risk factor of violent recidivism in adolescent offenders (Mulder et al., 2011).

Generational Substance Use

In addition to research displaying the strong relationship between generational offending and juvenile offending, substance use has also been revealed as intergenerational (Adler & Lotecka, 1973; Beardslee, Son, & Vaillant, 1986; Craig & Brown, 1975; Kothari, Sorenson, Bank, & Snyder, 2014; McDermott, 1984; Needle,

McCubbin, Wilson, Reineck, Lazar, & Mederer, 1986; Tec, 1974). One study on the relationship between parental substance use and adolescent drug use examined a sample of 106 adolescent drug users and compared them to 96 non-drug using juveniles. Juveniles, along with their own drug use history, were asked to describe their parents' use. During the analysis, a significant relationship was revealed between adolescent drug use and parents' drug use. Adolescents who used drugs were more likely to have one or more parents who also used drugs. Additionally, this examination found that parental attitudes toward drug use were a significant contributor to juveniles' substance use (McDermott, 1984).

Aside from parental influence on an adolescent's drug use, other family members may have a similar or stronger influence. Needle and colleagues (1986) presented a longitudinal study of 508 families with adolescents aged 11 to 13 years and their older siblings (aged 14 to 18 years). Their examination of older siblings provided support for the relationship between siblings and their substance use. In fact, through their analysis, they concluded that, compared to siblings, parental drug use was found to have a minimal effect and that siblings seemed to play a more important role in influencing adolescent drug use. Similarly, in the Oregon Youth Study, a 10-year examination of 206 families, two research questions were examined: to what extent was older siblings' alcohol, tobacco, and other drug (ATOD) use connected with their younger siblings' ATOD use and to what extent were individual, parent, sibling, and peer factors linked with adolescents' and young adults' ATOD use (Needle et al., 1986). These findings reiterated that there was a strong relationship between older siblings' and younger siblings' substance use. However, siblings and peers appeared to be a powerful influence as the

adolescent aged, but parents had a strong influence on their child's substance use early on in life (Kothari et al., 2014). Thus, family influence is a significant predictor of juvenile substance use.

Substance Use and Mental Health

Mental Health

The prevalence of mental health issues among adolescents in the juvenile justice system is significantly higher than in the general juvenile population (Cauffman, 2004; Colins, Vermerien, Vreugdenhil, van den Brink, Doreleijers, & Brokekaert, 2010; Vermeiren, Jespers, & Moffitt, 2006; Wasserman, Jensen, Ko, Cocozza, Trupin, Angold, Cauffman, & Grisso, 2003). In a screening of mental health prevalence among juvenile offenders, Cauffman (2004) found that approximately 70% of males and 81% of females exhibited at least one mental health disorder. Aside from mental health having a strong presence among juvenile offenders, mental health problems have also been linked to recidivism. In an analysis conducted in the South Carolina Department of Juvenile Justice, 99,602 delinquent juveniles were matched to a control group and measured on mental health. When examining recidivism, a juvenile with a mental health diagnosis was almost twice as likely to commit a second offense, and, when the mental health diagnosis was aggressive, the likelihood increased to three times over non-diagnosed juveniles (Barrett et al., 2014). Additionally, Wibbelink, Hoeve, Stams, and Oort (2017) conducted a meta-analysis of 17 studies (N=5,737) on mental health (internalizing and externalizing disorders) and juvenile recidivism. There was a small to medium effect size for externalized disorders, such as substance use disorders, attention deficit/hyperactivity disorder, disruptive behavior disorder, conduct disorder, and oppositional defiant

disorder. Comorbid disorders also had a small to medium effect size. On the other hand, internalizing disorders (depression, anxiety, and posttraumatic stress disorder) alone had no relationship with recidivism (Wibbelink et al., 2017).

Substance Use and Comorbidit

Aside from general mental health problems, substance use disorder (SUD) and comorbidity are two of the most problematic disorders when it comes to the juvenile justice system. Hoeve, McReynolds, Wasserman, and McMillian (2013) conducted a study examining both mental health and SUD. Using a secondary data analysis of 700 juveniles from Alabama, Hoeve and colleagues evaluated the juveniles on psychiatric disorders and offense characteristics. As a whole, approximately half of the sample reported at least one psychiatric disorder. The analysis revealed that recidivists were more likely to have a psychiatric disorder over non-recidivists. When the results were examined further, participants with a SUD alone were more likely to commit a serious offense in the future. Juveniles with a SUD, with or without a co-occurring disorder, were at a greater risk to have a severe re-offense, making SUD possibly the most problematic disorder (Hoeve et al., 2013). Furthermore, in Cottle and associates' (2001) meta-analysis, substance use alone did not predict recidivism, but substance abuse did, meaning habitual illicit substance use increases risk of offending.

As shown above, research on juveniles and offending has been extensively examined over the years, producing a variety of factors related to youth delinquency. Beyond a juvenile's arrest, if chosen to pursue, the adolescent then becomes involved in the next stage of the juvenile justice system: court.

Juvenile Court

Approximately two-thirds of all arrested juveniles ultimately get referred to court (Hockenberry & Puzzanchera, 2017). In 2010, there were 1,368,200 juvenile court cases; this total has decreased over the years with only 974,900 cases in 2014. Although in the last few years juvenile courts have seen fewer cases (-27%), delinquency caseloads have more than doubled since 1960. In total, more than 13 million teens were under juvenile court jurisdiction, according to the *Juvenile Court Statistics* of 2014 (Hockenberry & Puzzanchera, 2017).

Through examination of these juvenile court demographics, it was revealed that the majority of cases involved an adolescent under the age of 16 (53%), males (72%), and White individuals (43%) (Hockenberry & Puzzanchera, 2017). The proportions among age, gender, and race remained consistent from 2005-2014. Additionally, in 2014, offense profiles for males and females were parallel across person (26% male, 30% female), property (34% male, 34% female), drugs (15% male, 10% female), and public order offenses (26% male, 26% female). For race, Whites accounted for the majority of cases (43%), while Blacks were not far behind (36%), and Hispanics (18%), American Indians (2%), and Asians (1%) comprised the rest of the sample's ethnicities. To emphasize the true representation of race within the juvenile court system, it is important to recognize the proportion of the U.S. population that these races comprised. White youth made up 56% of the U.S. population in 2014, Black 15%, Hispanic 23%, American Indian 1%, and Asian youth 5% (Hockenberry & Puzzanchera, 2017), thus displaying the over representation of African Americans within the juvenile court system.

Beyond the demographics of juvenile court cases, statistics of delinquency case processing have also been reported. Thus far, the statistics presented have been on referrals to juvenile court, but there are five other areas of case processing. First is detention, which is defined as a secured facility that is used to detain a juvenile for safety and/or security. Overall, the use of detention decreased from 2005-2014 (Hockenberry & Puzzanchera, 2017). A juvenile was most commonly detained due to a person offense (33%), with property (28%) and public order (29%) not far behind; the final offense type, drugs, resulted in detention the least frequently at 9%. Furthermore, youth 16 years of age or older were more often detained (24% compared to 20%) as well as juvenile males (24% compared to 17%).White adolescents on the other hand were the least prevalent in detention (18%) compared to juveniles who were Black (25%), Hispanic (23%), American Indian (26%), or Asian (24%) (Hockenberry & Puzzanchera, 2017).

The second decision point is intake, a formal processing of a particular case that involves filing petition requests for an adjudicatory or waiver hearing (Hockenberry & Puzzanchera, 2017). As a whole, cases were more often handled formally (56%) than informally. Additionally, the more serious the offense, the more commonly was a petition produced. For example, aggravated assault and forcible rape were formally handled 74% of the time while larceny theft and trespassing were only handled formally 45% of the time. Distributed across demographics, juveniles 16 years of age and older (59%), males (59%) and Black (62%) were the most frequent groups to undergo a formal sentence (Hockenberry & Puzzanchera, 2017).

The third area of case processing is the decision of whether or not to send a case to be processed in the adult criminal justice system. Person offense cases were commonly

waived, although overall, it was uncommon for a case to be waived (Hockenberry & Puzzanchera, 2017). Moreover, youth 16 years of age and older had more cases waived (1.4% compared to 0.1%) as well as those who were male (0.9% compared to 0.3% of females) and Black (1.0% compared to 0.6% White, 0.5% Hispanic, 0.7% American Indian, and 0.3% Asian) (Hockenberry & Puzzanchera, 2017).

Adjudication is the fourth area of case processing. An adjudicatory hearing determines if the adolescent did commit the offense(s) being charged (Hockenberry & Puzzanchera, 2017). Overall, 30% of all delinquency cases resulted in adjudication or a waiver. Furthermore, adjudication occurred over half of the time, regardless of age, with juveniles younger than 16 years old (53%) and juveniles 16 years of age and older (54%), 49% of the time for females, 55% for males, and American Indians were the highest ethnic or racial group at 65% (Hockenberry & Puzzanchera, 2017).

The fifth and last area of case processing is disposition. Disposition options include commitment to an institution, probation, community service, fines, or a referral to outside treatment (Hockenberry & Puzzanchera, 2017). The *Juvenile Offenders and Victims: 2014 National Report* specifically reported out-of-home placements and probation. For out-of-home placements, 26% of all adjudicated cases resulted in this outcome. Adolescents age 16 years or older were placed out-of-home in 28% of all cases and 24% of juveniles age 15 years and under. This outcome also typically occurred more frequently with males (27%) compared to females (20%). For race, Hispanic juveniles were at the highest percentage for out-of-home placements (31%). Probation, on the other hand, was the most common sanction imposed by juvenile courts, occurring in 63% of all cases. This disposition was common for both juveniles under the age of 16 (65%) and

juveniles older than 16 years of age (60%). Furthermore, females (66%) and males (62%) were similar in probation dispositions as well. While most races ranged 61-66% for probation, Asians had the highest frequency at 72% (Hockenberry & Puzzanchera, 2017).

Juvenile Judicial Decisions

When it comes to predicting juvenile delinquency, research has extensively examined predictor variables for juvenile offending and recidivism. It is important to determine how these variables influence the discretion of juvenile justice personnel when it comes to making judicial decisions pertaining to the juvenile. Empirical studies focusing on factors related to juvenile court hearings are limited. Additionally, the ones that have been conducted examined narrow factors, obtained data purely from official records, were based on perception, and/or did not focus on severe juvenile offenders. Most researchers examining such topics restricted their variables to sex, race/ethnicity, and socioeconomic status (Arnold, 1971; Bishop & Frazier, 1995; Bishop, Leiber, & Johnson, 2010; Leiber & Fox, 2005; Terry, 1967; Thornberry, 1973), undermining the complex process of the juvenile court system, although some researchers have attempted to capture the complexity of the system (Applegate, Turner, Sanborn, Latessa & Moon, 2000; Fader, Harris, Jones, & Poulin, 2006; Sanborn, 1996).

Sanborn (1996) examined factors that affected dispositions in the juvenile court. He administered open-ended interviews to 100 workers from three juvenile courts. Participants consisted of judges, attorneys, public defenders, probation officers, and private attorneys. These individuals were asked which factors they believe should be considered in a juvenile's disposition. Overall, thirteen variables were cited as important when considering a delinquency disposition:

- family (81%),
- delinquent record (70%),
- crime (63%),
- school record (56%),
- previous disposition (52%),
- child's character (39%),
- treatment needs (33%),
- parents' characteristics (28%),
- mental condition (23%),
- age (22%),
- system resources (17%),
- drug/alcohol abuse (13%),
- community resources (11%).

When examining what was actually considered in a juvenile's disposition, the type of crime and the delinquent's criminal record were the top two factors for all three courts. Court workers were also asked which factors/characteristics resulted in a harsh dispositional outcome. The top five factors listed were: bad record (61%), serious/violent offense (57%), bad/no school (35%), failed treatment (32%), and bad character (30%) (Sanborn, 1996). Ultimately, this study allowed for an examination of a variety of factors that may influence a juvenile's disposition. Although it was limited to perceptions and only contained 11 judges, this examination builds on the complexity of juvenile court hearings.

In 2000, Applegate and colleagues furthered research on judges' decisions in juvenile court by surveying 69 juvenile court judges on situational disposition decisions. Vignette characteristics varied on felony degree, felony type, weapon involvement, harm, loss, prior record, prior commitment, age, codefendants, school attendance, family stability, parental cooperation, and local programming. Participants were simply asked to read a vignette and then answer the following question, "based on this information, how likely is it that you would commit this youth to a state facility?" Overall, judges' decisions were significantly influenced by whether there was a weapon involved, the offense was violent, and the youth had been previously institutionalized. If a case contained all three of these factors, the juvenile would have a 79.6% chance of being sent to a state facility. Additional factors influencing the judges' decisions were legal seriousness (felony), harm done to the victim, number of previous adjudications, and prior felonies. Factors that showed no significance in the decision making process were the juveniles' school attendance, family stability, and/or whether the act was committed alone. Ultimately, this study added to this body of research by focusing solely on judges' perceptions, serious offenders and various influential factors (Applegate et al., 2000).

Thus far, these studies have focused on perceptual decisions in juvenile court, and while they added in a few extra legal factors, they are still limited. In one study, Brown and Sorensen (2014) examined secondary data obtained from the Harris County Juvenile Probation Department in Texas. For this analysis, they looked at 376 dispositions resulting in transfer to adult court, 237 cases of determinate sentencing, and compared them to traditional indeterminate sentences (N=300). Samples were compared on legal (type of offense, offense severity, number of previous petitions, and age at the date of

offense) and extra-legal (sex and race/ethnicity) variables. Significant factors of transfer to adult court included were Black, Hispanic, male, committing a person offense or a first degree/capital felony. Minorities were three times more likely to be transferred to adult court when compared to White juveniles. Additionally, age also had a strong effect on transfer to adult court with 15-year-olds less likely to get transferred than 16-year-olds, and 14-year-olds were the least likely to experience this disposition. When examining determinate sentences, type and severity of the crime also had a strong influence on this disposition type. A felony offense resulted in an individual being 12 times more likely to receive a determinate sentence compared to an indeterminate one. Correspondingly, first-degree or capital felony crimes were nine times more likely to receive a determinate sentence compared to an indeterminate sentence. On the other hand, age, race/ethnicity, and sex did not increase the likelihood of determinate, compared to indeterminate, sentencing.

Fader, Harris, Jones, and Poulin (2006) studied factors involved in juvenile court in a different manner. For their analysis, they used a database maintained by the Crime and Justice Research Institute in Philadelphia called ProDES (the Program Development and Evaluation System) and examined predictors of out-of-home placement dispositions. Fader and associates chose to limit their analysis to first-time offenders with no prior program history (N=1,875). Additionally, five categories of variables were observed: socio-demographics, family and child functioning, situational, and offense-specific. The strongest predictor of out-of-home placement for first time offenders with no prior placement was a history of drug abuse (including any alcohol and/or drug abuse history) with almost twice as many juveniles being committed. Additional significant variables

were the seriousness of the offense, history of family violence, mental health problems, behavior since arrest, and history of alcohol abuse. This examination also included predictors of prior offenders with no prior placement. For this group, behavior since arrest, offense seriousness, history of drug abuse, and sibling history of arrest were all significant predictors of out-of-home commitment (Fader et al., 2006).

Another analysis examining out-of-home placement dispositions was conducted by Rodriguez and colleagues (2009). For this study, three data sources were included: the Maricopa County Juvenile On-Line Tracking System Database (N=325), social files corresponding to these juveniles, and semi-structured interviews with 14 juvenile probation officers. The focused independent variable for this study was family attributes such as a dysfunctional family and parent's criminal involvement. Probation officers defined dysfunctional families as a single-parent or absent-parent family, poverty, numerous children, substance use, abuse, and/or neglect. Several factors influenced commitment decisions including the presence of a dysfunctional family. If a juvenile was perceived to have a dysfunctional family, they were 2.570 times more likely to receive out-of-home placement ($p<.05$). Additionally, juveniles with incarcerated fathers were 2.625 times more likely to receive out-of-home placements compared to youth without incarcerated fathers ($p<.05$). When examining maternal incarceration, no significant influence on the disposition was found. Aside from these main independent variables, being Black increased the likelihood of out-of-home placement by 2.473 times ($p<.10$), compared to White juveniles. Furthermore, foster-care increased the odds of this disposition by 3.144 ($p<.05$). A prior record also had a positive influence on out-of-home dispositions ($p<.01$), while age had a negative influence ($p<.10$) (Rodriguez et al., 2009)

In a final analysis by Rodriguez et al. (2009) comparing probation versus confinement (includes residential treatment facilities) dispositions, several factors were found to have an effect on dispositional outcomes. For this analysis, several independent variables were assessed including demographics (age, race, sex, and parent's education level), legal (assessing current and past legal involvement), individual (psychosocial maturity, mental health problems, gang involvement, and IQ), and environmental factors (parent and school-related factors). Two demographic variables were predictive: sex and age. Being a male predicted confinement, while being older in age predicted probation. Additionally, two legal factors predicted disposition outcomes. Prior court referrals predicted a higher likelihood of confinement unless probation was received for a prior offense, then probation was the highest disposition possibility. Furthermore, three individual factors were significant. Drug abuse and drug dependency were predictors of confinement and having a higher IQ was predictive of probation and less likely to receive placement. Individuals scoring high in maturity were less likely to be transferred to adult court. Several variables had no significant effect on the disposition decision. Serious offenders and minorities were no more likely to be placed in confinement, with or without controlling for other factors. Also, an adolescent's psychosocial maturity and age by maturity interaction did not influence a dispositional outcome in this study.

Overall, research on juvenile court disposition factors has been limited in many ways, including examining demographics only using, perceptual surveys, and not examining serious juvenile offenders. In order to build on this research, legal and extralegal variables need to be analyzed along with an actual exploration of juvenile court outcomes. The current study explored predictor variables of juvenile offending in a

different light. Although these factors have been empirically supported as indicators of juvenile offending, variables affecting juvenile judicial decisions have not been as extensively examined. Therefore, the current analysis evaluated a variety of variables and their connection to juvenile state custody decisions.

CHAPTER THREE: METHODS

In order to establish predictors of judicial decisions pertaining to juvenile offender state commitment, this analysis reviewed the Idaho Department of Juvenile Corrections Rule-19 state commitment screenings and judicial decisions to determine the relevant factors surrounding commitment. The Rule-19 consists of a screening process intended to collect a variety of information pertaining to the juvenile being adjudicated. The research question for this analysis is as follows: Do variables established as predictors of juvenile offending overlap as predictors of juvenile state commitment? The hypothesis therefore is: predictor variables for juvenile commitment will be similar to the variables established as juvenile offending predictors. The data focuses on pre-screen reports provided by the IDJC for the time period of 2016-2018.

Participants

In the state of Idaho, there are 44 counties which comprise the 13 judicial districts (12 counties and one tribal) that all contain their own juvenile court, probation, and detention center (Idaho Department of Juvenile Correction, 2017). The utilization of these county-based detention centers is typically to hold juveniles until they appear in court or as a sanction subsequent to their court proceedings. Additionally, the state manages three secure correctional centers that serve as therapeutic environments for juveniles, thus supplying juvenile offenders with opportunities and services to help change their criminal behaviors. These facilities usually accommodate the juvenile for

longer terms ranging from several months to several years. In total, there are 270 state beds for juvenile offenders (State Facilities, n.d.).

The JCC-Lewiston is one of three juvenile correctional facilities in Idaho. Located in Lewiston, it provides beds to 36 medium-high risk male individuals ranging from ages 13-18 years old. Nampa, Idaho is home for the second IDJC facility, the JCC-Nampa. This location can host up to 84 medium-risk male and female juvenile offenders, with ages ranging from 13-20 years old. The final facility is the JCC-St. Anthony, the largest site in the IDJC located in St. Anthony, Idaho. Up to 138 high-risk juveniles, 13-19 years old, male and female, can be housed in the JCC-St. Anthony (State Facilities, n.d.).

Participant Selection

A census of available juvenile state commitment screenings obtained from the Idaho Department of Juvenile Corrections was used in this analysis (N=338). These files included every juvenile who underwent a Rule-19 decision in the state of Idaho between January 2017-2018 for commitments and January 2016-2018 for non-commitments. All juveniles included in the files were between the ages of 12-18 years, and every individual was de-identified for the purpose of anonymity.

Dependent Variable

In order for a juvenile to be committed to one of these state facilities, they need meet the criteria for an Idaho Juvenile Rule 19 (I.J.R. 19). Additionally, they must be adjudicated for their crime(s) in their county, and evidence that previous alternative sanctions have failed to change their criminal behaviors is necessary. The Standards and Procedures for Commitment to the Department of Juvenile Corrections (2016) states that

juveniles become eligible for commitment when their prior history or charged offense(s) contain any elements of four fundamental factors:

- "violence that either did or could reasonably have resulted in serious bodily injury or death to others";
- "a sexual nature";
- "a demonstration of a wanton and reckless disregard for the property rights of other such that release constitutes a substantial risk to the community"; or
- "a demonstrating pattern of misdemeanor or felony criminal behavior, escalating in its impact on public safety or the juvenile's safety of well-being over time" (Idaho Department of Juvenile Corrections, 2017, p. 86).

If a juvenile meets any or all of these listed factors, the court orders a screening team to assemble and determine if the individual's needs can be adequately addressed in their current community or if there is a need to send the juvenile to a secured state facility that tends their individualized treatment. Upon completion of the screening, a court designee prepares a report containing the findings and recommendations of the screening team. This document (Pre-Screen Report) is presented to the court in order for the judge to make an informed decision on whether or not to commit the juvenile. This dependent variable was measured dichotomously from the juvenile's screening, stating the final court decision of either commitment or no commitment. 51.5% of the sample resulted in a commitment decision.

Independent Variables

When a juvenile becomes eligible for commitment to state custody, they then are subjected to a screening team. The responsibility of this screening team is to simply assist the court's decision in the juvenile's case. This team consists of employees from the County Juvenile Probation Office, the Idaho Department of Juvenile Corrections and the Idaho Department of Health and Welfare (Idaho Department of Juvenile Corrections, 2017). Additionally, other members of the community, such as the prosecuting attorney, the defense attorney, local school officials, parents or guardians of the juvenile and any other individual who is believed to be relevant to the juvenile's screening are involved. When the screening is complete, a designee of the court, usually the county probation office, prepares a written report containing the team's findings and recommendations. This report is called, the "pre-screen report" (Idaho Department of Juvenile Corrections, 2017). This pre-screen report is divided into six sections that address the various factors regarding the juvenile in question. These variables will be examined in terms of their relationship to the Rule 19 commitment hearing decision.

Original Model Variables

Demographics

Data on the juvenile's age, sex, and race/ethnicity are demographic variables included in this study. Age was measured numerically in years and represents the age of the juvenile at the time of the screening. Sex was measured dichotomously by male or female and race/ethnicity was measured based on what was reported as 0 – White, 1 – Hispanic-all races, and 2 – all others (see Appendix A, Table 2.1 for more information).

Offense History

Criminal history was measured by two variables: prior offenses and age at first offense. Prior offenses are measured numerically including the juvenile offending history (excluding status offenses). Age at first offense was also measured numerically in years (see Appendix A, Table 2.1for more information).

Education Variables

Two variables were also included for educational factors: special education and suspension and/or expulsion from school. Both factors were measured dichotomously as no or yes (see Appendix A, Table 2.1for more information).

Family Variables

Four factors were included for examination of family variables: history of abuse (sexual, physical, both, or witnessed abuse), history of neglect, adopted, and family criminality. All variables were measured dichotomously as either no or yes (see Appendix A, Table 2.1for more information).

Substance Abuse and Mental Health

Substance abuse needs had one dichotomous measure by "does the juvenile have substance abuse needs?" with no or yes. Mental health needs were measured the same as substance abuse needs (see Appendix A, Table 2.1for more information).

Additional Variables

Demographic

Religious affiliation and committing county were additional demographic variables measured. Religious affiliation was coded into religious affiliation or no religious affiliation and committing county includes 33, out of 44 counties in Idaho, with

0 – Ada and Bonneville County and 1 – all other counties (see Appendix A, Table 2.1for more information).

Individual Factors

Most individual factors were included above, but one additional variable was also examined: medical need. Medical needs were measured dichotomously as either yes or no (see Appendix A, Table 2.1for more information).

Delinquency History

Five additional factors were included to examine the juvenile's delinquency history: history of assaults, history of running away, gang activity, type of first offense committed, and history of sexual crimes. History of assaults and running away were both measured dichotomously as no or yes. Gang activity was categorized into non-gang association and gang involvement (admitted/claimed gang associations or formal/active/jumped in/ involved in criminal activity). Type of first offense was also categorical and is based off the IDJC's classifications (sex, persons, property, drug, society, other, status, and traffic) and history of sexual crimes is separated into no or yes (adjudicated, non-adjudicated, or other sexual misconduct) (see Appendix A, Table 2.1for more information).

Current Offense

For inspecting the juvenile's current offense, six variables were included. First is the type of the current offense, which was classified by IDJC standards again (sex, persons, property, drug, society, other, status, and traffic). Next is restitution amount remaining, measured by dollar amount and community service hours remaining, reported in hours. Pre-decision detention is the next variable, which was measured dichotomously

as no or yes. The variable of recommitment was also measured dichotomously and the number of screening team members recommending commitment was measured numerically (see Appendix A, Table 2.1for more information).

Legal Variables

Five factors were included in measured legal variables: legal custody, number of detention placements, length of combined detention placements, number of commitments, and length of combined commitment placements. Who has legal custody of the juvenile was measured categorically into five categories: father, mother, joint, other relative, other non-relative. Number of detention placement and number of commitment placements was measured numerically, while length of detention placements was reported in days and length of commitment placements was in months (see Appendix A, Table 2.1for more information).

Statistical Analyses

For this study, SPSS was used to analyze data and produce descriptive statistics to examine the IDJC population. In addition, binary logistic regression was used to test the study's hypothesis. This test was selected in order to observe the predictive effects of each variable on the dichotomous dependent variable of commitment. Furthermore, a series of new additional models were examined to potentially identify other factors measured by the Rule-19 screening process. Following the model series, all statistically significant variables were combined to produce a final predictive model for juvenile commitment decisions.

CHAPTER FOUR: RESULTS

The results reported below include descriptive statistics pertaining to the characteristics of the sample such as age, sex, ethnicity/race, religious affiliation, and committing county. A model testing the hypothesis is presented below. Additionally, a series of binary logistic regressions examining variables beyond juvenile offending predictors, separated based on types of variables, were run to establish potential variable significance. From those significant variables, a final new model was formed and analyzed for predictor variables of juvenile commitment. For each model, a test for multicollinearity was run and no signs of multicollinearity were found[1].

Descriptive Statistics

For this analysis, 339 juvenile Rule-19 screenings were examined. Out of these screenings, 48.5% (N=164) resulted in no commitment, while 51.5% (N=174) resulted in commitment to an Idaho state juvenile correctional facility. The majority of the sample was male (N=290, 85.5%)and White (N=211, 62.2%) with the next most frequent race/ethnicity being Hispanic-all races (N=56, 16. 5%).When examining age, the modal category was 15-17 years old (15, 20.4%; 16, 26.3%; 17, 28.0%) at the time the screening was given ($\bar{x}$= 15.83, σ= 1.392). For religious affiliation, nine categories were reported with 'no religious affiliation' (33.9%) as the modal category. These screenings came from a total of 33 counties throughout the state of Idaho (see Tables 1.1).

[1] Results for the bivariate correlation matrices are available by request from the author.

Table 1.1 Sample Descriptives

Variable	Frequency	Percent
Variable: Sex		
Male	290	85.5
Female	48	14.2
Variable: Race/Ethnicity		
White	211	62.2
Hispanic- All Races	56	16.5
American Indian	13	3.8
Other/Mixed	5	1.5
Black	14	4.1
Pacific Islander	1	.3
Unknown	37	10.9
Variable: Age		
12-years-old	6	1.8
13-years-old	16	4.7
14-years-old	33	9.7
15-years-old	69	20.4
16-years-old	89	26.3
17-years-old	95	28.0
18-years-old	23	6.8
19-years-old	3	.9
Variable: Religious Affiliation		
None	115	33.9
Mormon/LDS	11	3.2
Christian	42	12.4
Catholic	18	5.3
Atheist	2	.6
Pentecostal	1	.3
Pagan	1	.3
Non-Denominational	1	.3
Satanic	1	.3
Variable: Committing County		
Ada	78	23.0
Bannock	20	5.9
Bingham	5	1.5
Blaine	2	.6
Bonner	4	1.2
Bonneville	46	13.6
Boundary	2	.6
Butte	2	.6
Canyon	33	9.7
Cassia	5	1.5
Elmore	5	1.5

Franklin	2	.6
Fremont	5	1.5
Gooding	4	1.2
Idaho	3	.9
Jefferson	4	1.2
Jerome	6	1.8
Kootenai	33	9.7
Latah	2	.6
Lemhi	4	1.2
Lewis	1	.3
Lincoln	1	.3
Madison	1	.3
Minidoka	7	2.1
Nez Perce	5	1.5
Oneida	1	.3
Owyhee	2	.6
Payette	4	1.2
Power	3	.9
Shoshone	2	.6
Twin Falls	30	8.8
Valley	1	.3
Washington	1	.3

Hypothesis Model

A logistic regression model was run testing the hypothesis that predictive variables of juvenile offending would reflect predictive variables of juvenile commitment. For this model, variables discussed in the literature review above were included. These variables were: criminal history, age at first offense, special education, suspension and/or expulsion from school, history of abuse, history of neglect, adopted, family criminality, substance abuse needs, and mental health needs. The model(n=155) was statistically significant (χ^2= 26.346, p=.023), explaining 46.8% (Nagelkerke R-Square) of variance in whether participants were committed and correctly classified 94.8% of cases. Upon examination of all the included variables, no variable was a statistically significant predictor variable of juvenile commitment (see Table 1.2).

Table 1.2 Binary Logistic Regression: Hypothesis Model

Variable	B	S.E.	Wald	df	Sig.	Exp(B)
CRIMHIST	.423	.264	2.578	1	.108	1.527
FIRSTAGE	-.192	.496	.150	1	.698	.825
SUSPENANDEXPUL	-1.214	1.383	.771	1	.380	.297
SPECIALED	-4.020	2.953	1.854	1	.173	.018
HISTABUS	.625	1.079	.335	1	.563	1.868
HISTNEGL	.281	1.398	.040	1	.841	1.324
ADOPT	.080	1.481	.003	1	.957	1.084
FAMCRIM	-20.129	5054.680	.000	1	.997	.000
SUDSNEEDS	1.496	1.508	.984	1	.321	4.462
MHNEEDS	3.253	2.873	1.282	1	.257	25.879
AGE	-.249	.379	.431	1	.512	.780
SEX	.622	1.338	.216	1	.642	1.862
ETHNICITY/RACE (WHITE)	-.628	1.346	1.462	1	.227	.196
ETHNICITY/RACE (HISPANIC)	.278	1.617	.030	1	.864	1.320

Binary Logistic Regression Series

In order to develop a final predictive model, all variables were separated based on categorical representations. Separate binary logistic regressions were run to establish significant variables from each model. The first logistic regression was performed to test the effects of the demographic variables: sex, age, race/ethnicity, religious affiliation, and committing county on commitment decision. The demographic model (n=189) showed no statistical significance ($\chi^2 = 10.498$, p=.105), explaining 11.6% of variance (Nagelkerke R-Square) in the commitment decision and correctly classified 90.5% of cases. Additionally, religious affiliation (OR=3.602, p=.044) was statistically significant within this model (see Table 1.3). The odds of being committed for no religious affiliation was 3.602 (260.2%) higher compared to juvenile who did identify with a religion.

Table 1.3 Binary Logistic Regression: Model 1

Variable	B	S.E.	Wald	df	Sig.	Exp(B)
AGE	.043	.194	.049	1	.826	1.044
SEX	-.345	.691	.250	1	.617	.708
ETHNICITY/RACE (WHITE)	-1.232	.649	3.604	1	.058	.292
ETHNICITY RACE (HISPANIC)	-.108	.705	.024	1	.878	.897
RELIAFF	1.281	.637	4.048	1	.044	3.602
COMMITCOUNT	-1.159	.663	3.061	1	.080	.314

The second logistic regression model was completed to assess individual factors. Variables included were history of suspension or expulsion, special education history, medical needs, mental health needs, substance abuse needs, history of abuse, history of neglect, adoption history, and family criminality. This individual model (n=152) was statistically significant ($\chi^2 = 26.577$, p=.002). 47.5% of variance (Nagelkerke R-Square) in whether a participant was committed is explained in this model and 94.1% of cases were correctly classified. When examining the individual variables within this model, substance abuse needs (OR= 17.032,p= .014) was the only statistically significant variable in the model (see Table 1.4), with the presence of substance abuse need increasing the odds of being committed by 17.032 (1603.2%)when compared to the absence of substance abuse needs.

Table 1.4 Binary Logistic Regression: Model 2

Variable	B	S.E.	Wald	df	Sig.	Exp(B)
ADOPT	-.500	1.191	.176	1	.675	.607
HISTNEGL	-.437	1.299	.113	1	.736	.646
HISTABUS	1.961	1.102	3.165	1	.075	7.103
SUDSNEED	2.835	1.148	6.098	1	.014	17.032
MHNEEDS	18.157	2799.287	.000	1	.995	76809313.53
MEDNEEDS	-1.382	.983	1.978	1	.160	.251
SUSPENANDEXPUL	-31.537	5991.677	.000	1	.996	.000
SPECIALED	-17.172	2799.287	.000	1	.995	.000
DIFAMCRIM	-31.661	5066.587	.000	1	.995	.000

The third model contained variables related to the juveniles' delinquency. This included history of assault, history of running away, gang activity, criminal history (excluding status offenses), type of first offense committed, age at time of first offense, and history of sexual crimes. Results indicated that the delinquency model (n=186) was statistically significant ($\chi^2 = 33.816$, p=.000), explaining 36.3% of variance (Nagelkerke R-Square) in commitment decisions and correctly classifying 93% of cases. When examining the individual variables, three variables in the model were statistically significant (see Table 1.5). History of running away (OR=3.596, p=.043) increases the odds of being committed by 3.596 when compared to no history of running away. Additionally, criminal history (OR=1.809, p=.000) increased the likelihood of being committed. For every one unit increase in criminal history, the odds of being committed increased by 1.809 or 80.9%. A history of sexual misconduct (OR=9.583, p=.008) also increased the odds of being committed by 9.583 or 858.3%, compared to juveniles with no history of sexual misconduct.

Table 1.5 Binary Logistic Regression: Model 3

Variable	B	S.E.	Wald	df	Sig.	Exp(B)
HISTASLT	-.198	.649	.093	1	.761	.821
HISTRUN	1.280	.633	4.082	1	.043	3.596
GANGACT	.583	.836	.488	1	.485	1.792
CRIMHIST	.593	.166	12.773	1	.000	1.809
FIRSTOFFENSE	-.095	.142	.449	1	.503	.909
FIRSTAGE	.309	.189	2.662	1	.103	1.362
SEXOFFENHIST	2.260	.851	7.046	1	.008	9.583

The fourth model included variables related to the current offense including current offense type, restitution amount remaining, community service hours remaining, if the juvenile was detained pre-decision, whether this would be a recommitment, and how many screening team members recommended commitment. This current offense

model (n=109) also was statistically significant ($\chi^2 = 13.180$, p=.040), explaining 36.6% of variance (Naglekerke R-Square) and correctly classifying 95.4% of cases. When examining each variable individually, the number of screening team members recommending commitment was the only statistically significant variable for commitment decision (OR= 2.170, p=.037) (see Table 1.6). For every one unit increase in recommended commitments, the odds of getting committed increased by 2.170 or 117%.

Table 1.6 Binary Logistic Regression: Model 4

Variable	B	S.E.	Wald	df	Sig.	Exp(B)
RESTAMT	.000	.000	.041	1	.840	1.000
COMMSERV	.791	138.697	.000	1	.995	2.207
PREDETENT	.487	1.076	.205	1	.651	1.628
NUMRECCOM	.775	.372	4.331	1	.037	2.170
COMMITOFFEN	-.090	.331	.074	1	.786	.914
RECOMMIT	18.101	10222.754	.000	1	.999	72614649.62

The fifth model consisted of legal variables such as who has legal custody of the child, how many times they have been placed in detention, the combined length of their detention days, how many times they have been placed in commitment before, and the total length of time committed. This legal model (n=15) was excluded from the analysis due to the exceptionally low sample size.

Final Binary Logistic Regression Model

The final model combines the statistically significant variables identified in the previous series of models. The final model included substance abuse needs, criminal history not including status offenses, the number of the Rule-19 screening team members who recommended commitment, history of running away, history of sexual misconduct, and religious affiliation. The logistic regression results specified in this six-predictor model (n=155) was statistically significant ($\chi^2 = 37.153$, p=.000). Although, upon further

examination of these six variables, no variable created statistically significant results, producing a concern of error (see Table 1.7).

Table 1.7 Binary Logistic Regression: Final Model with Religious Affiliation

Variable	B	S.E.	Wald	df	Sig.	Exp(B)
HISTRUN	67.165	1954.507	.001	1	.973	1.477E+29
SEXOFFENHIST	122.694	3492.687	.001	1	.972	1.930E+53
CRIMHIST	13.039	479.990	.001	1	.978	459828.108
NUMRECCOM	37.056	1119.324	.001	1	.974	1.239E+16
SUDSNEEDS	96.108	2833.014	.001	1	.973	5.484E+41
RELIAFF	53.737	1731.737	.001	1	.975	2.176E+23

This model was then rerun, removing one variable upon each logistic regression. This process indicated that the variable 'religious affiliation' was strongly affecting the outcome of this model. Therefore, this variable was removed from the final model, resulting in a new statistically significant model ($\chi^2 = 43.0236$, p=.000), explaining 47.1% of the variance in whether a juvenile was committed and correctly classifying 91.7% of cases. When observing each variable independently, three out of the five variables remained statistically significant. History of sexual misconduct (OR=21.417, p=.002), criminal history (OR=1.474, p=.018), and number of screening team members recommending commitment (OR=1.762, p=.005) were all significant predictors of juvenile commitment. The odds of being committed for youth who have a history of sexual misconduct was 21.417 (2041.7%) higher than juveniles who have no history of sexual misconduct. Furthermore, for every one unit increase in criminal history, the odds of commitment increase by 47.4% and for every one unit increase in screening team member commitment recommendations, the odds of commitment increase by 76.2% (see Table 1.8).

Table 1.8 Bivariate Logistic Regression: Final Model without Religious Affiliation

Variable	B	S.E.	Wald	df	Sig.	Exp(B)
HISTRUN	1.286	.697	3.401	1	.065	3.617
SEXOFFENHIST	3.064	.992	9.549	1	.002	21.417
CRIMHIST	.388	.164	5.618	1	.018	1.474
NUMRECCOM	.567	.201	7.972	1	.005	1.762
SUDSNEEDS	1.552	.801	3.753	1	.053	4.721

CHAPTER FIVE: DISCUSSION

For this analysis, a series of five models were run in order to examine a variety of variables that are included in an Idaho Rule-19 screening. The hypothesis was that predictor variables for juvenile delinquency would also be predictors of a juvenile being committed to a state facility. Overall, this hypothesis was partially supported. Out of 32 variables included, only six were shown to be statistically significant. The variables that were consistently shown to be a predictor of juvenile offending, as discussed in the literature review, and a predictor of commitment, as found in this analysis, were criminal history and substance abuse needs. Additional statistically significant variables were religious affiliation, history of running away, history of sexual misconduct, and number of screening team members who recommended commitment. Upon running the final model, only three of these variables remained statistically significant: history of sexual misconduct (OR=21.417, p=.002), criminal history (OR=1.474, p=.018) and number of screening team members recommended commitment (OR=1.762, p=.005). Religious affiliation was excluded from the final model, as discussed above. All other variables in the model series resulted in no significance in predicting the outcome of a commitment decision. Therefore, a juvenile's history of past offenses and sexual misconduct strongly influence if a judge will commit a juvenile to state custody. Additionally, the number of screening team members who recommended commitment for the juvenile, also strongly influence state commitment. Therefore, these findings demonstrate that a judge is

strongly influences by these three factors when it comes to making a commitment decision.

In addition to these statistically significant findings, there are also variables that were found to have no significance, despite previous literature. Age when first offense was committed (p=.103) and mental health needs (p=.995) were shown to be not statistically significant. Additionally, school factors also were shown to have no influence on the commitment decision with the variables of ever being suspended or expelled (p=.996) and history of special education (p=.995). Research has also consistently made known the strong influence of family factors, but these findings revealed no statistical significance for these factors. Ever being adopted (p=.675), experienced neglect (p=.736), experienced abuse (p=.075), and family criminality (p=.995) were shown to have no impact on the judge's state commitment decision. Finally, demographic of the juvenile such as their age (p=.826), sex (p=.617), and ethnicity/race, were insignificant. These findings were most surprising for the variable ethnicity/race. When the reference group was White, p=.058, and when the reference group was Hispanic, p=.878. Therefore, despite racial disparities found in previous research, the juvenile's ethnicity/race had no effect in this analysis.

Limitations

Limitations for this study included a large proportion of missing variables. As can be seen in the model information below, there were many missing cases for each model due to the large amount of missing information in the Rule-19 screening files. These screening are conducted by the juvenile's committing county and therefore they may vary in the amount of information provided. When these screenings are conducted, only two

sections are required to be completed, leaving the remainder up to the discretion of the juvenile probation officer to provide. Therefore, for many variables, these results were significantly influenced by these missing cases and results should be examined with this limitation in mind. Moreover, the discretion of the forms may also affect the reliability and validity of the variables being examined.

Additionally, this data is from the Idaho Department of Juvenile Corrections and therefore should be generalized only in Idaho. Generalizing these findings beyond Idaho should be done cautiously. Finally, although every model has missing data, model five had an extremely small sample size of 15 which is too small to run a valid regression analysis.

Policy Implications

The most vital policy implication produced from this analysis is the need to document full screenings on the juveniles being considered for a Rule-19. Based on the results for this analysis, the only significant factors influencing a decision to commit a juvenile to a state facility were their offending history and the number of screening members who recommended commitment. It seems unlikely, based on research, that these are the only three factors that influence a judge's decision and why a juvenile gets committed, but, due to lack of reporting other potential manipulating factors, it is difficult to know. If Rule-19 screening reports were completed in full, not only would this analysis be able to gain a more accurate insight into variables influencing commitment decisions, the IDJC would also be able to identify important areas of focus that are specific to juveniles who are committed to their state facilities.

Future Research

With results indicating a strong significance of screening team member recommendations influencing the outcome of a juvenile's Rule-19 commitment decision, future research should examine this further. Additional research should examine what specifically is influencing a screening member's decision to recommend commitment for a juvenile. Based on the current study's results, it is difficult to acknowledge what factors are influencing this decision. Therefore, future assessments should look into potential explanatory factors that are influencing this statistically significant predictor of juvenile state commitment.

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APPENDIX A

Variable List: All Models

ADOPT	Is the juvenile adopted?	0 – No 1 – Yes
AGE	Age of the juvenile at the time of the Rule-19 screening	Numeric, in years
CDLENGTH	Length of combine previous county detention days	In days
CDNUM	Number of previous county detention days	Numeric
COMMITCOUNT	Listed county pursuing the Rule-19	0 – Ada and Bonneville County 1 – All other counties (Bannock, Bingham, Blaine, Bonner, Boundary, Butte, Canyon, Cassia, Elmore, Franklin, Fremont, Gooding, Idaho, Jefferson, Jerome, Kootenai, Latah, Lemhi, Lewis, Lincoln, Madison, Minidoka, Nez Perce, Oneida, Owyhee, Payette, Power, Shoshone, Twin Falls, Valley, Washington)
COMMITLENGTH	Length of combined previous commitments to IDJC	In months
COMMITOFFEN	The type of crime committed by the juvenile being considered in the commitment decision	0 – Persons 1 – Other offenses (sex, property, drug, society, other, status, traffic)
COMMSERV	The juvenile's community serviced hours remaining	In hours
CRIMHIST	Number of prior offenses (criminal history, excluding status offenses)	Numeric
ETHNICITY/RACE	Listed race/ethnicity of the juvenile	0 – White 1 – Hispanic-all races 2 – All other ethnicities/races (American Indian, Other/mixed, Black, Pacific Islander, Unknown)

FAMCRIM	Does the juvenile's family have a criminal history?	0 – No 1 – Yes
FIRSTAGE	The age in which the juvenile was at the time of their first offense	In years and months
FIRSTOFFENSE	The type of the first crime committed by the juvenile	0 – Persons 1 – Other offenses (sex, property, drug, society, other, status, traffic)
GANGACT	Has the juvenile ever engage in gang activity (yes includes admitted/claimed gang association and formal/active/jumped in/involved in criminal activity)	0 – No 1 – Yes
HISTABUS	Has the juvenile ever experienced abuse (sexual, physical, both, or witnessed)	0 – No 1 – Yes
HISTASLT	Does the juvenile have a history of assaults?	0 – No 1 – Yes
HISTNEGL	Has the juvenile ever experienced neglect?	0 – No 1 – Yes
HISTRUN	Does the juvenile have a history of running away?	0 – No 1 – Yes
LEGALCUST	Who has legal custody of the juvenile?	0 – Father 1 – Mother 2 – Joint 3 – Other Related 4 – Other Non-Related
MEDNEEDS	Does the juvenile have medical needs?	0 – No 1 – Yes
MHNEEDS	Does the juvenile have mental health needs?	0 – No 1 – Yes
NUMCOMMIT	Number of previous commitments to IDJC	Numeric
NUMRECCOM	The number of screening members that recommended commitment for the juvenile	Numerical
PREDETENT	Was the juvenile detaining leading up to the screening	0 – No 1 – Yes

RECOMMIT	Would this commitment be a recommitment for the juvenile?	0 – No 1 – Yes
RESTAMT	The juvenile's restitution amount remaining	In dollars
RELIAFF	Juvenile's listed religious affiliation	0 – No Religion 1 – Religious (Mormon/LDS, Christian, Catholic, Atheist, Pentecostal, Pagan, Non-Denominational, Satanic)
SEX	Listed sex of juvenile	0 – Male 1 – Female
SEXOFFENHIST	Has the juvenile ever committed a sexual offense?	0 – No 1 – Yes (adjudicated, non-adjudicated, other sexual misconduct)
SPECIALED	Has the juvenile been enrolled in special education?	0 – No 1 – Yes
SUDSNEEDS	Does the juvenile have substance abuse needs?	0 – No 1 – Yes
SUSPENANDEXPUL	Has the juvenile ever been suspended or expelled from school?	0 – No 1 – Yes

Table 1.1 Variable List