The Relationship between Delinquency and Creative Writing for Detained Adolescent Males

by

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Abstract

This study examined the use of a brief writing intervention, Writing Our Stories (WOS), as it relates to delinquency, impulsivity, and IQ in a sample of detained adolescent males. The oppositional and unruly subscales of the Millon Adolescent Clinical Inventory measured the construct of delinquency, and the Wechsler Abbreviated Scale of Intelligence measured IQ. Both measures were administered as part of a standard intake protocol at a juvenile detention facility in the Southeast. The study consisted of 461 participants, 230 who did not participate in WOS and 231 who did.
There were 173 participants in grades eight and nine and 100 in grades ten, eleven, or twelve. Most of the participants identified as white (60.5%), and more than half were aged 16 or older (55.1%). More than half were on their first and only juvenile justice commitment (53.3%), and most students were detained on a sexual charge: sexual abuse, sodomy, or sexual misconduct (59.9%). The average WASI score for participants and nonparticipants was 77.87.

There was a strong relationship between IQ and delinquency ($r=.605$, $p \leq 0.01$). As IQ increased, the sum of the unruly subscale and the oppositional subscale also tended to increase. However, results of a two-way MANOVA between the unruly subscale and the oppositional subscale suggested that there were no main effects and no interaction effects across the sample. The results of four paired-samples t-tests suggested that delinquency as measured by the oppositional subscale, but not the unruly subscale,

decreased statistically significantly from pre- to post-treatment for participants in WOS. Scores on the unruly and oppositional subscales of the MACI did not demonstrate statistically significant decreases from pre- to post-detainment for the control group.

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Table of Contents

List of Tables

List of Abbreviations

ABSOP	Accountability Based Sex Offender Program
CAP	Chemical Addiction Program
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders version IV
DUI	Driving Under the Influence
FSIQ	Full Scale IQ
GAP	General Adolescent Population
IQ	Intelligence Quotient
JD	Juvenile Delinquent
JADI	Juvenile Detention Alternatives Initiative
PIQ	Performance IQ score
SAP	Standard Assessment Protocol
SI	Social Intelligence
TOP	Theft of Property
VIQ	Verbal IQ score

CHAPTER I. INTRODUCTION

The entire justice system in the United States is on the cusp of massive reform. Prisons are currently functioning at almost double capacity in Alabama, and in May 2015, lawmakers passed a bill aimed at managing that overcrowding to prevent federal intervention in this state (Cason, 2015; "Justice Reform," 2015).

While much of the focus in the media has been on the problems plaguing the adult justice system and the problems that await adult offenders upon incarceration, it is important that media attention as well as empirical consideration be given to the juvenile justice system, too. The time for change is now: in January 2016 President Barak Obama banned solitary confinement for detained juveniles in federal prisons because of the potential of psychologically damaging effects of this practice (Shear, 2016).

Indeed, the rate of juveniles detained is striking. According to a report by the United States Justice Department, there were almost 70,000 adolescents detained in the juvenile justice system at any one time in the United States throughout 2010 (Hockenberry, 2014). While these numbers may have been on a downward trend since the report was written in 2014, it is still imperative that efforts to continue the reduction and prevention of criminal behavior at a system-wide level continue to be the focus of research (Mendel, 2014).

There are several approaches to addressing both the juvenile justice system and the high numbers of juveniles that are a part of that system. These efforts include (1) pre-detainment for youth at a higher risk for illegal behavior, (2) specific efforts during detainment for those who end up in the juvenile justice system, and (3) efforts to reduce

recidivism, or reoffending, after the initial release from custody to prevent subsequent offending.

The Annie E. Casey Foundation, a non-profit in Baltimore, Maryland, focuses in part on juvenile detention reform by intervening on the front end of the problem, or before sentencing occurs for juveniles. In an effort to reduce the number of adolescents who received the highest security placement, staff members at the Annie E. Casey Foundation proposed the Juvenile Detention Alternatives Initiative (JDAI). This initiative aimed to reduce state dependence on detention facilities and correctional facilities for adolescents who have a history of illegal behavior. While this was not a nation-wide initiative, the available data from places where the JDAI was in effect suggests that the total number of youth detained in those places have been reduced by as much as 42% since inception. It is important to note that this reduction was substantially greater than the reduction of 11% nationwide from 2006-2010.

The JDAI focused on collaboration between juvenile court systems and the community, the collection and use of data to inform their practices, as well as the use of screeners to better identify individuals who were higher-risk for more restrictive placements and those who are lower-risk who did not need the same level of restriction for effective intervention. The use of neighborhood-based alternative programs along with institutional reform that caused court hearings to become more efficient were also foundational to the JDAI initiative. These professionals also reported working to affect policy change for generally low-risk crimes (e.g., a charge of violation of probation automatically resulted in detainment regardless of the risk that adolescent posed to society, and they proposed changing this legislation). There was a focus on racial bias,

and they developed an intense process for monitoring racism within detention facilities where juveniles were being detained (Mendel, 2014). The success of this program was remarkable, but it is not the only potential solution for the problems facing the current juvenile system.

In fact, the Southern Education Foundation suggested that shifting juvenile justice placements into educationally focused placements could affect positive change from the inside of currently existing facilities. The overarching stance of the Southern Educational Foundation is that juvenile justice systems should place education as the central crux of rehabilitation. They argued that because almost a third (30%) of juveniles in custody who had been tested were diagnosed with a learning disability, educational opportunities should have served as a primary form of intervention and rehabilitation (Suitts, Dunn, & Sabree, 2014).

While the efforts of the Annie E. Casey Foundation and The Southern Education Foundation are different but equally noble approaches to the problems that face the juvenile justice system, researchers must also consider ways to improve the system for adolescents while they are detained. In other words, large-scale interventions on the front end for the future generations of juvenile offenders will require systemic change that will likely happen over long periods of time. Indeed, time and resources should be allocated to those long-term interventions. Time and resources are also warranted to better understand brief interventions that can affect positive change for adolescents that are detained as a result of the current system, one that President Obama specifically called "broken" (Baker, 2015). In particular, the role and function of education-based interventions should be the crux of these efforts. In that vein, the present study aimed to investigate the

efficacy and potential utility of a brief creative writing intervention for adolescents that were been detained at a high-security juvenile detention facility in the Southeast.

Statement of the Problem

Adolescents who have a history of illegal behavior face the risk of being placed in the custody of the state, at which time they may be detained at a secure detention facility. Those who are placed in the custody of the state at security facilities are at a disadvantage when compared to their same-aged, non-delinquent (or non-detained) peers in several notable ways. The nature of a secure facility means adolescents detained there may have potentially limited access to family members, regular mental health services, and other positive social supports for the duration of their sentence. In addition, they will face unique challenges upon reintegration into society when compared to offenders who receive less restrictive sentencing (i.e., offenders who are never segregated from society).

Among many other facets of development, these physical circumstances (e.g., being "locked up") can affect the educational trajectory of these adolescents who may be in the midst of their middle or high school careers. The educational needs of this population are of particular interest because of the relationship that educational opportunities in adolescence can have on the opportunities available post-release. Little is currently understood about the value of brief educational opportunities for detained adolescents, especially as it relates to reducing the tendency toward delinquent personality traits. Thus, the focus of this study was the lack of information on the relationship between a brief therapeutic intervention, specifically participation in a

creative writing program while detained, and delinquency for juveniles in a Southeastern state.

Purpose of the Study

As efforts to systematically reform and improve the juvenile justice system in the United States have become increasingly imperative, it is essential that educational researchers also target short-term interventions that aim to improve outcomes for students who will be detained before potential sweeping systemic changes can be realized.

In that vein, the present study investigated the potential rehabilitating effects of a creative writing program, WOS, on measures of delinquency for adjudicated adolescent males. The purpose of this study was to provide information that may be used to inform educational and behavioral programming regarding the fidelity of the creative writing program WOS at juvenile detention facilities in the Southeast and beyond.

Research Questions

The following research questions were written and designed to address the stated problem: Did participation in a creative writing program significantly affect measures of delinquency for a sample of detained adolescent males from pre-detainment to post-detainment, and did IQ play a role in those delinquency scores? The present study aims to address that problem through the following five research questions:

Research Question 1: What were the demographic characteristics of adolescent males detained at a juvenile detention facility in terms of race, age group, educational level, number of commitments, and primary charge?

Research Question 2: What were the descriptive statistics for the WASI scores for the total sample?

Research Question 3: What was the relationship between Intelligence Quotient and delinquency scores as measured by the WASI and the sum of the unruly subscale score and the oppositional subscale score on the MACI?

Research Question 4: To what extent was there an interaction effect between the unruly subscale on the MACI and the oppositional subscale on the MACI, and to what extent was there a main effect for the unruly subscale and the oppositional subscale for adolescent males who were detained at a juvenile detention facility who do and do not participate in Writing Our Stories?

Research Question 5: To what extent was there a statistically significant difference in the scores on both the unruly and oppositional subscales of the WASI before and after treatment for adolescent males who were detained at a juvenile detention facility who did and did not participate in Writing Our Stories?

Significance of the Study

Steve Suitts at the Southern Educational Foundation (2014) claimed that:

> The most disadvantaged, troubled students in the South and the nation attend schools in the juvenile justice systems. These children, mostly teenagers, usually are behind in school, possess substantial learning disabilities, exhibit recognizable behavioral problems, and are coping with serious emotional or psychological problems. They are often further behind and hampered with more personal problems than any other identifiable group of students in the nation's elementary

and secondary schools. Very often they are confined in large, overly restrictive institutional facilities that are operated without priority or focus on their education. (p. 4)

The present study aimed to assess the effectiveness of an intervention that had the potential to be of value to educators as well as a range of other professionals (e.g., psychologists, social workers, chemical addiction specialists, etc.) who work with detained adolescents and/or youth who have a history of illegal behaviors. Specifically, the current study aimed to provide insight into potential changes in scores on measures of delinquency due to participation in a creative writing program during an otherwise high-risk time (i.e., while detained).

The findings have the potential to be used to inform educational, behavioral, and rehabilitation interventions that will be taking place across the juvenile justice system in the future. Indeed, the present study aimed to inform the broader programmatic structure of otherwise punitive, bleak placements within the juvenile justice system, particularly where the goal is to decrease a tendency for delinquency upon release.

Conceptual Framework

Previous research found that improvements in the quality and quantity of brief interventions positively affected outcomes for detained adolescents. In addition to that line of research, the current project emerged from both educational theory and developmental psychology theory. Because of the nature of working with participants who were in their teenage years, the malleability and rapid development of the brain during adolescence required that the theoretical assumptions in the present study be

developmentally conscious. The study took on a theoretical lens that was mindful of rehabilitation as well as adolescent development.

Assumptions of the Study

It was assumed in this project that IQ scores were indicative of broader intelligence and that greater intelligence (i.e., a higher IQ score) was indicative of greater cognitive ability and therefore more academic potential.

It was also assumed that measures of personality characteristics that indicated personality patterns of unruliness and opposition were indeed related to delinquency. This assumption was confirmed by Barbra Sulik's (2002) dissertation, Defining the Personality Characteristics of Delinquent Adolescent Recidivists. In her dissertation, Sulik used the Millon Adolescent Clinical Inventory (MACI) to examine personality profiles of juvenile delinquents. She found that adolescents who met clinical criteria for Oppositional Defiant Disorder but were not adjudicated as well as students who had been adjudicated twice but neither time for a felony conviction both scored significantly higher on six subscales of the MACI when compared to repeat, serious offenders (i.e., those who had at least two felony charges but no more than three total arrests). The present study considered two of those six subscales: unruly and oppositional personality patterns. Both the unruly and oppositional subscales were related to the personality profiles of the group of offenders in Sulik's dissertation that were most similar to the sample used in this project (i.e., no felony convictions).

It was also assumed that the adjudicated adolescent males in the present sample, both in the control group and the treatment group, answered questions honestly. It was

assumed that the administration of measures and the subsequent data entry done by research assistants was accurate. It was also assumed that by virtue of participants in the treatment group maintaining participation in the writing program, their engagement in the WOS curriculum was sufficient for change to potentially occur.

Limitations of the Study

There were a few notable limitations to the present study. These limitations may have affected both the utility of the findings (e.g., if the results were useful) as well as the findings themselves (e.g., the integrity and rigor of the findings). For example, all data were collected from only one juvenile detention facility in the Southeast. The results may not be generalizable to the other facilities in the state, facilities that serve adolescent females, or facilities in other geographical regions. However, it should be noted that the supervising instructor for each class of the writing program remained the same throughout the time data were collected. Although there were other variables that may have affected generalizability, having a consistent supervising teacher may have lent itself to greater generalizability of results than if each class was supervised by a different teacher.

While it could be argued that juvenile delinquents are a generally homogenous population, it should be noted that there was some variability in the sample used in this study. For example, the particular detention facility of interest housed adolescents for whom this was their first detainment and other adolescents for whom this was their 7th detainment simultaneously. The ages, and respective developmental stages, of participants varied from 11 to 19. While the statistical procedures used in this study

aimed to control for as much potential variance as possible, it still remained that these differences among the participants could have confounded the results of the study in some way.

Another limitation facing this project was that data used in the present study were collected by a number of different undergraduate and graduate students across eleven years. While all of the lab members who administered these measures were required to go through training, there may have been some inherent degree of inconsistency within the training that could have compromised the integrity of the data. For example, university students who administered the MACI may have strayed from the scripted instructions with different groups of offenders in ways that could have affected the consistency with which some but not all offenders responded to the same questions. This was a limitation that could only be acknowledged rather than controlled for at the time of data collection in the present study due to the fact that data have already been collected as part of a broader research project.

Additionally, the limitations that specifically could have affected the integrity of the measures used are also relevant. The Flynn Effect, for example, describes the phenomenon where by the average intelligence test scores have historically increased over time. Although IQ tests have been often revised and standardized with different, younger samples to control for this phenomenon, it is not clear if the Flynn Effect may have been a subtle influencer on IQ scores across the eleven years that data were collected as part of the large dataset used in the present study. In other words, the first data in this study were collected in 2002 and the most recent data were collected in 2012. It is not clear if the Flynn Effect could have accounted for changes across this decade, but

it should be considered as a potential limitation because the IQ data spanned multiple years.

In addition, the intelligence test used in the present study, the WASI, is an abbreviated test that was formed from two longer versions written by the same author. The WASI can be used as a screener to see if further testing was warranted or in environments where administering the full battery of a more comprehensive test is inefficient or impractical. Perhaps the relationship between IQ score and delinquency may have been better illuminated if participants had been given a longer version of the IQ test (e.g., the Wechsler Intelligence Scale for Children, WISC-IV, or the Wechsler Adult Intelligence Scale, WAIS-IV). In spite of the potential limitations of using the shorter intelligence test, the WASI was sufficiently correlated with these longer tests (e.g., WISC-III = .87 and WAIS-III = .92) (Wechsler, 1999).

Data from the MACI were all self-reported, and even though the measure was written at a 6th grade reading level, there may have been participants whose verbal and reading abilities were less advanced than a 6th grade level at the time of assessment. Because no screening data were available on the reading level of participants, the risk of students misunderstanding words or concepts used at the item level was an inherent potential limitation of this study.

The final identified limitation of the present study was that participants may have been subjected to multiple concurrent interventions that could have accounted for any decreases in measures of delinquent personality patterns (i.e., unruly and oppositional) that were found in this study. For example, detained students may have been required to consistently attend classes at the on-site school; for students who had a history of

irregular school attendance prior to detainment, this mandatory attendance may have played a role in decreases in scores of delinquency measures just by virtue of their required involvement with a regular, consistent academic curriculum. Other students may have had individual or group meetings with case managers, psychologists, or other caring staff members that affected their tendency away from delinquent personality patterns at post-detainment. The findings could have also been a result of the aversive conditions of detainment. The nature of using detained adolescents as research participants, however, was such that it was impossible to completely isolate one intervention from students in residential care. This limitation could not be controlled for within the bounds of this study beyond the acknowledgement that it may have played a role in the outcomes.

Delimitations of the Study

Delimitations are the boundaries beyond which the study was concerned. The present study was concerned with male students at one detention facility in Alabama. The facility has been regarded as the most secure adolescent placement in the state because of the security measures in place, including a secured fence surrounding the perimeter of the facility. The double-gated entrance to the facility allows staff and visitors to the campus to be searched with a metal detector by security guards after the first but before final entry into the facility.

The nature of the population from which data were collected also created a boundary that defined this study. As described further in the methods section, at the time of data collection, each participant was detained at this facility for as little as a couple of days. These participants might have been feeling nervous, scared, anxious, depressed, or

any number of other strong, negative emotions that can be present during times of prolonged separation from their caregiver and/or at times of transition. There was no easy or practical way to account for the potentially intense emotionality and distress felt by these adolescents, but it is likely that these factors were a common phenomenon that affected most or all of the participants in some way at the pre-detainment data collection sessions.

Definition of Terms

ABSOP – ABSOP is an acronym that stands for the Accountability Based Sex Offender Program. This is an offense status and label that applied to the group of detained students whose primary offense was related to illegal sexual behavior. Examples of charges that warranted this status included but are not limited to rape, sexual misconduct, and possession of child pornography.

Adolescent – While this term has had many different definitions in the literature, it was understood in the scope of this study to be an individual aged 11 years – 19 years. This was the typical range of ages of students that were placed at this juvenile facility at the time data were collected.

CAP – This is an acronym for the Chemical Addiction Program. This was an offense status and label that applied to the group of detained adolescents whose primary offense was related to illegal substance use. Some examples of charges that warranted this label included but were not limited to possession of marijuana and violation of probation.

DSM-IV – This was an abbreviation for the Diagnostic and Statistical Manual of Mental Disorders version IV. This text has been widely used as a reference for researchers and clinicians alike that professionally study and diagnose mental disorders. The DSM-IV outlines symptomology criteria for a variety of mental disorders (American Psychiatric Association, 2013).

DUI – This is an acronym for the charge of driving under the influence.

FSIQ – This is an acronym for Full Scale IQ. It is often the sum scores of VIQ and PIQ.

GAP – This is an acronym for General Adolescent Population. This was an offense status and label that applied to the group of detained youth whose distinction from the Alabama Department of Youth Services was something besides ABSOP or CAP. These students generally had a primary charge that was neither sexual in nature nor related to illegal substance use. Some examples of charges that earned this label included but were not limited to burglary, attempted murder, and assault.

IRB – This is an abbreviation for the Institutional Review Board at Auburn University.

IQ – This is an abbreviation for Intelligence Quotient.

JD – This is an acronym for Juvenile Delinquent and it was used interchangeably with GAP in the present study.

JDAI – This is an acronym for the Juvenile Detention Alternatives Initiative out of the Annie E. Casey Foundation in Baltimore, MD.

PIQ – This is an acronym for the Performance IQ score.

SAP – This is an acronym for Standard Assessment Protocol, or the packet of intake assessments and measures that was administered to every student upon intake and

prior to release at the detention facility. The measures considered in the present study were part of the SAP for many years.

SI – This is an acronym for Social Intelligence.

TOP – This is an acronym for the criminal charge of theft of property.

VIQ – This is an acronym referencing the Verbal IQ score.

CHAPTER II. REVIEW OF LITERATURE

Introduction

Because of the unique and rapid development that occurs during adolescence, there is the potential for maladjustment in many facets across the span of this developmental stage. Indeed, delinquent behavior may manifest for both high-risk and low-risk adolescents depending on any number of circumstances and variables. Academic performance, especially as measured by intelligence, is of particular importance during adolescence because teenagers may have made decisions about their education and careers that will follow them into adulthood.

As detailed below, populations who are at the intersection of adolescence and delinquent behavior have generally been shown to face unique challenges in the educational domain. Indeed, intelligence can be considered a protective factor against maladjustment in adolescence. These two facets of development, intelligence and delinquency, are related, and their influence on the other should be considered using the eye of empiricism. In that vein, the present study considered the potential effects of an education-based, non-violent creative writing program, WOS, on two subscales of delinquency as a measure of personality patterns for detained juveniles (i.e., unruly and oppositional subscales on the MACI). The role of IQ scores was also considered. A comprehensive overview of the literature related to adolescence, delinquency, and brief interventions, are presented herein to justify and support the current study.

Adolescence

Unfortunately there is not a consistent classification of the age range that earmarks adolescence across the fields of Education or Psychology. In spite of this debate, it has been well documented that because of the rapid social and emotional development occurring at the onset of puberty and lasting into young adulthood, adolescence can be a difficult time of transition for many young people.

These difficulties may have specifically manifested across several realms of functioning including emotional, behavioral, and/or cognitive domains (Pruitt, 2000). Indeed, there may have been many singular factors that contributed to adjustment or maladjustment during adolescence across each domain, but it has been well documented that some factors have had compounding effects for certain populations of adolescents within each domain. The conditions under which maladjustment is more or less likely to occur has been a focus in the research for decades, and those seminal scientists produced encompassing theories in an attempt to understand the dynamics of typical adolescent development.

In fact, more recent theories could have also been applied to the population of juveniles with a history of delinquent behavior as well as potentially illuminated the function of different protective and risk factors that were specific to this population. A selection of these theories was explored as potential lenses through which adolescent development (or adolescent maladjustment and stagnation, as the case may be) could be understood in this study. The theories included work done by A. Maslow, J. Piaget, L. Kohlberg, E. Erikson, and J. Marcia.

A. Maslow

Maslow's Hierarchy of Needs presents a standard order by which the inherent needs of an individual must be met. The base of this hierarchy begins with the essential biological needs and progresses upwards in order of decreasing essentiality, often depicted in the shape of a pyramid. Safety and biological needs are primary needs, and are thereby at the bottom of the pyramid, where as love, esteem, and the need to know are secondary needs at the top of the pyramid (Johnson & Weber, 2011). An important part of this theory and the pyramid visual that represents it is that a need can only be addressed if the needs below it have been satiated. In other words, the need to know cannot be fully addressed when safety needs have not been satisfied. While this theory can be used to help explain where maladjustment in adolescence may occur, it was not written to be specific to adolescents.

J. Piaget

Jean Piaget proposed a four-staged developmental theory spanning from birth to age 11 for children and also spanning beyond childhood into adolescence and adulthood. Because some adolescent juvenile facilities serve individuals who are within the age range of what Piaget would define as childhood (i.e., juvenile facilities may accept youth as young as nine), it is important to explore both Piaget's Concrete Operational stage in addition to his traditional stage of adolescence, the Formal Operations stage.

The Concrete Operational stage begins at age seven and ends at age 11 or adolescence. It is a time when children develop empathy while also becoming less egocentric in their functioning. A hallmark of this stage is the development of the understanding that their opinions and thoughts might not be universal and that others may

disagree with them. The next stage, the Formal Operations stage, covers the time between adolescence and adulthood. This way of thinking is quantitatively different than that of previous stages, and it holds that people become adept at understanding and using logic as well as developing a comfort around abstract ideas and ways of thinking during this stage (Miller, 2002).

L. Kohlberg

Building on that work of Piaget, Lawrence Kohlberg (2002) understood moral reasoning through six distinct developmental stages. Adolescence is generally understood to comprise stages three and four of Kohlberg's theory, and those two stages together are labeled as Conventional Morality. This is a time in development when individual morality becomes molded by and functions interchangeably with the moral norms of society. Typically those in this stage blindly observe the rules of society without questioning if those rules are appropriate or fair. Specifically, in stage three of Kohlberg's theory, individuals tend to gain acceptance and approval from their peers based on how well they individually adhere to the conventions and norms of society. In stage four, moral reasoning develops beyond the scope of the individual and becomes more about what is best for the larger society. Moral Reasoning comes from a more universal understanding of the external forces that determine right and wrong at this stage of Kohlberg's theory (Miller, 2002).

E. Erikson

Erik Erikson suggested that an individual's ego develops throughout the lifetime by resolving sequential crises. Adolescence is defined in this content as the conflict between ego identity and role confusion. This is a time when individual independence is

increasing while one examines their own identity. Erikson suggested that identities included both the sexual and the occupational selves (Miller, 2002). Bee (1992) suggested that successful resolution of the conflict in this stage is achieved when there has been "a reintegrated sense of self, of what one wants to do or be, and of one's appropriate sex role."

J. Marcia

In continuation of Erikson's work, Marcia proposed that identity development was more accurately understood through four statuses during adolescence. Those statuses are not stages; they may or may not have been completed in sequential order. The statuses apply to identity insofar as identity involves sexual orientation and a sense of romantic self, parenthood or non-parenthood, personal values, existential beliefs, and an occupational self. Those statuses include identity diffusion, foreclosure, moratorium, and achievement, and those statuses take form depending on the extent to which a person has explored or made a commitment to a value or ideal (Kroger & Marcia, 2011; Marcia, 1987; Eggen & Kauchak, 2004).

Specifically, diffusion is the time when an individual has not made a decision about their personal and social identities because they are not yet attempting to or are not yet developmentally ready to make those decisions and commitments. Identity foreclosure happens when identity commitments were made prematurely or without consideration of alternatives; an example of foreclosure is when adolescents conform to the ideals handed down from their parents without considering alternative ideals for themselves. Identity moratorium is when the adolescent is evaluating options but has not yet committed to any choice. It is considered a holding pattern or a pause in the

searching. Finally, the identity achievement status is achieved when the adolescent has committed to an identity of choice (Kroger & Marcia, 2011; Marcia, 1987; Eggen & Kauchak, 2004).

Each of the included developmental theories has accounted for different aspects of growth and development, and they each offered a unique perspective on what it means to be an adolescent. Taken separately, each theory identifies the ways in which adolescence can be challenging, and when understood together, it is clear why the transition from childhood to adulthood can be a time ripe with maladjustment. It holds that each of the presented theories could have accounted for problematic or atypical development through a different theoretical perspective, but likely each theory is related to the manifestation of delinquent behaviors in some but not all cases. It is important when considering the intersection of complex constructs like adolescence and delinquency that multiple theoretical perspectives be included for a more accurate understanding of those constructs.

Delinquency

In fact, delinquent behavior particularly warrants theoretical and empirical consideration because, according to the U.S. Department Bureau of Justice Statistics in the 2011 National Crime Victim Survey, delinquent behavior was on the rise in prior years. They found that the rate of violent victimization in the United States increased by 17% from 2010 to 2011. Additionally, according to annual arrest data from the Federal Bureau of Investigation, adolescents made up a considerable proportion of offenders in the total criminal acts in the United States. For example, juveniles in 2011 were

responsible for approximately 20.7% of all burglaries, 10% of all aggravated assaults, and 14.4% of forcible rapes in the United States (Federal Bureau of Investigation, U.S. Department of Justice, 2011).

Although many lenses have historically been used by which educators and researchers have interpreted and come to understand the complexities and the causes of delinquency, it has been most important that thorough consideration be given to the developmental frameworks that help explain delinquency. The developmental theories of Maslow, Piaget, Kohlberg, and Erickson along with the work of Maslow and Mischel can inform how typical, or non-delinquent, developmental trajectories may have shifted toward delinquent behavior on a theoretical and developmental level for individuals in the present study.

A. Maslow

According to Johnson and Weber (2011), Maslow's Hierarchy of Needs is structured and sequential in nature. As such, unmet needs may have incited risky and illegal behavior among adolescents. If delinquent behavior has stemmed from a need to have a primary need met, it is possible that rehabilitation could be achieved by have those unmet needs satisfied on an individual level in these cases. Maslow's theory also holds that other established risk and protective factors, like IQ, may only be addressed within the cognitive (i.e., secondary) needs level. Therefore, it is possible that adolescents who have ben subjected to insufficient external environments (i.e., those who were working to fulfill primary needs) might be less capable of performing well on cognitive tests, regardless of their inherent intelligence or cognitive ability, and regardless of their tendency toward delinquent behavior. If being detained or incarcerated serves to satisfy

lower level, primary needs like adequate nutrition and ensuring safety, it is possible that students may behave in ways that are less delinquent while detained. If alternative ways of meeting primary needs could be taught, for example through job training and work entry programs, then delinquent youth may no longer recidivate in order to satisfy their unmet needs.

On the other hand, if adolescent delinquency is related to what Maslow identified as higher order needs like belonging and esteem, then his theory suggests that spending time detained where lower level needs are being met may or may not suffice as rehabilitation. The complexities of this idea require further investigation beyond the scope of this project. It is worth surmising that delinquency could be needs-based and unmet needs along Maslow's hierarchy may motivate people in general to engage in illegal behavior.

J. Piaget

Piaget's stages as explained by Miller (2002) may account for delinquency for children ages seven to 11, or those in the Concrete Operational stage, when empathy fails to develop. It is plausible that someone who is not yet capable of understanding how their actions may impact another person could be inclined to behave without regard for social and interpersonal consequences of their behavior. If an individual does develop past the Concrete Operational stage, however, he or she may still fail to achieve the hallmarks of the Formal Operational stage including logic and abstract thinking. If a teenager is motivated to behave illegally, he or she may not be able to logically understand the consequences, like prolonged detainment or lifetime registration as a sex offender, which may follow their illegal behavior. Indeed, inhibiting behavior in order to behave in a

morally mature way could be considered a construct that requires abstract thinking. This lack of ability to think abstractly or logically may serve to facilitate illegal behaviors within the context of Piaget's theory.

L. Kohlberg

Kohlberg's Stages of Moral Development as outlined in Miller (2002) provide a direct understanding of how moral reasoning develops. While the theory does not directly explain how maladjustment may occur, it holds that adolescents who fail to observe society's rules in stage three or who fail to understand the central ideas of what is right and wrong in stage four may be more willing to engage in illegal behavior. It is also possible that adolescents with a history of illegal behavior are still functioning in either of the Pre-conventional stages, although they may have had limited experiences where "bad" behavior was punished consistently or at all. Certainly insufficient moral development, or a complete lack of moral development, could be evidenced through delinquent behavior.

E. Erickson

According to Miller (2002), development as explained by Erickson's work is founded on sequential crises. Erickson's approach to adolescent development could account for delinquency if a teenager is still working to resolve a previous conflict, like the stage just before adolescence where individuals face industry versus inferiority. Peer groups are especially important in stage four of Erickson's theory, and experiences where social acceptance of peers is gained from delinquency may prompt an individual to exhibit more frequent delinquent behavior in order to gain acceptance. In the fifth stage, typically understood as adolescence, the identity versus role confusion conflict manifests.

This is the time when an individual begins to understand their place in the larger society, and this conflict of the ego provides two possible avenues into delinquent behavior: 1.) the failure for one to understand his or her role as a productive member of society may default them into having an unproductive role in society through delinquent behaviors, or 2.) an individual may specifically understand that his or her role in society is to be delinquent. In either case, maladjustment in stages four and/or five can explain how delinquent and illegal behavior might manifest for adolescents.

J. Marcia

Marcia's (1987) statuses of identity development in adolescence can account for delinquency in four ways. During identity diffusion, the adolescent has not started to search for his or her own identity so delinquency could be the product of lower-order thinking. During foreclosure, a premature resolution could lead the adolescent to default into an identity that permits illegal behavior. During the crisis, or moratorium, delinquency may be an identity that is considered, and delinquency during the identity achievement may be a result of a commitment to that delinquent identity and the corresponding values.

These developmental theories mostly apply to typically developing children and adolescents, but they may account for delinquency through the function of applied critical thinking as well. It is also equally important to consider the role of theories that aim to specifically explain maladjustment and atypical development, including behaviorism, social learning theory, and the intersection of the two.

B. F. Skinner

Positive and negative reinforcement and punishment are foundational concepts in B. F. Skinner's (1938) theory of operant conditioning. The terms positive and negative in this context do not notate good or bad; positive means a stimulus is added and negative means a stimulus is removed. Reinforcement can be understood as the desire to increase the frequency of a behavior in the future while punishment can be understood as the desire to decrease the frequency of a behavior in the future. In this case, positive reinforcement is the addition of a stimulus in order to increase the likelihood of some behavior occurring more frequently in the future (e.g., the addition of candy to increase the likelihood of a child eating all of the broccoli during dinner in the future). Positive punishment is the addition of a stimulus in order to decrease the likelihood of some behavior occurring again in the future (Skinner, 1938). A common example of positive punishment is the addition of a written reprimand from a supervisor or teacher at work or school in order to decrease the behavior of tardiness. An example of negative reinforcement is when a parent takes away an aversive chore in order to increase the likelihood of repeating the behavior of their child earning a high score on a weekly spelling test in the future. Negative punishment happens when a parent takes away technology privileges in order to decrease the likelihood of their adolescent hurtfully teasing their siblings in the future. Each of these principles can be understood as mechanisms that are constantly influencing pro-social or anti-social, delinquent or legal behavior. They are processes that happen regularly across many different behaviors and with many different consequences.

A. Bandura

With these principals of operant condition in mind, Bandura (1973) authored a seminal paper on Social Learning Theory where he exposed children to adults behaving either violently or non-violently toward an inflatable doll. Researchers then measured the violent behavior that the children displayed in a variety of conditions toward the same doll. The results of Bandura's work indicate that children learn both from their own history of reinforcement and punishment as well as the reinforcement and punishment of others around them (Bandura, 1973). A teenager may in fact be drawn to delinquency when he or she notices that the class troublemaker gets more attention from the teacher than quiet students do as well as the social praise or some other reinforcement that they get themselves after acting in a delinquent manner. Delinquency may be learned through an individual's own experiences or the experiences of others that they see.

Indeed, it is the intersection of Behaviorism and Social Learning Theory that may specifically account for most delinquency in adolescence. According to more recent work, it has been shown that juveniles come to understand that delinquency is something that is desirable, or at the very least, permissible, through interactions with peers using a complex system of positive and negative reinforcement and punishment (Agnew & Brezina, 2015). Thus, the principals of positive and negative reinforcement and punishment are complex, and the ways adolescents can be socialized towards delinquency in Social Learning Theory is also complex in that there are many avenues by which one can learn to value aspects of atypical development.

W. Mischel

Another study that could account for and explain delinquency is known as the Stanford marshmallow experiment. Mischel (1972) led the enterprise on studying delayed gratification and impulsivity by giving children ages four to six the option to either receive one edible reward immediately or two edible rewards after a short time. His work demonstrated that children who inhibit and wait to receive the larger reward later had better outcomes later in life. This study and the subsequent work led Mischel and his colleagues to propose a "hot-and-cool" system for understanding what is known as willpower (American Psychological Association, 2016). Delinquency can be understood on a very basic level as the inability to inhibit behavior, and the role of willpower in helping curb impulsiveness is not clear but it seems intuitively connected to surges in delinquent behavior.

It is likely that a construct as complex as delinquency inherently necessitates multiple theories to adequately explain the multiple functions across diverse populations and settings. However, with regards to adolescents who have a history of illegal behavior, these developmental frameworks are of supreme importance in understanding how maladjustment may occur.

Intelligence

Another aspect of maladjustment, particularly with regards to delinquency and illegal behavior, is intelligence. Thorndike introduced the idea of three distinct but related intelligences in 1920. Indeed, these ideas have been foundational to the fields of

education, psychology, child development, and perhaps juvenile justice. Thorndike explained these intelligences in a 1920's magazine article as follows:

> It suffices to examine for three "intelligences," which we may call mechanical intelligence, social intelligence, and abstract intelligence. By mechanical intelligence is meant the ability to learn to understand and manage things and mechanisms such as a knife, gun, mowing - machine, automobile, boat, lathe, piece of land, river, or storm. By social intelligence is meant the ability to understand and manage men and women, boys and girls—to act wisely in human relations. By abstract intelligence is meant the ability to understand and manage ideas and symbols, such as words, numbers, chemical or physical formulae, legal decisions, scientific laws and principles, and the like. (p. 228)

It is important to consider in the context of this project that the construct of intelligence could refer to multiple manifestations across many of the facets of life. It is not an isolated function of living. In spite of and because of the complexities surrounding intelligence, it is also important to note that intelligence can be taught in some circumstances.

For example, the Social Intelligence Institute in Phoenix, AZ published a study on their online curriculum of Social Intelligence (SI). This 50-session program was aimed to measure and improve outcomes on three prongs of SI: sensitivity to others' emotions, more willingness to view others' perspectives, and confidence in one's capacity to manage social situations. The researchers found that after the intervention scores on SI were higher on being sensitive to the feelings of others, and participants had a higher self-confidence in their ability to navigate social situations as well (Zautra, Zautra, Gallardo

& Velasco, 2015). This study demonstrated that some types of intelligence can be taught and improved upon through specific intervention.

Other important facets of intelligence as they affect the life of adolescents include general intelligence and academic measures. There is some evidence that intelligence is related to other measures of academic success, and intelligence has been demonstrated to be a protective factor against delinquent behavior. For example, a lower IQ has been demonstrated to be a predictor for delinquency. Although there are some limitations to using IQ as a measure of intelligence, there is some seminal as well as emerging research on the malleability of general intelligence that could hold promise for populations who are at risk for delinquent behavior.

It has been documented that students who have higher IQ scores tend to perform better on other measures of academic performance (Coyle, 2015). For example, intelligence as measured through complex problem solving has been shown to predict grades and grade point average (Kretzschmar, Neubert, Wustenberg, & Greiff, 2016). These data suggest that intelligence is generally related to better outcomes on other measures of academic performance.

It has been also been documented that a high IQ is a protective factor against individual delinquency (Office of the Surgeon General, 2001). One study in particular by Moffitt, Lynam, and Silva (1994) found the reverse phenomenon to also hold true: a low verbal IQ was linked to delinquent behavior. Seguin, Pihl, Harden, Tremblay, and Boulrice (1995) found that slower rates of language acquisition, a tangential measure of general intelligence, were related to delinquency as well. Indeed, juvenile delinquents scored on average more than half a standard deviation below their non-delinquent peers

on measures of intelligence (Lynam, Moffitt, & Stouthamer-Loeber, 1993). This negative relationship between lower IQ and higher delinquency (and, in turn, higher IQ and lower delinquency) has been well documented across the years (e.g., Hirschi & Hindelang, 1977; Wilson & Herrnstein, 1985; Woodward, 1955).

As such, higher or more severe delinquency was specifically correlated with lower IQ scores. One study looked at intelligence scores for 157 adolescents who had been convicted of severe crimes (i.e., murder, attempted murder, or another felony-level assault) as part of a larger study on adolescents with a history of violent behavior. Data on IQ scores were obtained through detainment records, and all participants had either taken the revised version of the Wechsler Intelligence Scale for Children or the Wechsler Adult Intelligence Scale. The total full-scale IQ (FSIQ) scores from this sample ranged from 55 to 136. Four people scored above 120, another 16 scored below 70, and 33 additional participants scored below 80 (Cornell, 1992). These results demonstrated that the distribution of IQ scores among serious juvenile offenders was notably lower than the non-skewed distribution among non-delinquent adolescents.

Montague, Enders, Cavendish, and Castro (2011) followed a group of at-risk urban adolescents from middle school through high school (N = 212), half of which had previously been identified as at-risk for developing an emotional and behavioral disorder. Almost one third of the sample had qualified for special education services by the 4th grade; those receiving special education services showed a significant decrease in self-confidence scores at age 15. The research team found that at-risk students (e.g., those who received special education services) had significantly more variation in behavioral symptoms and learning problems over time, and the authors found that their attrition rates

(N = 157 to N = 137) were due "almost exclusively to students in the two risk groups." This study suggested that students who receive special education services (i.e., students who may have lower IQ scores) tend to exhibit more problematic behavioral symptomology over time.

According to the DSM-IV, Conduct Disorder presents as consistent behavior that violates the rights of others or society norms in such a way that there is significant impairment in one of three areas of functioning: social, academic, or occupational (American Psychiatric Association, 2013). In this way, Conduct Disorder can be understood to be similar to general delinquency because in order to meet the criteria for Conduct Disorder, one must regularly behave in a way that violates others. Murray and Farrington (2010) found that a diagnosis of conduct disorder could be predicted by a number of factors including low IQ and low school achievement. It is important to understand under which conditions IQ can serve to predict a tendency toward delinquent behavior in spite of the controversy around the potential limitations of using IQ scores.

One example of the limitations of using IQ scores is that IQ tests may not all be measuring the same thing across the board. According to a study by Bergeron and Floyd (2013), children who had a diagnosis of intellectual disability did not always score within the intellectual disability range on all subscales of different IQ tests. In fact, between 7% and 17% of students in their sample scored within the Average IQ or higher in at least one part of one IQ test, and between 33% to 52% scored in the Low Average range on at least one part of one IQ test. While this particular study was aimed at considering the suitability of IQ test scores as criteria for diagnosing intellectual disabilities, the findings have important implications with other populations, such as adolescents with a history of

delinquent behavior, as well. Just because a juvenile offender scores in a certain category on one intelligence test does not mean that he or she will always score within that range on other measures of intelligence.

Even with this potential limitation seemingly inherent to using IQ tests, there is emerging evidence that is compelling researchers to believe that general intelligence may be something that can be explicitly taught. Resnick and Schantz (2015) proposed that intelligence is indeed learnable. The authors used logical (i.e., not empirical) evidence to debunk the widely held notion that intelligence is actually a fixed trait for individuals across their lifespan. They defined intelligence broadly as "the ability to reason, process, interpret, and ultimately do something new with information" (p. 341). Resnick and Schantez then concluded that dialogic teaching, or teaching through dialogue, was one way to increase general intelligence. While more research on the topic is warranted, it is clear that intelligence, and its counterpart of academic potential, can be a salient factor when specifically considering populations of juvenile delinquents.

Toldson and colleagues found that in their sample of incarcerated African American students, there were clear relationships between social, emotional, and psychological factors and academic potential. These researchers also found that students who had less delinquency overall were more likely to evidence academic potential after release (Toldson, Woodson, Braithwaite, Holliday, & De La Rosa, 2010). These findings holds that if measures of delinquent personality indictors, such as unruliness and opposition, could be reduced, there may be implications for better outcomes for students upon release.

The state of Connecticut looked specifically at their adolescent offenders from 2007-2008 to ascertain the unique educational needs faced by this population. They found that a significant number of their adolescent offenders required special education services (Macomber et al., 2010). The link between delinquency and low scores on measures of intelligence and academic performance has been well established. It is of supreme importance that researchers further consider the ways that intelligence and other measures of academic success are related to juvenile delinquency.

Brief Interventions of Creative Programs

In light of the relationships between intelligence and delinquency across adolescence, is important to consider the successes of brief academic and nonacademic interventions among adolescent populations in order to fully justify the use of a short-term intervention in the present study.

A group of female adolescents aged 14 to 18 in Iran took part in six art therapy sessions that were aimed at reducing either internalizing or externalizing patterns. The intervention was punctuated with a pre- and post-test in the form of a self-assessment. The results suggested that the art therapy intervention significantly improved outcomes for the students who were in the internalizing problem group. The externalizing problem group was approaching significance and it was suggested that more art therapy sessions might demonstrate a significant change from pre- to post-test for these adolescent females (Bazargan & Pakdaman, 2016). This study evidenced how brief exposure to non-core academic subjects may have been beneficial for populations who had notable psychological needs (a sentiment that could be used to describe juvenile delinquents).

Brackett and colleagues taught typically developing students to write about their feelings using a social and emotional learning curriculum, and they found students in the experimental group had higher year-end grades and their teachers rated them higher on social and emotional measures as well (Brackett, Rivers, Reyes, & Salovey, 2012). This indicated that writing instruction can have positive outcomes for some students.

Other researchers applied a similar strategy to students who had emotional and behavioral disorders and who were also receiving special education services. Although not currently incarcerated, these students may have had some of the same emotional and behavioral disorders that affect adolescents who have a history of illegal behavior. The participants in the treatment group scored significantly higher than the control group on almost every measure of academics at post-intervention (Cuenca-Sanchez, Mastropieri, Scruggs, & Kidd, 2012). This study suggested that academic intervention might have had implications for behavioral change as well.

Another study considered the effects of therapeutic letter writing among family members of adolescents who were in residential care. The clients and participants of the study were working with a family therapist, and they were able to use writing as a means to foster favorable attributes such as forgiveness, compassion, and letting go of problems. There were different types of letters outlined in the study, including impact letters and accountability letters, that each served different functions in the therapeutic process as supported by anecdotal experiences (Christenson & Miller, 2016). While also not specific to juvenile offenders, explicit writing instruction has been shown to improve outcomes for adolescents in residential care, and detainment can be considered similar to residential care in some essential aspects.

In 2015, Travagin, Margola, and Rvenson conducted a meta-analysis on the use of expressive writing with adolescent populations aged ten-18. Expressive writing was explained in this study to be exercises that required the participant to write about an instructor-provided negative topic (like peer problems or chronic physical illnesses) or any traumatic, distressing experience that the student wanted to explore as the subject of their writing. The researchers found that expressive writing interventions did have significant, although small, improvements in measures of problem behaviors, internalizing problems, social adjustment, school participation, somatic complaints, and medical visits. The benefits of expressive writing interventions were greater for adolescents who had a presence of emotional problems when compared to those who did not have emotional problems (Travagin, Margola & Revenson, 2015). This study supports the specific idea that writing interventions may affect positive change for at-risk adolescents.

Another writing program for incarcerated adults shows that writing has been helpful for a group of women who have a history of illegal behavior. The program was through the University of North Carolina's William and Ida Friday Center for Continuing Education. The article discussed positive outcomes from a seven-week, 14 session writing class, Introduction to Fiction, that was taught by a University of North Carolina law professor, Tamar Birckhead. The evidence in this case was anecdotal in nature, but the following quote from Brooke Wheeler, the education director at the North Carolina Department of Public Safety, sums up the perceived benefits of the class:

> Many of the women do not think they have much self-worth or that they can accomplish things they once believed they could, so I think once they take a class

> through UNC, they feel like they can accomplish something, and they think there is more they can do when they get released. (Derickson, 2016)

Even though the success of the program was not couched in an empirical design, the instructor of this course discussed her intentions of and successes in fostering an appreciation for literature, reading, and improving confidence levels among participants who have a history of delinquency. These were noble goals for any intervention with a high-risk population, and the sustainability of programs like this depends on scientific evidence.

The creative writing program of interest in the present study, WOS, was first examined five years after its inception by two of the curriculum authors, Smitherman and Thompson (2002). Their work described the program, including the importance of publishing student work in an anthology, as well as the pre- and post- test instrument that was used to measure student outcomes on writing improvement. Although the results of the pre- and post- test scores were inconclusive, the article presented anecdotal evidence of the perceived successes of WOS. Specifically, the authors quoted the following letter written by R. H. Dorrough (personal communication, 2001):

> I have seen firsthand how "Writing Our Stories" can impact the life of juvenile offenders and their families in a positive way. I have read the anthologies published through the program since 1998 and have seen the pride these boys and girls feel in their published work. From a family standpoint, I believe this program has a positive effect on the parents who watch these young men and women express themselves and give a voice to their emotions, fears and dreams. The parents most surely realize that if their children who have committed crimes

can succeed in this writing endeavor, perhaps a feeling of accomplishment will translate into strengthened self-esteem for work in school and life after time in DYS.

Smitherman and Thompson (2002) also provided a specific case as evidence of the beneficial elements of the program. A student, J.L., was detained because he allegedly suffocated his 2-year-old sister. Before joining the writing program, this 12-year-old student "had been unable to openly admit his crime." Through experiences in WOS, "J.L. found a vehicle to express the crime, and directly address his sister and family, and thereby accept responsibility for his actions." He used the following poem to, "apply human characteristics or actions to an abstract rendering (as "sister life") of the young child he had harmed."

LILA
In memory of my sister

Why did you have to die?
Why couldn't I have died instead?
Will you accept my apology?
Will you accept what I have done?

My apology is this, I am sorry.
I am sorry for what I have done.
I didn't know what to do.
My anger overcame me and I couldn't control it.

I sit and wait at my bed,
Thinking of what ifs.
Time and time again
My thoughts wonder to you.

You died when you were young.
You died when you were two.
You died at my hands and I didn't even know it.
You died in my room.

The idea behind the WOS program is that once these young men and women who participate, much like J.L., are able to acknowledge and deal with their difficult emotions through healthy and socially appropriate outlets, they may be less likely to express those difficult emotions through inappropriate outlets in the future. Inhibiting the impulsive behavior that comes from anger, for example, may reduce violence and delinquency for any young person who has been given the tools needed to be able to express and process those emotions through poetry rather than aggression.

Another student in WOS, known as S.L., authored another evocative piece about difficult feelings. The following poem was published in the 2013 anthology, edited by M. Barlow, and it highlights the potential significance of the therapeutic process as the adolescent author deals with anger.

Anger

Anger makes me do stupid things
and feel bad about myself.
He dresses me with a rusty chain
that crosses my chest,
one that's never been oiled,
and I want to wrap it tight around me
until it digs deep into my skin.
Anger covers me with his odor,
and I smell like a skunk born to stink.
No one comes near me and I wish
my smell would evaporate.
Sometimes I remember when I used to
bathe every day, and now I don't
really care about my smell.
So I continue to stink of Anger,
and the worse my smell grows,
the angrier I turn. (p. 83)

Both of these poems are indeed powerful literary pieces because they demonstrate the process of one young man expressing his feelings and perhaps for the first time

admitting to a crime he had previously denied and another young man realizing and expressing the cyclical nature and power of his anger. However, these benefits are purely anecdotal and they may only hold as much value as is perceived. While the experiences of the students who participate in WOS can be interpreted and explained to researchers by the thoughtful, impassioned adults that were a part of the program, those benefits have not been measured in an empirical way. It is important that interventions such as WOS capture these perceived benefits in a measurable, reliable, and valid way rather than only by focusing on the perceptions of the staff and students to ensure program efficiency and efficacy.

These types of measurable interventions are particularly necessary for those populations with unique risk factors for negative outcomes. Adolescents who have both a learning disability and a history of delinquent behavior can be considered one such population (Brier, 2001). These students are high-risk because of their learning disability and they are also high-risk because of their history of delinquent behavior, so they may be particularly influenced by brief interventions. However, students with either risk factor, learning disabilities or a history of delinquent behavior, may also have improved outcomes on educational and delinquency measures. The relationship between behavior and academics is a clear one. It is important that incarcerated (i.e., at-risk) students, especially those who may have higher rates of requiring special education services, receive adequate academic support, and a creative writing program may provide that academic support while also serving to improve outcomes on measures of delinquency.

Summary

The previous literature on adolescence, intelligence, and juvenile delinquency suggests that these domains are all complex and interrelated. Given the success of the aforementioned brief intervention programs, juvenile detention facilities should consider what empirical academic and psychosocial gains might come from an explicit writing program. It is important to understand the whole picture of students who have a history of delinquent behavior because of the saliency of the academic domain and the complexities of juvenile delinquency. Indeed, given the prevalence of criminal behavior, efforts to inform practices in juvenile detention centers are of supreme importance because those detention centers have the unique opportunity to address behavioral, psychological, and academic needs simultaneously and within an atmosphere that has the potential to be rehabilitative rather than just punitive.

CHAPTER III. METHODS AND PROCEDURES

Introduction

The focus of this study was to determine the relationships between IQ and measures of psychological functioning that are related to delinquent behavior for detained adolescent males in a Southeastern state. Specifically, comparisons were made among incarcerated adolescents who do (i.e., treatment group) and do not (i.e., control group) participate in a writing program, WOS, as part of their detainment.

The researcher at Auburn University where the study was conducted obtained permission from the Institutional Review Board (IRB) to use existing, de-identified human subjects data that were previously collected under another approved IRB document. The parent IRB to the present study encompasses the comprehensive research program at the juvenile detention facility and is updated yearly by the two Principle Investigators on the project. The IRB approved for the present study was exempt while the parent IRB required a full-board review. The protocol, a request for expedited status, two information letters including permission to use the database from both of the principal investigators of the parent IRB, and a copy of the relevant measures from the SAP (Standard Assessment Protocol) were submitted to the IRB as part of this project. Permission from the IRB to conduct the study was obtained prior to data analysis.

Purpose of the Study

Students who have a history of illegal behavior require unique supports in their development, education, and rehabilitation. Because of the inverse relationship between intelligence scores and delinquency, every effort possible should be made to better

understand the way IQ scores are distributed across scores on delinquency measures. The purpose of the study was to further the empirical knowledge base about the use of a creative writing intervention to decrease scores on measures of delinquency and to identify the relationship between participant IQ scores and delinquency.

Research Questions

The research questions for this study focused on the relationships between intelligence and personality measures of delinquency.

Research Question 1: What were the demographic characteristics of adolescent males detained at a juvenile detention facility in terms of race, age group, educational level, number of commitments, and primary charge?

Research Question 2: What were the descriptive statistics for the WASI scores for the total sample?

Research Question 3: What was the relationship between Intelligence Quotient and delinquency scores as measured by the WASI and the sum of the unruly subscale score and the oppositional subscale score on the MACI?

Research Question 4: To what extent was there an interaction effect between the unruly subscale on the MACI and the oppositional subscale on the MACI, and to what extent was there a main effect for the unruly subscale and the oppositional subscale for adolescent males who were detained at a juvenile detention facility who do and do not participate in Writing Our Stories?

Research Question 5: To what extent was there a statistically significant difference in the scores on both the unruly and oppositional subscales of the WASI before

and after treatment for adolescent males who were detained at a juvenile detention facility who do and do not participate in Writing Our Stories?

Design

This was a non-experimental research design. Scores on the IQ test were calculated using the Wechsler Abbreviated Scale of Intelligence. This test includes four sections: (1) vocabulary, (2) similarities, (3) block design, and (4) matrix reasoning. These subscales provide a Verbal IQ score (VIQ), which is an indicator of crystalized abilities like word knowledge, and a Performance IQ score (PIQ), which is an indicator of abstract reasoning and visual motor coordination. The Full Scale IQ (FSIQ) score is an estimate of general intellectual ability. These three scores (i.e., VIQ, PIQ, and FSIQ) are calculated from items that are open-ended (e.g., define "wagon") and multiple choice (e.g., which comes next in this pattern?).

The treatment program of interested used an anti-violence creative writing curriculum guide that was developed and published by The Alabama Writers' Forum, Inc. in conjunction with The Alabama Department of Youth Services. The program, WOS, consists of three key creative writing topics: poetry, fiction, and personal narratives. The poetry section includes 22 lessons ranging from learning about imagery and metaphor in the beginning to specific writing assignments in the end of the unit. The fiction section includes 13 lessons, and the personal narratives section includes three lessons that integrate all of the previous lessons (Barton, Cooper, Gamble, Smitherman & Thompson, 2002).

Instrumentation

The Standard Assessment Protocol (SAP), a battery of measures that were typically administered during the first two weeks that a student was detained at the facility was used in this study. The SAP, while used for research purposes, was also used to inform an individualized case conceptualization and was mandated as part of the juvenile's sentencing. The juvenile had the authority to choose whether to consent for his data to be included in research endeavors, but the court allowed for the requirement of all students who were detained at this facility to complete the SAP for programmatic decision-making upon intake, and for most individuals, upon release as well. The SAP was typically administered at pre-detainment within two to 21 days after the student arrived on campus. The SAP was typically administered between two months and two weeks before release from the custody of the Department of Youth Services. The variability in the post-detainment administration was mostly related to an inconsistent notification process for release dates. In other words, some students were required to attend a court hearing before being released, and those dates sometimes changed with little notice and other times the release was expedited according to the measurable progress that student made while detained.

The SAP was comprised of 16 measures ranging from a substance use inventory to a screener for symptoms of autism to parent and peer attachment styles. In addition, the SAP included a clinical interview that was administered by graduate students to acquire information on the adolescent's personal and family history. The SAP measures pertaining to this study included the Millon Adolescent Clinical Inventory (MACI; Millon, 1993) and the Wechsler Abbreviated Scale of Intelligence (WASI; Wechsler,

1999). The de-identified database that was provided for the present study included only data on relevant measures within the scope of this study.

The juvenile delinquency subscales have been used in previous research in an attempt to establish personality profiles to identify and better understand juvenile delinquency (Suilk, 2002). This warranted their use in the present study.

Population

The sample for this study was taken from a population of 1,434 detained adolescent males with a history of illegal behavior. This is a 780-acre, 264-bed facility for boys typically aged 11 – 19 years old located in Alabama. The campus houses the state's Chemical Addiction Program (CAP) and the Accountability-Based Sex-Offender Program (ABSOP), as well as the General Adolescent Population of offenders (GAP) (i.e., those adjudicated for a non-substance use crime and/or a non-sex crime). Demographic and other data of interest for 919 juvenile sex offenders (64.09%), 416 juvenile delinquents adjudicated for a non-sex offense (29.01%), and 99 juvenile delinquents adjudicated for a non-sex offense in the Chemical Addiction Program (6.9%) are included to provide a contextual understanding of the population from which the sample was drawn.

The mission statement of the state department that houses this detention facility is to, "enhance public safety by holding juvenile offenders accountable through the use of institutional, educational, and community services that balance the rights and needs of victims, communities, offenders" (Alabama Department of Youth Services, 2017). The three guiding principles of ABSOP are community safety (e.g., no more victims), holism

(e.g., consideration of behavioral, biopsychological, cultural, environmental, familial, and developmental contexts), and empiricism (e.g., using best-practice models of therapy).

The data is presented in three parallel sections, permitting comparison between the three groups: juvenile sex offenders (JSO), non-sexual delinquent juvenile offenders (JD), and chemical addiction program participants (CAP). Of the 919 JSOs evaluated up until the date that the present project began, 55.5% were White/Non-Hispanic, 41.1% African-American, 1.6% Bi-racial, and 1.2% Hispanic. The average age of those offenders was 15.77 years (SD = 1.68 years). The educational level attained by these youth ranged from 5th to 12th grade with four students reporting some postsecondary or vocational education. The majority of JSO students were in grades seven (13%), eight (20.4%), nine (29.3%) or 10 (18.4%) at the time of the assessment. In addition, of the JSO students, a total of 19 students (3.6%) reported earning their high school diploma or equivalency. A total of 631 JSOs received testing of intellectual functioning using the Wechsler Abbreviated Scale of Intelligence (WASI). The average FSIQ of this group was 85.8 (SD = 13.57), the average VIQ was 85.96 (SD = 13.74), and the average PIQ was 89.24 (SD = 14.5).

Of the 416 JDs evaluated, 68.3% were African-American, 29.5% were White/Non-Hispanic, 0.7% Bi-racial, and 0.5% Hispanic. The average age of these offenders was 17.18 years (SD = 0.78 years). The educational level attained by JDs in this sample ranged from sixth to 12th grade, with the majority in grades nine (27.4%), 10 (28.8%), and 11 (14.0%), with 19 individuals (4.6%) having obtained their high school diploma or equivalency at the time of the evaluation. Intellectual testing using the Wechsler Abbreviated Scale of Intelligence (WASI) was conducted with 343 JDs and the

average full-scale IQ was 82.96 (SD = 13.30), the average verbal score was 82.04 (SD = 12.02), and the average performance score was 86.66 (SD = 13.09).

Of the 99 CAPs evaluated, 42.4% were White/Non-Hispanic, 51.5% were African-American, 2.0% Hispanic, and 4.0% Bi-racial. The average age of these offenders was 17.37 years (SD = 0.68 years). The educational level attained by CAPs in this sample ranged from 6th to 12th grade, with the majority in grades nine (25.3%), 10 (16.2%), and 11 (16.2%) with 14 individuals (13.1%) having obtained their high school diploma or equivalency at the time of the evaluation. Intellectual testing using the Wechsler Abbreviated Scale of Intelligence (WASI) was conducted with 95 CAPs and the average full-scale IQ was 82.95 (SD = 15.66), the average verbal score was 82.35 (SD = 14.81), and the average performance score was 86.38 (SD = 16.96).

Lifetime juvenile justice commitments for the JSOs ranged from one to 35 times committed, with the majority (56.3%) indicating the current commitment was their first; 17.2% were committed for the second time, and 8.5% indicated it was their third juvenile delinquency commitment. In terms of sex offense adjudications, the juvenile justice commitment ranged from one to 28, and most JSOs indicated this was their first adjudicated offense (75.3%), while 13.5% reported two, and 7.7% reported three or more prior adjudicated sex offenses while others engaged in partial denial. Of the 919 sex offenders, 12.6% completely denied having any offending behavior (past and present), while 13.5% completely denied only their current offense. Upon further questioning, 1.8% reported no victims, possibly a result of “blaming the victim” or “taking the victim stance” (e.g., common examples include, “my little brother isn’t a victim because he wanted me to do it; it’s his fault” or “she’s not the victim; I am the victim because I’m

the one who got locked up"). Of the remaining JSOs, 65.6% reported one known victim, 18.9% reported two known victims, 7.6% had three known victims, and 2.0% had four victims. Of these victims, 25.4% were siblings of the offenders; 26.4% were other relatives; 37.5% were friends or acquaintances of the offenders; 4.9% were described as romantic partners of the offenders (e.g., statutory sexual offenses); and 3.6% of victims were strangers to the offenders. Victim gender was predominantly female (64.9%); male victims accounted for 22.1% of the total, and a mixed pattern of victim genders accounted for 11.3% of the total. Victim ages ranged widely from less than one to 55 years old. There are two modal ages of victims, however. Almost 20% of all victims were six years (72 months) or eight years (96 months). The median age was 8.67 years (104 months) and the average age was 9.31 years (111.71 months). Overall, 62.2% of victims were four or more years younger than the JSOs. Approximately 63.6% of victims were age 10 and under at the time of the offense. There was a range of sexual contact offenses reported. The greatest percentage of reported offenses included sexual abuse, 1st degree (26.9%), followed by sodomy, 1st degree (18.3%), sexual misconduct (12.7%), rape, 1st degree both completed (8.7%) and attempted (2.4%), and rape, 2nd degree (7.7%).

Lifetime juvenile justice commitments for the JDs ranged from one to 33; the average number of commitments was 4.65. Of the JDs, most were repeat offenders, with 18.2% reporting two lifetime juvenile commitments, 21.9% reporting three commitments and 33.6% reporting four to six commitments. In terms of sex offense adjudications, thirteen JDs reported a previous adjudicated sex offense (3.13%). The majority of offenses committed by the JD group are broken down as follows: 23.5% for burglary/robbery (burglary 1st degree, 2.7%; burglary 2nd degree, 4.4%; burglary 3rd

degree, 10.5%; robbery 1st degree, 5.9%), 14.6% for theft of property (TOP 1st degree, 10.7%; TOP 2nd degree, 2.7%; TOP 3rd degree, 1.2%), and 12.4% for a violation of parole/aftercare order (violation of parole, 7.8%; violation of aftercare 4.4%; failure to appear in court, .2%).

Lifetime juvenile justice commitments for the CAPs ranged from one to 14; the average number of commitments was 4.02. Of the CAPs, most were repeat offenders, with 14.1% reporting two lifetime juvenile commitments, 23.2% reporting three commitments and 41.4% reporting four to six commitments. In terms of sex offense adjudications, one CAP reported having two previous adjudicated sex offenses (1.01%). Almost half of the offenses committed by the CAP group were a violation of parole/aftercare order (28.3% total; 7.1% for violation of aftercare, 21.2% for violation of probation), possession of drugs or drug paraphernalia (9.1% total; 5.1% for possession of drugs, 1.0% for possession of drug paraphernalia, and 3.0% for possession of marijuana 2nd degree), and domestic violence 3rd degree (6.1%).

Sample

This was a purposeful sample in which the researcher selected all of their participants (n = 231) who completed the treatment (i.e., WOS). A control group (n = 230) was then formed based on the control participant's proximity in order of intake to one of the treatment group participants. That is, when a treatment group participant's name was selected, the name of a participant who did not participate in WOS either immediately before or after the treatment participant was selected for the control group.

This helped ensure the treatment and control groups were matched as closely as possible on the intake dates and order for everyone in the sample.

De-identified data was used for a total of 230 participants in the control group and 231 participants in the treatment (i.e., WOS) group. Participants in both the control group and the treatment group could have been in any of the three offense groups: ABSOP, GAP, or CAP. The participants for this study were adolescent males who were detained in a correctional facility in a Southeastern state.

Procedures

Graduate and undergraduate students from Auburn University and Auburn University at Montgomery collected data. Those undergraduate and graduate students were trained on the SAP and followed general procedures as outlined in a readily available training and reference manual. Data were collected in person, usually in one-on-one or small group sessions. Due to the nature of the secured facility, data were recorded with pencil and paper, either by the student or by a research assistant. Data were then later entered into an electronic database by a team of undergraduate and graduate students. The Research Coordinator at this facility, an employee of Auburn University, checked data entry periodically for accuracy, and the person in this position was responsible for retraining research assistants as necessary.

At no less than two days and no more than 21 days after intake, participants and controls took an IQ test, the Wechsler Abbreviated Scale of Intelligence (WASI), during individual (i.e., not group) administrations with trained graduate students or trained staff members who had earned at least a Masters degree in a related field. During the same

timeframe, but almost always during a different data collection session, participants and controls were typically administered the Millon Adolescent Clinical Inventory (MACI) by trained undergraduate students in individual or small group data collection sessions. These SAP sessions were divided into multiple occasions not only because of the difference in skill level and training required in order to administer the different measures, but also because the total time to complete the entire SAP can exceed 20 hours per detained adolescent and at least one break was often warranted.

Study Variables

Information on the following demographic variables was collected during the intake process (i.e., pre-detainment data): race, age group, education level achieved, lifetime juvenile justice commitments, and the primary offense/charge for the current detainment (e.g., sexual abuse 1st degree).

The only independent variable in this study was participation in WOS, the brief writing intervention program, or the treatment of interest. The dependent variable in this study was the score on the WASI measure of intelligence. The WASI IQ score is an interval variable because the difference between any two IQ points is standard across any other two scores. The internal consistency of the WASI is sufficient: the internal consistency reliability was found to be .961 for VIQ, .956 for PIQ, and .976 for the FSIQ (Axelrod, 2002).

Another dependent variable in this study included the combined scores on two subscales of the MACI as well as the independent scores on the two subscales of the MACI. The MACI is a 160-item self-report measure of 31 different personality scales

based on the criteria for each personality pattern in the DSM-IV. The responses to these items were nominal because participants indicated "true" or "false," responses that were mutually exclusive and unordered. The internal consistency of the subscales in the MACI has been found to range from .71 to .93 (Pinto & Grilo, 2004).

The two subscales (i.e., unruly and oppositional) on the MACI that were selected for use in the present study were chosen in part because of the related work that went into the creation of The Hare Psychopathy Checklist - Revised (Hare, 1991). Based on this work and the resulting factors of psychopathy that were established, the MACI scales of unruly and oppositional were most relevant to the present study. Both of these scales are defined and summarized by McCann and Dyer (1996) in their work on forensic assessment as follows:

> Scale 6a – Unruly: This scale corresponds to the antisocial personality disorder in the DSM-IV, and measures features of conduct disturbance. Higher scores are difficult to manage, especially autonomous, and prone to seek revenge for perceived injustices or abuses they have experienced. Their behavior is often impulsive and irresponsible, they are insensitive toward others, and they can be quite ruthless.
>
> Scale 8a – Oppositional: The features characterizing teenagers' elevations on this scale are intense resentment and irritability over having demands placed on one's self by others. Strong negative and oppositional attitudes prevail and there is a stubborn resistance to doing things that others ask of the adolescent. (p. 27-29)

Data Analysis

Descriptive statistics, including frequencies and percentages, were developed to address and describe the characteristics of the participants of the study (i.e., race, age group, education level, number of juvenile justice commitments, and the primary offense associated with the present detainment). Tests were also used to identify the descriptive statistics (i.e., mean, standard deviation, minimum and maximum values) for the WASI scores. A Pearson product moment correlation coefficient was used to measure the relationship between IQ scores and delinquency, and a two-way multivariate analysis of variance was used to explore the two subscales of delinquency (i.e., the unruly subscale and the oppositional subscale). T-tests were used to determine if changes in scores on both subscales of the MACI were statistically significant from pre- to post- detainment for both WOS participants and the control group. All analyses were conducted using SPSS version 23.0.

Summary

The proposed research project aimed to gain a deeper understanding of the relationships between measures of delinquency and measures of intelligence for adolescents who have a history of illegal behavior that participate in a creative writing program while detained. Data were collected as part of general intake and release procedures via one-on-one or small group sessions led by one or more university undergraduate or graduate students.

CHAPTER IV. STATISTICAL ANALYSIS AND RESULTS

This study was designed to further the empirical knowledge base around the use of a creative writing intervention to decrease scores on measures of delinquency. Chapter one included the research problem, the purpose of the study, five research questions related to this study, the significance of the study, the conceptual framework for adolescent males who were detained at a juvenile detention facility, the necessary assumptions of this study, the limitations of the study, the delimitations of the study, and the terms used in this study. A comprehensive review of literature in chapter two explored the constructs of adolescence and the related theories of development by A. Maslow, J. Piaget, L. Kohlberg, E. Erikson, and J. Marcia. Those same theories were then used to consider the construct of delinquency, and then intelligence was explored as a related factor. The present chapter will focus on the research findings of the project. The findings are reported according to each research question in the following section.

Descriptive Data Analysis and Results

Descriptive statistics, including frequencies and percentages, were calculated to address and describe the characteristics of the participants of the study. Analyses were conducted in SPSS version 23.0. Descriptive data were used to answer research questions one and two.

Research Questions

Research Question 1: What were the demographic characteristics of adolescent males detained at a juvenile detention facility in terms of race, age group, educational level, number of commitments, and primary charge?

Research Question 2: What were the descriptive statistics for the WASI scores for the total sample?

Research Question 3: What was the relationship between Intelligence Quotient and delinquency scores as measured by the WASI and the sum of the unruly subscale score and the oppositional subscale score on the MACI?

Research Question 4: To what extent was there an interaction effect between the unruly subscale on the MACI and the oppositional subscale on the MACI, and to what extent was there a main effect for the unruly subscale and the oppositional subscale for adolescent males who were detained at a juvenile detention facility who do and do not participate in Writing Our Stories?

Research Question 5: To what extent was there a statistically significant difference in the scores on both the unruly and oppositional subscales of the WASI before and after treatment for adolescent males who were detained at a juvenile detention facility who do and do not participate in Writing Our Stories?

Results

The findings from the first research question (What are the demographic characteristics of adolescent males detained at a juvenile detention facility in terms of race, age group, educational level, number of commitments, and primary charge?) are

presented in the present section. Descriptive data gathered from the SAP were used to address research question one. Data were collected from a combination of participant self-report and/or clinical interviews and/or paperwork from the court.

The demographic characteristics considered included race, age group, education level, number of juvenile justice commitments not including the present, and the primary offense associated with the present commitment. Descriptive statistics, where available, were calculated for these variables. Of the 431 participants, 173 were in grades eight and nine, 100 were in grades 10 through 12, and only 69 participants were in grades seven or less. The majority of students were in grades eight and nine at the time they completed the SAP. If a participant completed the SAP during the summer months, they were in most cases considered to be in the following grade. The other demographics, including race, age group, number of commitments, and primary charge are reported in Tables one through four.

A majority of the participants identified as white (60.5%). Almost 35% of participants identified as black (34.4%), and only 16 out of 349 adolescents identified as either Hispanic/Latino (1.4%), two or more races (2.6%), or something else (0.6%) combined.

There were age data available for 265 participants. Of those, 44.9% (n=119) were aged 15 or younger. The remaining 55.1% were aged 16 or older.

A majority of the participants were in grades eight or nine at the time the SAP was administered. Approximately 20% were in grades seven or lower (20.2%) and the remaining approximate 30% were in grades 10, 11, or 12 (29.2%).

The total number of commitments ranged from one to 24, with more than half of participants being on their first and only commitment (n=186, 53.3%). Only one participant was on their 10th, 11th, 17th, or 24th detainment each. These numbers included brief detainments (such as a boot-camp style placement) as well as trips to county facilities and their current stay at the state facility. A total of about 8% (n = 29) of participants reported that they had never been committed to a juvenile justice facility. While it is not immediately apparent why students who were detained might have indicated that they had never been committed before, it is plausible that these young men either misunderstood the question, were in denial about the reality of being committed, and/or they were dishonest in answering. Among those who were dishonest in their answering, they may have been motivated to do so in hopes that the court might look more favorably upon them for reporting that they had never been committed to a juvenile justice facility, they may have hoped to impress the research assistant who was asking them, or they may have been lying as sort of a compulsion to protect themselves in what may feel otherwise like a threatening environment.

The other demographic variable of interest was the primary charge associated with the current detainment. The three most common offenses were all sexual in nature; the most common was sexual abuse, 1st degree (n=102, 29.2%), the second was sodomy, 1st degree (n=70, 20.1%), and the third was sexual misconduct (n=37, 10.6%). The least common charges each were held by just one participant (which was .3% of the total): assault, 2nd degree, criminal mischief, degree unspecified, theft of property, 3rd degree, DUI, menacing, making a terroristic threat, kill or disable livestock, theft of an automobile, and producing/disseminating obscene material.

Table 1

Race of Participants

Race	n	Valid Percent
Data Missing	2	0.6%
European American/White	211	60.5%
African American/Black	120	34.4%
Hispanic/Latino	5	1.4%
Identifies as two or more races	9	2.6%
Other	2	0.6%
Total	349	100%

Table 2

Age Group of Participants

Age Group	n	Valid Percent
15 or younger	119	44.9%
16 or older	146	55.1%
Total	265	100%

Table 3

Educational Level of Participants

Educational Level	n	Valid Percent
Grade 7 or lower	69	20.2%
Grades 8 or 9	173	50.6%
Grades 10 through 12	100	29.2%
Total	342	100%

Table 4

Number of Commitments of Participants

Number of commitments	n	Valid Percent
Missing	4	1.1%
0	29	8.3%
1	186	53.3%
2	65	18.6%
3	28	8.0%
4	15	4.3%
5	7	2.0%
6	5	1.4%
7	3	0.9%
9	3	0.9%
10	1	0.3%
11	1	.3%
17	1	.3%
24	1	.3%
Total	349	100%

Table 5

Current Offense of Participants

Current Offense	n	Valid Percent
Missing	3	.9%
None or unreported	1	.3%
Sexual Assault, I	7	2.0%
Rape, II	14	4%
Sexual Abuse, I	102	29.2%
Assault, II	1	.3%
Sodomy, I	70	20.1%
Sodomy, II	7	2%
Criminal Mischief, degree unspecified	1	.3%
Theft of Propery, III	1	.3%
Violation of Probation	10	2.9%
Attempted Rape	7	2%
Rape, I	22	6.3%
Harassment	5	1.4%
DUI	1	.3%
Menacing	1	.3%
Enticing a Child	2	.6%
Indecent Exposure	5	1.4%
Burglary, II	3	.9%
Sexual Abuse, II	16	4.6%
Sexual Misconduct	37	10.6%
Sexual Harassment	7	2.0%
Runaway	2	.6%
Assault, I	2	.6%
Making a Terroristic Threat	1	.3%
Assault, III	3	.9%
Domestic Violence	2	.6%
Kill or Disable Livestock	1	.3%
Incest	3	.9%
Theft of an Automobile	1	.3%
Attempted Sodomy	5	1.4%
Violation of Aftercare	3	.9%
Attempted Incest	2	.6%
Producing/disseminating Obscene Material	1	.3%
Total	349	100%

The second research question is as follows: What are the descriptive statistics for the WASI scores for the total sample?

Descriptive calculations for full WASI scores revealed a mean score of 77.87, a max score of 129, and a minimum score of 53. The standard deviation was 51.65 points.

Research Question 3: What was the relationship between Intelligence Quotient and delinquency scores as measured by the WASI and the sum of the unruly subscale score and the oppositional subscale score on the MACI?

The results of the Pearson Product Coefficient revealed a strong relationship between IQ and delinquency. The correlation coefficient was .605, which is statistically significant at the 0.01 alpha level. This finding demonstrates a strong positive correlation, in such that as IQ increases, the sum of the unruly subscale and the oppositional subscale also tend to increase.

Research Question 4: To what extent was there an interaction effect between the unruly subscale on the MACI and the oppositional subscale on the MACI, and to what extent was there a main effect for the unruly subscale and the oppositional subscale for adolescent males who were detained at a juvenile detention facility who do and do not participate in Writing Our Stories?

Results of the two-way multivariate analysis of variance between the unruly subscale and oppositional subscale Wilks Lambda was .99, $p = 0.152$. The between subjects effects for the MACI unruly subscale was $F=0.003$, $p = .955$ and the oppositional subscale was $F = .543$, $p = .462$. Partial eta squared was negligible, 0.00 and 0.002 respectively. Therefore, one must conclude there are no main effects. Since there were no main effects and there was no interaction effect between the two groups, the effects on

one variable did not depend on the score on the other variable. In addition, the effects of WOS did not depend on the scores of either the unruly subscale or the oppositional subscale.

Research Question 5: To what extent was there a statistically significant difference in the scores on both the unruly and oppositional subscales of the WASI before and after treatment for adolescent males who were detained at a juvenile detention facility who do and do not participate in Writing Our Stories?

A series of four paired-samples t-tests were conducted to compare pre- and post-scores for WOS participants and the control group: two for the unruly subscale of the MACI (pre- and post-) and two for the oppositional subscale of the MACI (pre- and post-).

The first paired-samples t-test compared pre and post scores for WOS participants on the unruly subscale of the MACI. Results of the paired-samples t-test showed that mean scores on the unruly subscale did not differ significantly from before ($M = 51.77$, $SD = 36.08$) and after treatment ($M = 48.79$, $SD = 41.98$) at the .05 level of significance; $t(186) = -0.86$, $p = .394$). On average, scores for unruliness were almost three points lower after treatment than before, and that difference was not statistically significant.

The second paired-samples t-test compared pre and post scores for WOS participants on the oppositional subscale of the MACI. Results of the paired-samples t-test showed that mean scores on the oppositional subscale did differ significantly from before ($M = 51.72$, $SD = 34.99$) and after treatment ($M = 40.01$, $SD = 40.57$) at the .01 level of significance; $t(187) = -3.4$, $p = .001$. On average, scores for oppositional

personality traits were about 11.71 points lower after treatment than before, and that difference was statistically significant.

The third paired-samples t-test compared pre and post scores for those participants who did not engage with WOS during their detainment on the unruly subscale of the MACI. Results of the paired-samples t-test showed that mean scores on the unruly subscale did not differ significantly from before (M = 50.07, SD = 36.32) and after treatment (M = 48.54, SD = 41.28) at the .05 level of significance; $t(148) = -0.38$, $p = .708$. On average, scores for oppositional personality traits were about 1.53 points lower at release than at intake, and that difference was not statistically significant.

The fourth paired-samples t-test compared pre and post scores for those participants who did not engage with WOS during their detainment on the oppositional subscale of the MACI. Results of the paired-samples t-test showed that mean scores on the oppositional subscale did not differ significantly from before (M = 50.54, SD = 35.74) and after treatment (M = 43.29, SD = 40.7) at the .05 level of significance; $t(148) = -1.73$, $p = .09$. On average, scores for oppositional personality traits were about 7.25 points lower at release than at intake, and that difference was not statistically significant.

The results of the four paired-samples t-tests are included in Table 6 and Table 7.

Table 6

Pre and Post Unruly and Oppositional Scores for WOS Participants

	Treatment condition			
	Pre-treatment	Post-treatment	*t*	*df*
Unruly scores	51.77 (36.08)	48.79 (41.98)	-.086	186
Oppositional scores	51.72 (34.99)	40.01 (40.57)	-3.4***	187

Note. *** = $p \leq .001$. Standard Deviations appear in parentheses below means.

Table 7

Pre and Post Unruly and Oppositional Scores for Control Participants

	Treatment condition			
	Pre-detainment	Post-detainment	*t*	*df*
Unruly scores	50.07 (36.32)	48.54 (41.28)	-0.38	148
Oppositional scores	50.54 (35.74)	43.29 (40.7)	-1.73	148

Note. *** = $p \leq .001$. Standard Deviations appear in parentheses below means.

CHAPTER V. SUMMARY, CONCLUSION, AND RECOMMENDATIONS

Introduction

One goal of juvenile justice is to reduce recidivism and general delinquency among adolescents who have a history of delinquent behavior. That reduction can be accomplished through multiple avenues of treatment, but brief, multifaceted programs may be of particular interest because of the fewer resources required to implement them. The present study utilized scores on two subscales of the Million Adolescent Clinical Inventory (MACI), particularly the unruly and oppositional subscales, to create a measure of delinquency. The relationship between that delinquency score and participation in the WOS program was explored along with demographic variables that described the sample. This chapter includes a discussion of the findings, conclusions, and recommendations according to each research question.

Summary of Findings

Demographic data was used to address the first Research Question, and the results follow in the present section. The majority of students who participated in WOS and the study identified as white (60.5%). Just over half of the participants were aged 16 and older (55.1%) and just under half were aged 15 or younger (44.9%). Accordingly, about half of participants were in grades eight or nine (50.6%) at the time of assessment. Slightly more than half of the participants had only one lifetime juvenile detention detainment (53.3%) and it was related to the present charge. Of those charges, the three most common (totaling 59.9% for all three) were sexual abuse, 1st degree (29.2%), sodomy, 1st degree (20.1%), and sexual misconduct (10.6%).

The second research question used descriptive data to identify and describe the WASI scores for the sample. The mean score was 77.87 for this sample. The standardized mean for this IQ test is 100 with a standard deviation of 15 points. The mean for this sample is more than one standard deviation below the standardized mean, and this is consistent with the literature on the academic and educational needs of adolescents who have a history of illegal behavior. The range of FSIQ scores in the sample is from 129 to 53, and the standard deviation for scores is 51.65 points. This range of scores is typical, although slightly lower, than the population (i.e., the average score for the three population groups included 85.8 for JSO, 82.96 for JD, and 82.95 for CAP in the population). One possible reason the average IQ for the sample used in this study was lower than the population averages may have been because students who have higher IQs may already possess the coping mechanisms that could be ascertained from the WOS intervention, therefore those with higher IQs either lack interest in the program or their case managers do not recommend it as part of their treatment.

The third research question explores the relationship between IQ scores and a summed delinquency score. The delinquency score was calculated by adding the sum of unruly subscale and the oppositional subscale on the MACI. The correlation coefficient was .605, which indicates a strong positive correlation. This can be interpreted to mean that as IQ scores increase, the total scores on the unruly and oppositional personality patterns increase.

This positive relationship can be explained in multiple plausible ways. First, it may be that participants who have higher IQs may be especially subjected to the social learning patterns of detainment. For example, those who have higher functioning may be

learning to be more delinquent from their more-delinquent peers who are also locked up. Another, perhaps comorbid, explanation of this trend could be that the participants who have higher IQs may think of more ways to be delinquent. A third possibility is that students who have higher IQs may also have more self-insight with regards to their personality patterns, making the MACI assessment easier to understand or easier to answer with respect to their propensity towards unruliness and opposition. A final explanation could be accounted for in higher rates of impression management among students who have higher IQs. Those who have higher functioning may be unintentionally or intentionally inflating their sense of delinquency (or unruliness and/or opposition) in order to preserve or create their standing among delinquent peers, while students who have lower IQs may be unaware or unconcerned with how their answers on an SAP measure may affect their perceived delinquency among staff and peers.

The two subscales that total the delinquency score used in the present study include items that make up the unruly subscale and the oppositional subscale on the MACI. The interaction effect between the two subscales was measured, and the potential main effect for each subscale was considered.

A two-way multivariate analysis of variance was used to address the first part of the fourth research question. Results indicated that there was no interaction effect between the unruly subscale and the oppositional subscale. The absence of an interaction effect can be interpreted to mean that the score on one subscale did not depend on the score on the other subscale. In other words, the scores on the unruly subscale did not depend on the scores on the oppositional subscale and vice versa. The effects of each variable independently, rather than together, are considered with the main effects of

partial eta squared. The results, 0.00 and 0.002 for the unruly and oppositional subscales respectively, were negligible. These results indicated that the effects of the WOS intervention did not depend on either the scores on the unruly subscale or the oppositional subscale. The WOS program did not seem to have an effect on combined scores of unruliness or opposition for the present sample. In other words, delinquency, as defined by both scores on unruly and oppositional subscales, was not affected by the WOS intervention. Students who participated in WOS as part of their treatment for illegal behavior are no more or no less than students who do not participate in the program to have changes in their scores of delinquency as measured by the combined scores of unruliness and oppositional personality measures.

The fifth research question used four paired-samples t-tests to separately compare pre-and post- scores on both the unruly and oppositional subscales of the MACI for WOS participants and those in the control group. Changes in scores measuring oppositional personality features from pre- to post- detainment were statistically significant for those who participated in WOS. Although there was a decrease in the average score on the unruly subscale of the MACI for those who participated in WOS, it was not a statistically significant change. Neither unruliness nor oppositional scores decreased significantly from pre- to post-detainment for participants who were detained but did not attend the WOS treatment, although it should be noted that scores for opposition decreased more than scores on unruliness decreased for both students in the control group as well as students in the treatment group.

Conclusions

The following conclusions were based on the findings of the study:

1. For adolescent students who participated in a writing intervention while detained, there was a strong positive correlation between IQ and delinquency. As IQ increased, so did scores on measures of delinquency.
2. There was no interaction effect, and no related main effects, for the two subscales used to measure delinquency when combined. Scores on unruliness and oppositional tendencies did not depend on each other, and they did not depend on participation in the treatment program when considered across participants and non-participants.
3. There was a statistically significant difference in pre- and post-treatment scores for WOS participants on the oppositional subscale of delinquency. There was not a statistically significant difference in scores from pre-and post-treatment on the unruly subscale of the MACI for either WOS participants or controls, and the control group did not demonstrate a statistically significant difference in scores from pre- to post-detainment on the oppositional subscale.

Recommendations

1. Delinquency is a broad construct and the effects of the WOS intervention on delinquency should be considered with various definitions and measurements of delinquency.
2. The other benefits of the writing program should be considered empirically. For example, the present study determined that WOS did not significantly affect

delinquency (as defined by unruly and oppositional scores together), but it may be that the creative writing program has other measureable benefits when delinquency is measured differently.

3. When considered separately, WOS affected oppositional traits but not unruly traits in a statistically significant way. Perhaps the WOS curriculum can be modified so that measureable changes in delinquency can be achieved in particular facets of delinquency (e.g., unruly personality patterns). Indeed, other research should also be conducted to explore ways that WOS may be affecting other facets of delinquency beyond scores on a measure of unruliness and oppositional personality traits.

References

Agnew, R. & Brezina, T. (2015). *Juvenile delinquency: Causes and control.* New York, NY: Oxford University Press.

Alabama Department of Youth Services. (2017, February 1). *Mission Statement.* Retrieved from http://dys.alabama.gov/

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.

American Psychological Association. (2016). *What you need to know about willpower: The psychological science of self-control.* Retrieved from www.apa.org/helpcenter/willpower-gratification.pdf

Axelrod, B. N. (2002). Validity of the Wechsler Abbreviated Scale of Intelligence and other very short forms of estimating intellectual functioning. *Assessment, 9,* 17-23.

Baker, P. (2015, July 14). Obama calls for effort to fix a 'broken system' of criminal justice. *New York Times.* Retrieved from http://www.nytimes.com/2015/07/15/us/politics/obama-calls-for-effort-to-fix-a-broken-system-of-criminal-justice.html

Bandura, A. (1973). *Aggression: A social learning approach*. Englewoods Cliffs, NJ: Prentice-Hall.

Barlow, M. (Eds.). (2013). Open the door 16: An anthology of poems and stories from the award-winning Writing Our Stories, Mt. Meigs, Alabama.

Barton, M., Cooper, P.H., Gamble, D., Smitherman, T., & Thompson, J. (2002). *Writing our stories: An anti-violence creative writing program curriculum guide.* Montgomery, AL: The Alabama Writers' Forum, Inc.

Bazargan, Y. & Pakdaman, S. (2016). The effectiveness of art therapy in reducing internalizing and externalizing problems of female adolescents. *Archives of Iranian Medicine, 19,* 51-56.

Bee, H. L. (1992). *The developing child.* London: HarperCollins.

Bergeron, R. & Floyd, R. G. (2013). Individual part score profiles of children with intellectual disability: A descriptive analysis across three intelligence tests. *School Psychology Review, 42,* 22-38.

Brackett, M.A., Rivers, S.E., Reyes, M.R., & Salovey, P. (2012). Enhancing academic performance and social and emotional competence with the RULER feeling words curriculum. *Learning and Individual Differences, 22*, 218-224.

Brier, N. (2001). The relationship between learning disability and delinquency: A review and reappraisal. *Journal of Learning Disabilities, 22,* 546-553.

Cason, M. (2015, May 7). Alabama prison reform passes; governor plans to sign. Al.com. Retrieved from http://www.al.com/news/index.ssf/2015/05/alabama_prison_reform_bill_cou.html

Christenson, J.D. & Miller, A.L. (2016). Slowing down the conversation: The use of letter writing with adolescents and young adults in residential settings. *Contemporary Family Therapy, 38,* 23-31.

Cornell, D.G. (1992). High intelligence and severe delinquency: Evidence disputing the connection. *Roeper Review, 14,* 233-236.

Coyle, T. R. (2015). Relations among general intelligence (g), aptitude tests, and GPA: Liner effects dominate. *Intelligence, 53,* 16-22.

Cuenca-Sanchez, Y., Mastropieri, M.A, Scruggs, T.E., & Kidd, J.K. (2012). Teaching students with emotional and behavioral disorders to self-advocate through persuasive writing. *Exceptionality: A Special Education Journal, 20*, 71-93.

Derickson, C. (23 March 2016). Tamar Birckhead inspires NC inmates through fiction and writing. *Daily Tarheel.* Retrieved from http://www.dailytarheel.com/article/2016/03/tamar-birckhead-inspires-nc-inmates-through-fiction-and-writing

Eggen, P. & Kauchak, D. (2004). *Educational psychology: Windows on classrooms* (6th ed.). Upper Saddle River, NJ: Pearson Education, Inc.

Hare, R. (1991). The Hare Psychopathy Checklist – Revised. Tonawanda, NY: Multi-Health Systems.

Hirschi, T. & Hindelang, M.J. (1977). Intelligence and delinquency: A revisionist review. *American Sociological Review, 42*, 571-587.

Hockenberry, S. (2014). *Juveniles in residential placement, 2011.* Retrieved from http://www.ojjdp.gov/pubs/246826.pdf

Johnson, J. C. & Weber, A. L. (2011). *Introduction to psychology* (2nd ed.). New York: HarperCollins.

Justice Reform in the Deep South. (2015, May 18). New York Times, p. A18.

Kretzschmar, A., Neubert, J.C., Wustenberg, S., & Greiff, S. (2016). Construct validity of complex problem solving: A comprehensive view on different facets of intelligence and school grades. *Intelligence, 54*, 55-69.

Kroger, J. & Marcia, J.E. (2011). The identity statuses: Origins, meanings, and interpretations. In S. J. Schwartz, K. Luychz, & V. L. Vignoles, *Handbook of identity theory and research* (31-53). New York, NY: Springer.

Lynam, D., Moffitt, T., & Stouthamer-Loeber, M. (1993). Explaining the relation between IQ and delinquency: Class, race, test motivation, school failure, or self-control? *Journal of Abnormal Psychology (102)*, 187-196.

Macomber, D., Skiba, T., Blackmon, J., Esposito, E., Hart, L., Mambrino, E., Richie, T., & Grigorenko, E.L. (2010). Education in juvenile detention facilities in the state of Connecticut: A glance at the system. *Journal of Correctional Education, 61,* 223-261.

Marcia, J. (1987). The identity status approach to the study of ego identity development. In T. Honess & K. Yardley (Eds.), Self and Identity: Perspectives across the life span. London: Routledge and Kegan Paul

McCann, J. & Dyer, F. (1996). Forensic assessment with the Millon inventories. New York, NY: Guilford.

Mendel, R.A. (2014). *Juvenile detention alternatives initiative progress report 2014.* Retrieved from http://www.aecf.org/m/resourcedoc/aecf-2014JDAIProgressReport-2014.pdf

Millon, T. (1993). *Millon adolescent clinical inventory (MACI) manual.* Minneapolis, MN: National Computer Systems.

Miller, P.H. (2002). Theories of developmental psychology (4th ed.). New York, NY: Worth Publishers.

Mischel, W., Ebbesen, E. B., & Raskoff Zeiss, A. (1972). Cognitive and attentional mechanisms in delay of gratification. *Journal of Personality and Social Psychology, 21,* 204-218. http://dx.doi.org/10.1037/h0032198

Moffitt, T.E., Lynam, D., and Silva, P.A. 1994. Neuropsychological tests predict persistent male delinquency. *Criminology*, 32, 101–124.

Montague, M., Enders, C., Cavendish, W., & Castro, M. (2011). Academic and behavioral trajectories for at-risk adolescents in urban schools. *Behavior Disorders, 36*(2), 141-156.

Murray, J. & Farrington, D.P. (2010). Risk factors for conduct disorder and delinquency: Key findings from longitudinal studies. *Canadian Journal of Psychiatry, 55,* 633-642.

Office of the Surgeon General. 2001. Youth Violence: A Report of the Surgeon General. Washington, DC: U.S. Department of Health and Human Services, Office of the Secretary, Office of Public Health and Science. Retrieved from www.surgeongeneral.gov/library/youthviolence

Pinto, M. & Grilo, C. M. (2004). Reliability, diagnostic efficiency, and validity of the Millon adolescent clinical inventory: examination of selected scales in psychiatrically hospitalized adolescents. *Behavior Research and Therapy, 42*, 1505-1519.

Pruitt, D. B. (2000). *Your adolescent: Volume 2*. New York: HarperCollins.

Resnick, L.B. & Schantz, F. (2015). Re-thinking intelligence: Schools that build the mind. *European Journal of Education, 50,* 340-349.

Seguin, J.R., Pihl, R.O., Harden, P.W., Tremblay, R.E., and Boulrice, B. 1995. Cognitive and neuropsychological characteristics of psychically aggressive boys. *Journal of Abnormal Psychology, 104*, 614–624.

Shear, M. D. (2016, January 25). Obama bans solitary confinement of juveniles in federal prisons. *New York Times.* Retrieved from http://www.nytimes.com/2016/01/26/us/politics/obama-bans-solitary-confinement-of-juveniles-in-federal-prisons.html

Skinner, B. F. (1938). *The Behavior of organisms: An experimental analysis.* New York: Appleton-Century.

Smitherman, T. & Thompson, J. (2002). "Writing Our Stories": An anti-violence creative writing program. *The Journal of Correctional Education, 53,* 77-83.

Suitts, S. (2014). *Just learning: The imperative to transform juvenile justice systems into effective educational systems.* Southern Education Foundation. Retrieved from http://www.southerneducation.org/getattachment/cf39e156-5992-4050-bd03-fb34cc5bf7e3/Just-Learning.aspx

Sulik, B.J. (2002). *Defining the personality characteristics of delinquent adolescent recidivists* (Unpublished doctoral dissertation). Philadelphia College of Osteopathic Medicine, Philadelphia, Pennsylvania.

Thorndike, E. L. (1920, February). Intelligence and its use. *Harper's Magazine.* Retrieved from https://www.unz.org/Pub/Harpers-1920jan-00227

Toldson, I.A., Woodson, K.M., Braithwaite, R., Holliday, R.C., & De La Rosa, M. (2010). Academic potential among African American adolescents in juvenile detention centers: Implications for reentry to school. *Journal of Offender Rehabilitation, 49,* 551-570.

Travagin, G., Margola, D., & Revenson, T.A. (2015). How effective are expressive writing interventions for adolescents? A meta-analytic review. *Clinical Psychology Review, 36*, 42-55.

U.S. Department of Justice. (2011). *Criminal Victimization, 2011.* Retrieved from http://bjs.ojp.usdoj.gov/index.cfm?ty=pbdetail&iid=4494

Wechsler, D. (1999). *Wechsler Abbreviated Scale of Intelligence*. San Antonio, TX: Psychological Corporation.

Wilson, J.Q. & Herrnstein, R.J. (1985). *Crime and human nature.* New York, NY: Simon & Schuster.

Woodward, M. (1955). The role of low intelligence in delinquency. *British Journal of Delinquency, 5,* 281-303.

Zautra, E. K., Zautra, E. K., Gallardo, C. E., & Velasco, L. (2015). Can we learn to treat one another better? A test of a social intelligence curriculum. *PLoS ONE, 10,* 1-17. doi:10.1371/journal.pone.0128638

Appendices

Appendix A

Auburn Institutional Review Submission, Exempt Status

Office of Research Compliance
115 Ramsay Hall, basement
Auburn University, AL 36849

AUBURN UNIVERSITY

Telephone: 334-844-5966
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January 17, 2017

MEMORANDUM TO: Ms. Lisa Simmons
College of Education

PROTOCOL TITLE: "The Relationship Between Delinquency and Creative Writing for Detained Adolescent Males"

IRB FILE NO.: 16-195 EX 1606

APPROVAL: June 10, 2016
EXPIRATION: June 09, 2019

The referenced protocol was approved "Exempt" by the IRB under 45 CFR 46.101 (b) (4):

> Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless:
> (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and
> (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

Note the following:

1. CONSENTS AND/OR INFORMATION LETTERS: Only use documents that have been approved by the IRB with an approval stamp or approval information added.
2. RECORDS: Keep this and all protocol approval documents in your files. Please reference the complete protocol number in any correspondence.
3. MODIFICATIONS: You must request approval of any changes to your protocol before implementation. Some changes may affect the assigned review category.
4. RENEWAL: Your protocol will expire in three (3) years. Submit a renewal a month before expiration. If your protocol expires and is administratively closed, you will have to submit a new protocol.
5. FINAL REPORT: When your study is complete, please notify the Office of Research Compliance, Human Subjects.

If you have any questions concerning this Board action, please contact the Office of Research Compliance.

Bernie R. Olin, Pharm.D.
Chair of the Institutional Review Board #2
for the Use of Human Subjects in Research

cc: file