GENDER DIFFERENCES IN THE PREVALENCE OF MENTAL HEALTH AND SUBSTANCE ABUSE PROBLEMS AMONG DETAINED JUVENILES IN IDAHO

by

Jessica Marshall

A thesis

submitted in partial fulfillment

of the requirements for the degree of

Master of Health Science in Health Policy

Boise State University

May 2019
DEFENSE COMMITTEE AND FINAL READING APPROVALS

of the thesis submitted by

Jessica Marshall

Thesis Title: Gender Differences in the Prevalence of Mental Health and Substance Abuse Problems among Detained Juveniles in Idaho

Date of Final Oral Examination: 15 March 2019

The following individuals read and discussed the thesis submitted by student Jessica Marshall, and they evaluated her presentation and response to questions during the final oral examination. They found that the student passed the final oral examination.

Edward Baker, Ph.D. Chair, Supervisory Committee
Theodore W. McDonald, Ph.D. Member, Supervisory Committee
Sandina Begic, Ph.D. Member, Supervisory Committee

The final reading approval of the thesis was granted by Edward Baker, Ph.D., Chair of the Supervisory Committee. The thesis was approved by the Graduate College.
ACKNOWLEDGEMENTS

Thank you to the Boise State Center for Health Policy, my Thesis Committee, Idaho Department of Juvenile Corrections, and Idaho’s Juvenile Detention Centers. The Clinical Services Program has connected thousands of youth with the services they need at a crucial time in their lives.

I would like to extend a special thanks to my committee chair, Dr. Edward Baker, for taking a chance on an eager freshman undergraduate so many years ago. My time at the Center for Health Policy has been invaluable and I am so thankful to have learned from you.
ABSTRACT

For the past 11 years, the Boise State University’s Center for Health Policy has partnered with the Idaho Department of Juvenile Corrections to analyze data on juveniles entering detention at 13 Juvenile Detention Centers in Idaho. The Alaska Screening Tool (AST) is used to screen juveniles who may or may not meet the criteria for having a mental health problem, substance abuse problem, or both types of problems. The current study explores prevalence rates and gender differences as indicated by the AST for fiscal years 2008-2017. Across nine years of data (fiscal years 2008-2017), on average, 61% of all detained youth met AST criteria for having a mental health problem, and 43% met the criteria for a substance abuse problem. On average, 72% of youth met AST criteria for having at least one problem (mental health only, substance abuse only, or both). Girls (77%) were more likely to meet AST criteria for any type of problem (i.e. a mental health problem only, a substance abuse problem only, or both types of problems) than boys (70%). There was a significant association between gender and meeting AST criteria for any type of problem, $\chi^2 (1, N=12,384) = 54.19, p < 0.0005$. Girls (70%) were statistically significantly more likely than boys (58%) to meet AST criteria for a mental health problem, $\chi^2 (1, N = 12,384) = 164.81, p < 0.0005$. Girls (42%) were slightly less likely than boys (43%) to meet AST criteria for a substance abuse problem, although this difference was not statistically significant, $\chi^2 (1, N=12,384) = 0.952, p = 0.359$. These findings indicate that efforts to address these problems while youth are in detention and upon their release back into the community are important in the rehabilitation of justice-
involved youth. Girls are especially in need of community-based services due to their higher prevalence rates of mental health problems than boys.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>iv</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>v</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>ix</td>
</tr>
<tr>
<td>LIST OF ABBREVIATIONS</td>
<td>x</td>
</tr>
<tr>
<td>CHAPTER ONE: INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Statement of the Problem</td>
<td>1</td>
</tr>
<tr>
<td>Purpose</td>
<td>2</td>
</tr>
<tr>
<td>Research Questions</td>
<td>2</td>
</tr>
<tr>
<td>CHAPTER TWO: LITERATURE REVIEW</td>
<td>4</td>
</tr>
<tr>
<td>Juvenile Justice System and Mental Health</td>
<td>4</td>
</tr>
<tr>
<td>Gender Differences</td>
<td>6</td>
</tr>
<tr>
<td>Screening and Assessment</td>
<td>7</td>
</tr>
<tr>
<td>Alaska Screening Tool</td>
<td>8</td>
</tr>
<tr>
<td>CHAPTER THREE: METHOD</td>
<td>10</td>
</tr>
<tr>
<td>Sample</td>
<td>11</td>
</tr>
<tr>
<td>Research Design</td>
<td>12</td>
</tr>
<tr>
<td>Instrument</td>
<td>12</td>
</tr>
<tr>
<td>Procedure</td>
<td>13</td>
</tr>
<tr>
<td>Analysis</td>
<td>13</td>
</tr>
</tbody>
</table>
CHAPTER FOUR: RESULTS ................................................................. 15

CHAPTER FIVE: DISCUSSION ........................................................... 20
  Consistent Findings ........................................................................... 20
  Gender-Specific Services ................................................................. 21
  Trauma ............................................................................................... 22
  Community Services .......................................................................... 23
  Limitations .......................................................................................... 24
  Suggestions for Future Research ...................................................... 24
  Conclusion ............................................................................................ 25

REFERENCES ....................................................................................... 26

APPENDIX A ........................................................................................ 31
  Alaska Screening Tool ....................................................................... 31
LIST OF FIGURES

Figure 1. Number of Cases, by Year .................................................................11
Figure 2. Percentage of Cases, by Gender .........................................................12
Figure 3. Prevalence of Mental Health Problems, by Year .................................15
Figure 4. Prevalence of Substance Abuse Problems, by Year ..............................15
Figure 5. Prevalence of Mental Health Problems, by Gender ..............................16
Figure 6. Prevalence of Substance Abuse Problems, by Gender ...........................17
Figure 7. Prevalence of Neither Problem, Mental Health Only, substance Abuse Only, Or Both Problems .................................................................18
**LIST OF ABBREVIATIONS**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AST</td>
<td>Alaska Screening Tool</td>
</tr>
<tr>
<td>BSU</td>
<td>Boise State University</td>
</tr>
<tr>
<td>CHP</td>
<td>Center for Health Policy</td>
</tr>
<tr>
<td>CSP</td>
<td>Clinical Services Program</td>
</tr>
<tr>
<td>IDHW</td>
<td>Idaho Department of Health and Welfare</td>
</tr>
<tr>
<td>IDJC</td>
<td>Idaho Department of Juvenile Corrections</td>
</tr>
<tr>
<td>JDC</td>
<td>Juvenile Detention Center</td>
</tr>
</tbody>
</table>
CHAPTER ONE: INTRODUCTION

Statement of the Problem

Although the juvenile justice system in the United States began with goals to rehabilitate youth, throughout the 1980s and 1990s, increasing rates of crime among youth resulted in more criminal sanctions and large increases in the number of youth being sentenced to juvenile incarceration for punishment (Grisso, 2007). Those working in the juvenile justice system recognized that many of these incarcerated youth were suffering from mental health and/or substance abuse problems that were not being adequately diagnosed or treated. Prior to the 1990s, limited research existed to systematically examine and report the prevalence rates of these problems youth were experiencing (Edens & Otto, 1997; Otto, Greenstein, Johnson, & Friedman, 1992). Screening youth for mental health and/or substance abuse problems when they entered a facility was identified as a best practice to connect them with services they require (Otto et al., 1992).

The Boise State University (BSU) Center for Health Policy (CHP) has collected and analyzed data as part of an ongoing evaluation for the Clinical Services Program (CSP) since 2008 (McDonald, Begic, & Deitsch, 2018). The Alaska Screening Tool (AST) is administered to youth at intake and identifies those with mental health and substance abuse problems. The CSP began as a pilot study in the Juvenile Detention Center (JDC) in Bonneville County, Idaho and has expanded to include 13 JDCs across the state.
**Purpose**

The purpose of this study was to explore gender differences in the prevalence rates of mental health and substance abuse problems among detained youth in Idaho, as measured utilizing the Alaska Screening Tool (AST). Research indicates mental health and substance abuse problem prevalence rates differ between youth involved in the justice system and non-justice involved youth (Teplin, Abram, McClelland, Dulcan, & Mericle, 2002). The symptoms frequently appear as delinquency, such as “acting out,” resulting in youth being placed in custody for their delinquency when in reality they are often in need of mental health services instead (Grisso, 2007; Otto, Greenstein, Johnson, & Friedman, 1992; Teplin et al., 2002).

To better understand the needs of juveniles in detention, personnel at juvenile justice facilities should examine the prevalence rates of mental health and substance abuse problems in their populations. The AST is a screening tool designed to quickly identify these problems in youth when admitted to a facility (McDonald, Williams, Osgood, & Van Ness, 2009; Vincent, 2011). Clinicians at Idaho JDCs have used the AST since the inception of the program to collect these data. The researcher analyzed AST data collected during fiscal years 2008-2017 from 13 JDCs across Idaho. Mental health problems and substance abuse problem prevalence rates were analyzed for gender differences across nine years.

**Research Questions**

This research was exploratory and therefore there were no hypotheses. The research questions that were explored are listed below:
1. What was the prevalence of mental health problems, as measured by the AST, in detained juveniles in Idaho during fiscal years 2008-2017?

2. What was the prevalence of substance abuse problems, as measured by the AST, in detained juveniles in Idaho during fiscal years 2008-2017?

3. What was the prevalence of both mental health and substance abuse problems, as measured by the AST, in detained juveniles in Idaho during fiscal years 2008-2017?

4. What was the prevalence of meeting AST criteria for any type of problem (mental health problem only, substance abuse problem only, or both types of problems)?

5. Do mental health and substance abuse prevalence rates, as measured by the AST, differ between genders?
CHAPTER TWO: LITERATURE REVIEW

Juvenile Justice System and Mental Health

The first juvenile court in the United States was established in 1899 in Cook County, Illinois (Grisso, 1996). Recognizing that youth face different challenges and commit different crimes than adults, youth courts began to grow and were largely informal probation systems that sought to rehabilitate youth instead of punish them (Thomas, 2002). Juvenile courts viewed most crimes as a consequence of age rather than criminality, limiting the number of youth receiving criminal sentencing (Grisso, 1996; Thomas, 2002). The 1980s and 1990s saw increases in juvenile crime rates across the United States; these resulted in tougher sanctions on youth and higher rates of youth incarceration (Grisso, 1996; Grisso, 2007). Around the same time, policy shifted from rehabilitation to punishment for crimes committed (Grisso, 2007). Many courts began to sentence youth to incarceration in adult prisons and lower the age that youth could be tried as adults for certain crimes, resulting in an increase in the population of detained juveniles (Grisso, 1996; Teplin et al., 2002). As these increasingly punitive policies spread throughout the United States, state funding for child community mental health systems and services started to decrease (Seagrave & Grisso, 2002).

Consequently, youth with mental health problems started to be diverted to the juvenile justice system instead of receiving the mental health services they needed in their community. Perhaps expectedly, juvenile detention centers began to report alarming rates of behavior problems among their populations. They reported that youth with
Mental health problems were manifesting complex behavior problems, causing more difficulties in detention center operations (Aalsma, Schwartz, & Perkins, 2014; Otto et al., 1992). This does not seem surprising given that certain mental health disorders are significantly higher in incarcerated youth; a good example are conduct disorders, which often manifest in the form of delinquent and criminal behaviors that lead to arrests but are in reality symptoms of mental health disorders (Edens & Otto, 1997; Otto et al., 1992).

Prevalence rates of mental health problems are higher among youth involved in the justice system than the general youth population (Aalsma et al., 2014; Otto et al., 1992). Left untreated, the risk for recidivism increases and rehabilitation efforts while in detention suffer (Loeber et al. 1998; Lynam, 1996; Wasserman, Ko, & McReynolds, 2004). As the detained youth population in the United States grew, advocates stressed the importance of identifying youth with mental health problems and connecting them with appropriate services. It became apparent that youth suffering from mental health problems were inappropriately becoming incarcerated. The National Coalition for the Mentally Ill in the Criminal Justice System prioritized addressing the mental health needs of the incarcerated youth population (Teplin et al., 2002).

More than three decades ago, Otto et al. (1992) identified the lack of data available surrounding prevalence rates of mental health problems for delinquent youth. Furthermore, methodological limitations made it difficult to generalize prevalence rates due to inconsistent use of sampling techniques, consistent screening tools to identify problems, and failure to address comorbidity (Edens & Otto, 1997).

A landmark study conducted by Teplin et al. (2002) as part of the Northwestern Juvenile Project, in collaboration with members of the National Coalition for the
Mentally Ill in the Criminal Justice System, sought to address this gap in the literature utilizing many of the recommendations identified by Otto et al. (1992). Utilizing the Diagnostic Interview Schedule for Children (DISC), interviewers randomly selected youth ages 10-18 years old (N=1829) who were housed at the Cook County, Illinois JDC from 1995-1998. Through stratifying by gender, race and ethnicity, and age, prevalence estimates could be generalized to this facility’s population. Six-month prevalence rates suggested that two-thirds of males and three quarters of females met the diagnostic criteria for at least one psychiatric disorder. This facility’s population also suggested one half of males and about one half of females met the diagnostic criteria for a substance abuse problem. High prevalence rates of mental health and substance abuse problems in youth suggested that correctional facilities needed to be prepared to address these problems detained youth were experiencing (Grisso, 2007; Shufelt & Coccoza, 2006).

**Gender Differences**

In the Cook County, Illinois sample, the most common disorders reported for both genders were substance use disorders and disruptive behavior disorders (Teplin et al., 2002). Increased focus on the differences between genders seems necessary to design best intervention and prevention strategies for high-risk youth. Females in the juvenile justice system have higher odds of experiencing any mental health disorder, and suffer worse outcomes beyond adolescence (Teplin et al, 2002; Wassermann et al., 2004). Seventy-five percent of detained female youth meet diagnostic criteria for one or more psychiatric disorders, as compared to 66% of males (Teplin et al., 2002; Washburn et al. 2015). Detained female youth are more likely than detained male youth to report suicidal ideation (Meltzer, Gatward, Goodman, & Ford, 2003; Washburn et al., 2015). About half
of detained male and female youth also meet diagnostic criteria for having a substance use disorder (Teplin et al., 2002). Females are more likely to experience internalizing disorders whereas males are more likely to exhibit externalizing disorders (Cauffman, 2004). Symptoms of externalizing disorders, such as bullying or disrespect for authority, can appear as youth behavior problems. Females are less likely to exhibit these symptoms, leaving females inadvertently untreated for their problems since internalizing disorder symptoms do not attract the same attention (Cauffman, 2004). Although males represent the majority of juvenile offenders, rates of female offenders are increasing (Pusch & Holtfreter, 2017).

**Screening and Assessment**

Screening at intake to a JDC is an effective way to quickly identify youth who may be experiencing a mental health problem, a substance abuse problem, or both types of problems (Cauffman, 2004; Otto et al., 1992; Teplin et al., 2002). Many youth in the justice system do not receive treatment for their disorders (Cauffman, 2004; Young, Dembo, & Henderson, 2007). Efficient, reliable screening tools are necessary for JDC clinicians to identify youth who need services and understand prevalence rates in their populations. By screening all youth upon arrival, personnel at juvenile justice facilities can identify the youth most in need of immediate services and identify youth with a higher likelihood of mental health problems, who may require more attention (Grisso, 2005; Vincent, 2011). Screening youth identifies the current symptoms he or she is experiencing and helps place him or her in proper levels of treatment. It also identifies youth in need of more detailed assessments (Vincent, 2011). For example, a screen can identify a youth needing substance detoxification or suicide watch at intake (Grisso,
In contrast to screening, an assessment requires a trained clinician to conduct a clinical interview and review pertinent records to address mental health problems or and/or substance abuse problems identified by a screener (Grisso, 2005). A youth needing an assessment may have deeper, more complex mental health problems than can be addressed at intake.

**Alaska Screening Tool**

The Alaska Screening Tool (AST) was developed by behavioral health providers, the Alaska Mental Health Board, Alaska Mental Health Trust Authority, and the Alaska Division of Behavioral Health to quickly identify individuals experiencing a mental health problem (Niven, 2007; State of Alaska Department of Health and Social Services, 2007). As part of Alaska’s suicide prevention plan, mental health and substance abuse programs that receive funds from the Division of Behavioral Health were mandated in 2006 use the AST to enhance intervention and diagnoses of these problems (Niven, 2007; State of Alaska Department of Health and Social Services, 2007). The AST screens individuals for mental health problems, substance abuse problems, and traumatic brain injuries (McDonald, Williams, Osgood, & Van Ness, 2009; Vincent, 2011).

This screen demonstrated success in the juvenile justice system in Alaska (Niven, 2007; State of Alaska Department of Health and Social Services, 2007). The AST was revised in 2011 to refine the mental health subscale and investigate adverse childhood experiences (Vincent, 2011). The AST short form developed in 2006, the screener used in Idaho JDCs, can be found in Appendix A. Rather than require extensive training in regards to how to utilize the tool and interpret the results, the AST utilizes “yes” and “no” answers to each question. Based upon a youth’s answers, a clinician is prompted to ask
clarifying questions that identify if the youth is experiencing a mental health and/or substance abuse problem (Vincent, 2011).

If a youth responds “yes” to any of the first five questions, the clinician asks the youth clarifying questions (State of Alaska Department of Health and Social Services, 2007). If the response indicates a positive result, the youth is referred to a full substance abuse assessment. If the youth responds positively to any question between questions six-13, they are referred for a full substance abuse assessment. A positive response to question 14 and 15 trigger a full substance abuse assessment (State of Alaska Department of Health and Social Services, 2007).

If a youth responds positively to any of the first 12 questions, the clinician asks for clarifying information (State of Alaska Department of Health and Social Services, 2007). If a positive response is validated, the youth is referred for a full mental health assessment. A positive response to any two of the remaining questions (13-20) requires the clinician to ask for clarifying information. A positive response triggers a referral for a full mental health assessment (State of Alaska Department of Health and Social Services, 2007).
CHAPTER THREE: METHOD

In 2006, the Idaho Department of Health and Welfare (IDHW) and the Idaho Department of Juvenile Corrections (IDJC) piloted a program in which a mental health clinician screened all juveniles entering the JDC in Bonneville County, Idaho (McDonald et al., 2009; McDonald, Begic, & Deitsch, 2018). The clinician screened the youth for mental health and substance abuse problems, and made recommendations for post-release services based upon the youths’ provisional diagnoses. A positive internal evaluation of the pilot showed high prevalence rates of both types of problems and success in linking juveniles with appropriate services upon release. This project was expanded to include 12 additional JDCs and became known as the Clinical Services Program (CSP). The expansion included JDCs in the counties of Ada, Bannock, Bonner, Canyon, Fremont, Kootenai, Lemhi, Minidoka, Nez Perce, Twin Falls, and Valley, as well as the Fort Hall Shoshone/Bannock tribal facility. The CSP contracted with an evaluation team at the Boise State University (BSU) Center for Health Policy (CHP). IDJC clinicians and other staff members compile data on incoming youth as part of the intake process. IDJC staff remove unique identifiers and provide the data to researchers at the CHP. The present analysis includes data collected during the first nine years of the CSP, spanning fiscal years 2008-2017.
Sample

Data were gathered over nine years of the CSP, for a total of 12,384 cases of detained juveniles. As seen in Figure 1, on average, the number of detained juveniles decreased each year. The exceptions are Year 4 and Year 8.

![Figure 1. Number of Cases, by Year](image)

On average across nine fiscal years, most detained juveniles were male (71%), ranging from 68% to 73% (Figure 2). Detained females comprised, on average, 29% of cases, ranging from 27% to 32%. Race/ethnicity information was not used in any annual evaluation, and therefore not in this study.
Research Design

In the present analysis, the researcher utilized an exploratory design analyzing secondary data from the CSP across fiscal years 2008-2017.

Instrument

All youth entering an Idaho JDC are screened with the Alaska Screening Tool (AST) by a mental health clinician. Throughout each program implementation year, the AST was the primary assessment utilized to assess the prevalence of mental health and substance abuse problems for detained juveniles. Although the tool includes three subscales (i.e. mental health problems, substance abuse problems, and traumatic brain injuries) only mental health problems and substance abuse problems are utilized in CSP program implementation. The JDCs utilize the original AST developed in 2006 to screen youth.

After the clinician completes the clinical interview (usually completed at intake or within the first day) the data are entered in to the clinician database as “True” or “False.” “True” means the juvenile met the criteria for a mental health or substance abuse problem
and was referred for a full mental health assessment or full substance abuse assessment. “False” means the juvenile did not meet the criteria for the relevant problem and was not triggered for a complete mental health assessment or full substance abuse assessment.

**Procedure**

All data utilized in this analysis were collected by IDJC clinicians, and a data specialist removed any identifiable information. The data were then provided to the BSU CHP as part of an ongoing evaluation of the CSP. BSU Institutional Review Board approval was attained prior to the current study. For the purpose of this analysis, the data extracted from fiscal years 2008-2017 are reported in aggregate. Data were cleaned and entered in IBM’s Statistical Package for the Social Sciences (SPSS) Version II, which was also used for analysis.

**Analysis**

Descriptive statistics were the primary mode of data analysis to explore the prevalence rates of mental health problems, substance abuse problems, and both types of problems among detained youth in Idaho. Chi-square analyses were utilized to assess for any gender differences in these prevalence rates.

Each case was categorized on a nominal scale (true/false) according to the AST subscale. A designation of “true” indicates the youth scored positive for the mental health or substance abuse problem and “false” indicates the youth did not meet the criteria for having the problem. These results are presented in aggregate form as well as by year and gender.

As aforementioned, the researcher utilized chi-square analyses to assess for possible gender differences. First, the researcher determined if there was a difference for
meeting any AST criteria for a problem (mental health only, substance abuse only, or both) and gender. Second, possible differences between gender and meeting criteria for a mental health problem were examined. Third, possible gender differences between gender and meeting AST criteria for a substance abuse problem were examined.
CHAPTER FOUR: RESULTS

Across nine years of the CSP project, the majority of youth screened with the AST when entering a JDC met the criteria for having a mental health problem. The average percentage was 61%, ranging from a low of 56% in year six to a high of 68% in year one (Figure 3). In most years, the percentage was similar to the nine-year average.

![Figure 3. Prevalence of Mental Health Problems, by Year](image)

Figure 3. Prevalence of Mental Health Problems, by Year

On average, 42% of youth met the criteria for having a substance abuse problem when screened with the AST. This ranged from 35% in year eight to 55% in year one. As

![Figure 4. Prevalence of Substance Abuse Problems, by Year](image)

Figure 4. Prevalence of Substance Abuse Problems, by Year
seen in Figure 4, the percentage of youth meeting the criteria for a substance abuse problem continued to decrease, albeit with a slight rise in year nine.

Gender differences in the prevalence of mental health problems as indicated by the AST were consistent in all years of CSP data. Figure 5 displays prevalence rates by gender. Girls who met the criteria for a mental health problem averaged 70% across nine years, ranging from 67% to 76%. Boys who met the criteria for a mental health problem averaged 57%, ranging from 53% to 65%. In all years, significantly more girls than boys met the AST criteria for mental health problems.

Figure 5. Prevalence of Mental Health Problems, by Gender

Gender differences in the prevalence of substance abuse problems as indicated by the AST were consistent in CSP data (Figure 6). Girls with a substance abuse problem as indicated by the AST across nine years averaged 41% and boys averaged 42%. Girls ranged from 53% to 38% and boys ranged from 55% to 34%. In years one through five, more boys met the criteria for substance abuse problems than girls. In years six through
eight, more girls met the criteria for substance abuse problems than boys. In year nine, 38% of boys and girls met the AST criteria for a substance abuse problem (Figure 6).

**Figure 6. Prevalence of Substance Abuse Problems, by Gender**

Many youths in the Idaho JDCs met the AST criteria for having both a mental health problem and a substance abuse problem. Figure 7 displays the nine-year average prevalence rates of youth who met the AST criteria for having neither a mental health problem nor substance abuse problem, a mental health problem only, a substance abuse problem only, or both a mental health and substance abuse problem. More youth met AST criteria for having both a mental health and substance abuse problem (31%) than not met the criteria for having neither type of problem (28%). A much smaller percentage of youth met the criteria for a substance abuse problem only (11%) than a mental health problem only (30%). When combined, 72% of youth screened met the AST criteria for any time of problem (i.e. a mental health problem, a substance abuse problem, or both types of problems).
The researcher performed a chi-square analysis to assess whether prevalence rates for meeting AST criteria for any problem (i.e. a mental health problem only, a substance abuse problem only, or both types of problems) were different with regards to gender. There was a statistically significant association between gender and meeting AST criteria for any type of problem, $\chi^2 (1, N=12,384) = 54.19, p<0.0005$. Girls (77%) were more likely to meet AST criteria for any problem (i.e. a mental health problem only, a substance abuse problem only, or both types of problems) than boys (70%).

A chi-squared test was performed to assess whether prevalence for meeting the AST criteria for a mental health problem were different with regards to gender. Across nine years of aggregate data, girls (70%) were statistically significantly more likely to meet the criteria for a mental health problem as indicated by the AST than boys (58%) $\chi^2 (1, N=12,384) = 164.81, p<0.0005$. 
A chi-square test was performed to assess if prevalence rates for meeting the AST criteria for a substance abuse problem were different with regards to gender. Across nine years of aggregate data, girls (42%) were slightly less likely to meet the criteria for a substance problem as indicated by the AST than boys (43%), although this difference was not statistically significant, $\chi^2 (1, N=12,384) = 0.952, p =0.359$. 
CHAPTER FIVE: DISCUSSION

This study examines the prevalence rates of mental health problems and substance abuse problems, as indicated by the AST, of youth entering JDCs in Idaho during fiscal years 2008-2017. These results offer policy makers, clinicians, and administrators valuable information to create policies and procedures to meet the needs of justice-involved Idaho youth. This chapter will begin with a discussion of the consistent gender patterns identified in Idaho. The chapter will also discuss the need for gender-specific services and the role of trauma in juvenile delinquency. It will conclude with the importance of community-based services, followed by limitations of the study and suggestions for future research.

**Consistent Findings**

One of the most striking findings in this research study is that, on average, 72% of youth entering a JDC in Idaho screen positively on the AST for having some type of problem- whether a mental health problem, a substance abuse problem, or both types of problems. Perhaps more striking is that 31% of youth meet the criteria for having both a mental health problem and substance abuse problem. Although these prevalence rates are high, Idaho is not unique in this regard. Justice-involved youth have higher prevalence rates of mental health and substance abuse problems than compared to non-justice involved youth (Doherty & Kartalova-O’Doherty, 2010). Nationally, about 20% of non-incarcerated youth suffer from a mental health problem and seven percent of non-incarcerated youth suffer from a substance abuse problem (National Alliance on Mental
Illness [n.d.]; Substance Abuse and Mental Health Services Administration, 2010). Other states have reported prevalence rates of mental health problems and substance abuse problems in their detained youth that are similar to those found in Idaho (Shufelt & Cocozza, 2006; Teplin et al., 2002; Washburn et al., 2002). Detention centers are not equipped to deal with these types of problems; they are not mental health treatment centers yet are faced with the majority of their youth needing these services while in their custody.

Consistently across fiscal years 2008-2017, detained girls in Idaho have significantly higher prevalence rates of mental health problems as indicated by the AST than detained boys. Girls comprise 27% of the juvenile justice population in the United States, and 29% of the sample in Idaho during fiscal years 2008-2017, and 70% of these girls screened met criteria for having a mental health problem (Pusch & Holtfreter, 2017). Girls may be slightly less likely than boys to need substance abuse problem services while in detention. Across nine years, girls (42%) are were slightly less likely to meet AST criteria for a substance abuse problem than boys (43%). Again, these rates in Idaho are similar to what other states report in their detained youth populations (Teplin et al., 2002). Girls may have different life experiences that contribute to their higher prevalence rates of mental health problems when involved in the justice system.

**Gender-Specific Services**

Boys and girls in need of mental health services should receive them, but findings suggest that efforts targeted towards girls are especially important. Girls are more likely to suffer from internalizing disorders and many have histories of trauma (Hennessey, Ford, Mahoney, Ko, & Siegfried, 2004; Shufelt & Cocozza, 2006). This difference can
result in girls not receiving the same services as boys do, as externalizing disorders attract more attention from staff and clinicians. To address these needs, one must understand that girls involved in the juvenile justice system require a different approach in treatment. Veysey (2003) suggests gender-sensitive services and gender-specific programming are best practices to aid in the treatment of girls. Girls-only programs offer a “safe-space” for girls to heal and disclose past trauma. The justice-system was created to treat boys and many facilities do not have gender-sensitive treatment options catered towards girls’ experiences and healing mechanisms (Veysey, 2003). Gender sensitive approaches are necessary during juvenile detention and while receiving treatment for their mental health problems (Dierkhising, Ko, Woods-Jaeger, Briggs, Lee, and Pynoos, 2013; Doherty & Kartalova-O’Doherty, 2010). Research suggests that girls and boys follow different pathways that result in their involvement in the justice system. Problem behaviors in boys emerge from peer influences and delinquent choices, whereas girls often suffer from traumatic experiences (Dembo, Williams, Fagan, & Schmeidler, 1993; Veysey, 2003).

Trauma

Youth that experience multiple traumas are more likely to commit criminal offenses and become involved in the justice system (Dierkhising et al., 2013). Dierkhising et al. (2013) reported that 90% of youth in the justice system experienced a traumatic event. Most commonly, youth experienced the loss of a parent or other caregiver, domestic violence, emotional abuse or physical abuse, and community violence. On average, youth in the justice system experienced nearly five different types of traumas (Dierkhising et al., 2013). Girls in the justice system suffer from more traumatic experiences, specifically childhood physical and sexual abuse, than do boys.
The high prevalence rates of mental health and substance abuse problems are not surprising given the high levels of trauma detained juveniles have experienced. Trauma in childhood is predictive of future justice system involvement (Felitti, Anda, Nordenberg, Williamson, Spitz, Edwards, Koss, & Marks, 1998; Wolff & Shi, 2012). Many youth who come to the attention of the justice system have been chronically traumatized early in their childhoods (Dierkhising et al., 2013). They are at risk of re-victimization and recidivism, and have difficulty responding to standard rehabilitation efforts during detention (Dierkhising et al., 2013). In some youth, trauma exposure can result in mental health and behavioral health problems and substance abuse problems as a way to cope. The juvenile justice system has an important responsibility to address the problems youth are facing and understand that delinquency and criminality in youth are often the result of circumstances beyond their control.

**Community Services**

It is important to understand that youth participating in the CSP are not in juvenile *prison* but rather juvenile *detention*. These stays in detention are often short-lived and clinicians do not have the time or resources to conduct in-depth treatment to address all of the youths’ needs (McDonald et al., 2018). Much of the treatment comes in the form of community based services recommended to youth and their parents upon their release back into the community. The CSP is intended to identify youth with mental health problems and substance abuse problems, and then connect them to services. Treatment for juveniles is most effective when it is community-based rather than punitive (Underwood & Washington, 2016). When access to children’s mental health services is
reduced in a community, more youth are involved in the juvenile justice system (Underwood & Washington, 2016).

**Limitations**

Limitations related to this study include the use of the AST as the primary screening tool to identify mental health and substance abuse problems in youth entering a JDC. More widely used screening tools such as the Massachusetts Youth Screening Instrument (MAYSI) or Youth Level of Service/Case Management Inventory (YLS/CMI) show validity in other states for identifying youth with mental health or substance abuse problems (Cauffman, 2004; Marczyk, Heilbrun, Lander, & DeMatteo, 2003; Washburn et al., 2015). However, due to the similar prevalence rates in Idaho as compared to those reported in other states using different screening tools, the AST appears to be a valid tool.

**Suggestions for Future Research**

The results of this research suggest further research is needed to understand why mental health and substance abuse problem prevalence rates are so different between girls and boys. Early intervention and treatment for trauma-exposed youth can reduce mental health problems and substance abuse problems later in life and reduce the likelihood that a youth will be involved in the justice system (Lynam, 1996; Marczyk et al., 2003). Upstream approaches in health care show promise in preventing or reducing severity of future health problems. This same framework can be applied toward delinquent youth. Upstream approaches that address mental health problems and substance abuse problems early in adolescence may limit future involvement in the justice system (Chisolm, 2017; Vincent, 2011).
Conclusion

Justice-involved youth have higher prevalence rates of mental health problems and substance abuse problems when compared to non-justice involved youth. According to the research presented in this study, 72% of youth entering detention in an Idaho JDC meet the AST criteria for having a mental health problem, a substance abuse problem, or both types of problems. Girls are significantly more likely to have a mental health problem than boys. The prevalence rate of mental health problems in girls was 70% in comparison to 57% in boys. Boys (43%) are slightly (though non-significantly) more likely to have a substance abuse problem than girls (42%). These findings are similar to those found in other states. This demonstrates not only the importance of screening youth when they enter a facility, but also the importance for gender-specific services as girls experience different types of traumas in childhood that result in their involvement in the justice system.
REFERENCES


Substance Abuse and Mental Health Services Administration. (2010). *Results from the 2009 national survey on drug use and health: Summary of national findings*. Rockville, MD. Substance Abuse and Mental Health Services Administration.


APPENDIX A

Alaska Screening Tool
Alaska Screening Tool
For Dual-Diagnosis and Traumatic Brain Injury

Please circle your answer to the following questions based on your activities over the past 12 months.

1. Have you gotten into trouble at home, at school or in the community, because of your drinking, using drugs or inhalants? Yes No

2. Have you missed school or work because of using alcohol, drugs or inhalants? Yes No

3. In the past year have you ever had 6 or more drinks at any one time? Yes No

4. Have you done harmful or risky things when you were high? Yes No

5. Do you think you might have a problem with your drinking, drug or inhalant use? Yes No

6. When using alcohol, drugs or inhalants have you done things without thinking, and wished you had not done them later? Yes No

7. Do you miss family activities, after school activities, community events, traditional ceremonies, potlatches, or feasts because of using alcohol, drugs or inhalants? Yes No

8. Does anyone close to you worry or complain about your using alcohol, drugs or inhalants? Yes No

9. Have you lost a friend or hurt a loved one because of your using alcohol, drugs or inhalants? Yes No

10. Do you use alcohol, drugs or inhalants to make you feel normal? Yes No

11. Does it make you mad if someone tells you that you drink or use drugs or inhalants too much? Yes No

12. Do you feel guilty about your alcohol, drug or inhalant use? Yes No

13. Do you or other people worry about the amount of money or time you spend at Bingo, pull-tabs or other gambling activities? Yes No

14. Did your mother ever consume alcohol? Yes No
15. If yes, did she continue to drink during her pregnancy with you?  Yes  No

SECTION II  --Please circle your answer to these questions based on the past 12 months.

1. Do you often have difficulty sitting still and paying attention at school, work or social settings?  Yes  No

2. Do disturbing thoughts that you can’t get rid of come into your mind?  Yes  No

3. Do you ever hear voices or see things that other people tell you they don’t see or hear?  Yes  No

4. Do you spend time thinking about hurting or killing yourself or anyone else?  Yes  No

5. Have you tried to hurt yourself or commit suicide?  Yes  No

6. Do you think people are out to get you and you have to watch your step?  Yes  No

7. Do you often find yourself in situations where your heart pounds and you feel anxious and want to get away?  Yes  No

8. Do you sometimes have so much energy that your thoughts come quickly, you jump from one activity to another, you feel like you don’t need sleep and like you can do anything?  Yes  No

9. Have you destroyed property or set a fire that caused damage?  Yes  No

10. Do you feel trapped, lonely, confused, lost or hopeless about your future?  Yes  No

11. Do you feel dissatisfied with your life and relationships?  Yes  No

12. Do you have nightmares, flashbacks or unpleasant thoughts because of a terrible event like rape, domestic violence, incest/unwanted touching, warfare, a bad accident, fights, being or seeing someone shot or stabbed, knowing or seeing someone who has committed suicide, fire, or natural disasters like earthquake or flood?  Yes  No

13. Do you have difficulty sleeping or eating?  Yes  No

14. Have you physically harmed or threatened to harm an animal or person on purpose?  Yes  No
15. Have you lost interest or pleasure in school, work, friends, activities or other things that you once cared about? **Yes** **No**

16. Do you feel angry and think about doing things that you know are wrong? **Yes** **No**

17. Do you often get into trouble because of breaking the rules? **Yes** **No**

18. Do you sometimes feel afraid, panicky, nervous or scared? **Yes** **No**

19. Do you feel sad or depressed much of the time? **Yes** **No**

20. Do you spend a lot of time thinking about your weight or how much you eat? **Yes** **No**

**Scoring Information for the Alaska Screening Tools**

**SECTION I—Substance Abuse Screen Scoring Instructions**

If a consumer responds negatively to all questions, and the interviewer has not learned anything during the interview that is contradictory, the client is not considered as a potential dual-diagnosis consumer.

If a consumer responds positively (Yes) to any of the top five questions (1-5), the client should be asked for clarifying information about the question and if the positive response is validated, this will trigger a referral for a full substance abuse/dependence assessment.

If a consumer responds positively to any two of the questions 6-13, the client should be asked for clarifying information and if the responses are validated, this will trigger a referral for a full substance abuse/dependence assessment. If the person responds positively to both questions 14 and 15, they should referred for an FASD assessment.

Screeners are urged to err on the side of referring for an assessment when they are not sure of the likelihood of a positive screen, rather than to miss someone who needs treatment.

**SECTION II—Mental Health Screen Scoring Instructions**

If a consumer responds negatively to all questions, and the interviewer has not learned anything during the interview that is contradictory, the client is not considered as a potential dual-diagnosis consumer.

If a consumer responds positively (Yes) to any of the top twelve questions (1-12), the client should be asked for clarifying information about the question and if the positive response is validated, this will trigger a referral for a full mental health assessment.
If a consumer responds positively to any two of the remaining questions (13-20), the client should be asked for clarifying information and if the responses are validated, this will trigger a referral for a full mental health assessment.

Screeners are urged to err on the side of referring for an assessment when they are not sure of the likelihood of a positive screen, rather than to miss someone who needs treatment.