2017

Hopelessness Depression as a Predictive Risk Factor for Recidivism and Survival Time Among Juvenile Offenders

Todd Milton McGinnis
Walden University

Walden University

College of Social and Behavioral Sciences

This is to certify that the doctoral dissertation by

Todd McGinnis

has been found to be complete and satisfactory in all respects,

and that any and all revisions required by

the review committee have been made.

Review Committee
Dr. Sharon Xuereb, Committee Chairperson, Psychology Faculty
Dr. Elisha Galaif, Committee Member, Psychology Faculty
Dr. Peggy Gallaher, University Reviewer, Psychology Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
2017

Abstract

Hopelessness Depression as a Predictive Risk Factor for Recidivism and Survival Time Among Juvenile Offenders

by

Todd Milton McGinnis

MA, California State University Fresno, 2006

BA, California State University Fresno, 2002

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Clinical Psychology

Walden University

November 2017

Abstract

In the United States, there is a high incidence of recidivism among juvenile offenders with mental health disorders. This is a critical social issue facing the public and the Department of Juvenile Justice Administration today. However, research is not clear on the role of psychological factors in recidivism frequency and survival time. The purpose of this study was to examine whether hopelessness depression, as measured by suicidal-ideation, depression-anxiety, anger-irritation, and alcohol-drug use, and offense type, were predictors of recidivism frequency and survival time when controlling for age, gender, and race. The total sample consisted of archival data from 404 juvenile offenders between the ages 13 and 19, who were detainees in the Juvenile Detention facility between January 1, 2009, and December 31, 2012. Data consisted of scores from the Massachusetts Youth Screening Instrument, which is part of the standard intake screening at time of booking. A hierarchical regression analysis indicated a collective significant predictive relationship between age, gender, race, suicidal-ideation, depression-anxiety, anger-irritation, alcohol-drug-use, and recidivism frequency and survival time. Posthoc analyses of variance indicated statistically significant differences in alcohol-drug-use and anger-irritation levels between races. However, the multiple linear regression indicated that suicidal-ideation and depression-anxiety did not significantly predict either recidivism frequency or survival time. Results could enable juvenile justice staff to detect hopelessness depression among juvenile reoffenders at an earlier stage and offer better treatment aimed at reducing future occurrences of youth recidivism, thereby benefitting individuals as well as society.

Hopelessness Depression as a Predictive Risk Factor for Recidivism and Survival Time Among Juvenile Offenders

by

Todd Milton McGinnis

MA, California State University Fresno, 2006

BA, California State University Fresno, 2002

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Clinical Psychology

Walden University

November 2017

Dedication

I have been working on this educational journey since 1997, after completing 20 years in the grocery business. I completed my bachelor's degree in 2002. I completed my master's degree in 2006. I started working on my doctorate in 2007. All this would not have been possible without the assistance from my mother, siblings, friends, and family members. During this period, some very significant individuals who meant the world to me met with their demise. In loving memory, I would like to dedicate this accomplishment to the following individuals, Rose McGinnis (mother), George McGinnis (father), Daphne McGinnis (sister), Joe Williams (uncle), Charles Slocum (cousin), Steven Jackson (best friend), Lee West (best friend), and Dr. Jack Apsche (chair). Spiritually, I know they would be proud of me.

Acknowledgements

I would like to thank my chair, Dr. Sharon Xuereb. I appreciate your patience and direction throughout this process. When I was feeling frustrated and overwhelmed, you provided the encouragement I needed to get me through the rough spots.

I would like to thank my methods person, Dr. Elisha Galaif, for being part of my committee. Thank you for your input in getting the best from the study's results.

Table of Contents

List of Tables v

List of Figures vi

Chapter 1: Introduction to the Study 1

Introduction 1

Background 3

Problem Statement 8

Purpose of the Study 9

Research Questions 10

Theoretical Framework 11

Nature of the Study 13

Definitions of Terms 14

Assumptions 15

Scope and Delimitations 15

Limitations 17

Significance 18

Summary 20

Chapter 2: Literature Review 21

Introduction 21

Literature Search Strategy 23

Theoretical Foundation 24

Literature Review Related to Key Variables and Concepts 25

Mental Health Factors and Youth Recidivism 26
Hopelessness and Offender Recidivism 27
Depression-Anxiety and Recidivism 28
Anger-Irritability and Recidivism 30
Alcohol-Drug-Use and Recidivism 31
Offense Type and Recidivism 33
Early Versus Late Onset Age and Recidivism 35
Gender and Offender Recidivism 38
Race and Offender Recidivism 41
Measures of Recidivism 43
Survival Time in the Community 44
Literature Related to the Method of Recidivism Assessment 48
Summary 49
Chapter 3: Research Method 51
Introduction 51
Research Design and Rationale 51
Methodology 52
Population 52
Sampling and Sampling Procedures 52
Procedures for Participation and Data Collection 53
Instrumentation and Operationalization of Constructs 54
Threats to Validity 61

Ethical Procedures 62
Summary 62
Chapter 4: Results 64
Introduction 64
Data Collection 64
Results 66
Sample Descriptive Statistics 66
Descriptive Statistics of Continuous Variables 69
Assumption Testing 71
Results of Hierarchical Multiple Linear Regression 73
Analyses of Variance 76
Assumption Testing 78
Results of Hierarchical Multiple Linear Regression 79
Summary 82
Chapter 5: Discussion, Conclusions, and Recommendations 83
Introduction 83
Interpretation of Findings 84
Theoretical Framework 84
Predictor Variables 86
Control Variables 90
Limitations of the Study 92
Recommendations 93

Implications.....95

Conclusion 97

References.....100

List of Tables

Table 1. *Frequencies and Percentages of Demographic Data* 68

Table 2. *Descriptive Statistics of Continuous Variables* 69

Table 3. *Correlations Among MAYSI Subscales* 70

Table 4. *Results for Hierarchical Regression with Age, Gender, Race, Suicidal-Ideation, Depression-Anxiety, Anger-Irritation, and Alcohol-Drug-Use Use Predicting Recidivism Frequency* 76

Table 5. *Results for Hierarchical Regression with Age, Gender, Race, Suicidal-Ideation, Depression-Anxiety, Anger-Irritation, and Alcohol-Drug-Use Predicting Survival Time* 81

List of Figures

Figure 1. Normal P-P plot for recidivism frequency. 72

Figure 2. Standardized predicted values versus standardized residuals for the regression on recidivism frequency. 73

Figure 3. Normal P-P plot for survival time. 78

Figure 4. Standardized predicted values versus standardized residuals for the regression on survival time 79

Chapter 1: Introduction to the Study

Introduction

There is a high incidence of recidivism among juvenile offenders with mental health disorders, particularly in the state of California. According to the California Department of Juvenile Justice (CDJJ; 2010), the juvenile recidivism rate in the state is estimated at around 84.2%. The high recidivism rate among juveniles is a critical social issue facing the Department of Juvenile Justice Administration (DJJA) today, which poses a serious threat to public health and safety (Colins et al., 2011).

However, research is not clear on the role of psychological factors in recidivism frequency and survival time. Epidemiological studies show that 14% to 20% of detained youth in the juvenile justice system (JJS) in the United States meet the criteria for a mental health disorder (Archer, Bisbee, Spiegel, Handel, & Elkins, 2010). Researchers have examined most mental health risk factors among juvenile offenders in the United States (see Becker et al., 2012; Dalton, Evans, Cruise, Feinsein, & Kendrick, 2009; Duke et al., 2011). However, based on a review of literature (see Chapter 2), little is known about the extent to which hopelessness depression (defined as comprising suicidal ideation, depression-anxiety, anger-irritation, and alcohol or drug use) and offense type predict juvenile recidivism and survival time in the community when controlling for demographic variables (age, gender, and race).

There are over 30 juvenile predictive risk factors known to be associated with juvenile recidivism. These factors include age at first arrest or contact with law enforcement, offense type, alcohol or drug use, mental health disorders, family conflict

problems, conduct problems, educational problems, history of abuse and maltreatment, demographic background, gender, and race (Mulder, Brand, Bullens, & Van Marle, 2010). Several of these risk factors can co-occur during adolescence, increasing the likelihood of delinquency (Benner, Stage, Nelson, Laederich, & Ralston, 2010).

Survival time refers to the amount of time a criminal offender remains free within the community after reintegration prior to reoffending and returning to custody (Harris, Lockwood, Mengers, & Stoodley, 2011). Hopelessness is a subtype of major depression and manifests as suicidal ideation, depression-anxiety, anger-irritation, alcohol or drug use, and violent offending (Duke, Borowsky, Pettingell, & McMorris, 2011). My study was the first, according to my review of the literature, to use the hopelessness theory of depression (Abramson, Metalsky, & Alloy, 1989) to examine aspects of hopelessness depression simultaneously in order to predict recidivism frequency and survival time.

According to the Diagnostic and Statistical Manual-Fifth Edition (DSM-5), mental illness represents a discord in cognitive functioning, emotional regulation, and behavior that impedes psychological, biological, and developmental processes, which causes distress in social environmental settings (American Psychological Association [APA], 2015). The hopelessness theory of depression (Abramson et al., 1989) provided the theoretical foundation for my investigation. My objective was to examine whether hopelessness depression (i.e., suicidal ideation, depression-anxiety, anger-irritation, and alcohol or drug use; Abramson et al., 1989) and offense type are predictors of recidivism frequency and survival time in the community, while controlling for age, gender, and race. I gathered data from an archival sample of detained juvenile offenders from a

Central Valley California detention facility in the United States. First, I describe the background of the research topic. Next, I state the problem and purpose of the research, and then I describe the nature of the research and list the research questions. A description of the theoretical framework follows, after which I define key terms and list the assumptions and limitations of the study. Last, I describe the significance of the study to practice and research. A summary concludes the chapter.

Background

The prevalence of serious mental health disorders in detained youth populations is three times higher than that within the general youth population in the United States (Karnik, Soller, Redlich, Silverman, & Steiner, 2009). Researchers found that 40% to 82% of all detained youth have a diagnosable mental health disorder, compared with 33% of youth in the general population (Grande, Hallman, Underwood, Warren, & Rehfuss, 2012). Juvenile offenders' mental health disorders include internalizing and externalizing problems, such as suicidal ideation, depression-anxiety, anger-irritation, alcohol-drug-use, conduct disorder, oppositional defiant disorder, and posttraumatic stress disorder (Becker, Kerig, Lim, & Ezechukwu, 2012; Grande et al., 2012).

Becker et al. (2012) found demographic differences in mental health prevalence within an archival sample of detained juvenile offenders. For instance, the authors noted that younger juvenile offenders struggled with anger-irritation and depression-anxiety symptoms more frequently than much older offenders did. Available evidence also indicates distinctive gender differences in the prevalence of mental disorder among detained populations, with female offenders being more likely than male offenders to

have mental health diagnoses (Matsuura, Hashimoto, & Toichi, 2013). In a 2009 study, female juvenile offenders presented with higher levels of anger-irritation and alcohol-drug-use–related symptoms when compared with their male peers (Dalton et al., 2009). At 75%, European American juvenile offenders also presented with higher levels of mental health disorders, compared with 65% of minority juvenile offenders (Dalton, Evans, Cruise, Feinsein, & Kendrick, 2009).

The California Department of Corrections estimated, in 2012, the cost of mental health treatment at $4,337 per month, per inmate (Fleming, Gately, & Kraemer, 2012). The same year, the California Department of Corrections and Rehabilitation, Division of Adult Parole Operations, in collaboration with the University of California, Los Angeles (UCLA), performed an impact and outcome evaluation study of the Division of Adult Parole Operations' Mental Health Services Continuum Program (Fleming et al.,2012). The findings indicated that 85% of inmates exhibited mental disorder symptoms and were in the Correctional Case Management System (Fleming et al., 2012). Moreover, among those inmates who underwent reassessment prior to reintegration to the community and who had participated in the Parole Outpatient Clinic program, recidivism rates declined by 13% at one-year follow up (Fleming et al.,2012). For inmates who attended two or more Parole Outpatient Clinic sessions, recidivism declined by 34%, and the cost of treatment per inmate declined by 50% (Fleming et al.,2012). Typically, 65% of prisoners suffering from a mental disorder recidivate within 5 years from their reintegration to the community (Fleming et al., 2012).

Psychologist Terrie Mofitt classified juvenile delinquents as either life-course-persistent offenders or adolescent-limited offenders (Mulder at al., 2010). For life-course persistent offenders, the onset of criminal activity typically occurs between the ages of 10 and 13 (Mulder at al., 2010). Offenders who start their criminal careers early are highly likely to continue offending into adulthood (Mulder at al., 2010). Conversely, adolescent limited juvenile offenders, by definition, start their criminal behavior during late adolescence, when they are between the ages of 14 and 18, and typically cease offending as they enter early adulthood (Mulder at al., 2010). Persistent offenders are most likely to recidivate and to meet criteria for hopelessness depression subtypes (Mulder at al., 2010).

In 1972, Wolfgang and colleagues conducted a study focusing on chronic persistent juvenile offenders. Their sample consisted of 9,945 males born in the Philadelphia area, whom the researchers followed from birth until the age of 18 (Siegel & Welsh, 2008). The findings indicated that one third (n = 3,475) of the sample had prior contact with law enforcement, while the remaining two thirds (n = 6,470) of the sample had no prior contact with law enforcement (Siegel & Welsh, 2008). In addition, 54% of the group who had prior contact with law enforcement (n = 1,862) were frequent repeat offenders (Siegel & Welsh, 2008). Finally, while the nonchronic offenders had recidivated between one and five times, the chronic offenders (n = 627) had recidivated significantly more than five times (Siegel & Welsh, 2008).

Based on their findings, Wolfgang and colleagues identified the risk factors and characteristics associated with the persistent offenders, which they categorized as personal, environmental, social, and developmental (Siegel & Welsh, 2008). Persistent

offenders are likely to struggle with personal issues, such as educational problems, poor school connection, and low intellectual functioning (Siegel & Welsh, 2008). They typically reside in a single-parent household headed by a woman. The parenting style is usually harsh, with no apparent warmth. The communities in which persistent offenders live display severe social disorganization, poverty, drugs, gang violence, and crime (Siegel & Welsh, 2008). In addition, persistent offenders often have negative peer relationships and struggle with developmental cognitive deficits, along with low aspirations for success (Siegel & Welsh, 2008). Persistent offenders are relevant to the present study because research has shown that juvenile offender populations are likely to recidivate (Mulder at al., 2010; Siegel & Welsh, 2008). Since the present study focuses on juvenile offenders, and since persistent offenders struggle with mental health issues (Siegel & Welsh, 2008), research supports the need for the present study, which examines an understudied mental health risk factor (hopelessness depression) among juvenile offenders.

Therefore, there is a need to understand whether hopelessness depression (i.e., suicidal-ideation, depression-anxiety, anger-irritation, and alcohol-drug-use) and offense types among youth are predictors of recidivism frequency and survival time in the community. It is also essential to explore the connection between hopelessness and youth demographics such as age, gender, and race (Becker et al., 2012; Brozina & Abela, 2006). For example, Duke et al. (2011) found that youth who engaged in violent behaviors such as carrying a weapon or fighting typically exhibited symptoms of hopelessness depression. During adolescence, depression manifests as aggression, anger,

and irritation (Matsuura et al., 2013). Adolescents usually adopt delinquency, alcohol-drug-use, and violent behavior as a coping strategy to manage their level of hopelessness and the stressful adverse events of life; they do so because they do not expect the circumstances in their lives and communities to improve (Duke et al., 2011). These findings point to a conceptual link between hopelessness depression and offending. When young people experience hopelessness depression, they expect adverse life events to take place, without much hope for improvement in their circumstances (Abela, Stolow, Mineka, Yao, Zhu, & Hankin, 2011). Owing to the conceptual link between hopelessness depression and offending, I hypothesize in the present study that hopelessness depression will predict recidivism frequency and survival time in the community.

The hopelessness theory of depression suggests that persistent juvenile offenders may have a cognitive vulnerability towards negative environmental stressors, which makes them susceptible to feeling hopeless because they have an expectation that they cannot effect change (Cole, Ciesla, Dallaire, & Felton, 2008). Due to their residing within socially disorganized communities, these juveniles exhibit additional symptoms related to hopelessness, such as depression and anger, when they feel cut off from mainstream social mobility (Cole et al., 2008). These thoughts and feelings may lead to additional stress, isolation, and frustration expressed in the form of violence, crime, alcohol, and drug use (Drummond, Bolland, & Harris, 2011). Persistent juvenile offenders may believe that negative life outcomes are the norm and will likely perpetuate into the future (Haeffel, Abramon, Brazy, & Shah, 2008).

The objective of the present study was to examine whether hopelessness depression and its components (i.e., suicidal ideation, depression-anxiety, anger-irritation, and alcohol-drug-use), as well as offense-type, predict recidivism frequency and survival time in the community, while controlling for age, gender, and race. I sought to address the research gap concerning knowledge about hopelessness depression subtypes as predictors of recidivism frequency and survival in the community. There was a need to conduct this study because hopelessness depression may be associated with violent offending and persistent reoffending. Understanding the predictors for these outcomes could help practitioners prevent such outcomes by focusing on the treatment of important risk factors.

Problem Statement

Research on hopelessness depression as a predictor of juvenile recidivism frequency and survival is lacking. Authors of extant studies concur that chronic juvenile reoffenders recidivate on average two to five times more than the detained juvenile offender population in general (Harris, Lockwood, & Mengers, 2009; Harris et al., 2011). For example, according to the CDJJ (2010), recidivism rates remain consistently high over 3-year follow-up periods, averaging at around 84.2%. Nevertheless, researchers know little about the rate of juvenile recidivism because definitions, variables, and tracking periods used to measure juvenile recidivism are not standardized (Harris et al., 2009).

The problem I addressed in this study was the lack of knowledge regarding whether aspects of hopelessness depression, namely suicidal-ideation, depression-

anxiety, anger-irritation, and alcohol-drug-use, as well as offense type, predict juvenile recidivism frequency and survival time in the community when controlling for demographic variables (age, gender, and race). Hopelessness depression and its aspects relate to juvenile fighting, violence, crime, weapons carrying, and alcohol-drug-use (Duke et al., 2011). Because these outcomes negatively affect, not just offenders themselves, but society as a whole, there is a need to determine the extent of the relationship among juvenile offenders.

Purpose of the Study

The purpose of this study was to ascertain whether the hopelessness depression subtypes (suicidal ideation, depression-anxiety, anger-irritation, and alcohol-drug-use), along with offense type, predict recidivism frequency and survival time in the community while controlling for age, gender, and race. The study sample consisted of juvenile offenders who had recidivated at least one time and had experienced detention at the County Juvenile detention facility. Hopelessness depression subtypes (suicidal ideation, depression-anxiety, anger-irritation, and alcohol-drug-use) and offense-type served as the independent variables, while age, gender, and race were the covariates. The dependent variables were recidivism frequency and survival time in the community.

Hopelessness depression refers to unmet expectations, which lead to a perception that stressful negative life events will occur and that positive situations are less likely to occur in the future (Abela et al., 2011). In existing research, researchers usually operationalize recidivism by measuring the number of repeated rearrests, incarcerations, and reintegration to the community (Harris et al., 2009; Harris et al., 2011).

Operationalization of survival time consists of measuring the length of time (days) an offender remains free within the community prior to rearrests (Harris et al., 2011). This study may be beneficial in determining whether juvenile offenders in the sample persistently recidivated and whether recidivism relates to symptoms of suicidal-ideation, depression-anxiety, anger-irritation, alcohol-drug-use, and offense type. Such knowledge may provide juvenile justice practitioners with meaningful information for psychological assessment and rehabilitation of these youth.

Research Questions

The research questions and associated hypotheses were, as follows:

RQ1: Do suicidal-ideation, depression-anxiety, anger-irritation, and alcohol-drug-use, as measured by the Massachusetts Youth Screening Instrument, Second Version (MAYSI-2), positively predict recidivism frequency when controlling for age, gender, and race?

RQ2: Do suicidal ideation, depression-anxiety, anger-irritation, and alcohol-drug-use, as measured by the MAYSI-2, positively predict survival time when controlling for age, gender, and race?

The alternative hypotheses for both questions follow.

H_a1: Suicidal ideation, depression-anxiety, anger-irritation, and alcohol-drug-use, as measured by the MAYSI-2, will positively predict recidivism frequency when controlling for age, gender, and race.

H_a2: Suicidal ideation, depression-anxiety, anger-irritation, and alcohol-drug-use, as measured by the MAYSI-2, will positively predict survival time when controlling for age, gender, and race.

Theoretical Framework

Abramson et al. (1989) developed the hopelessness theory of depression, which serves as the theoretical foundation for this study. In developing this theory, Abramson and colleagues aimed to help explain the role that hopelessness plays in depression. These authors argued that, when a person has an expectation that adverse conditions are not likely to improve, he or she will have no hope that positive conditions will occur in the future. A hopeless or negative cognitive style can lead to the onset of depression, whereby the person begins to develop the sense of being helpless to produce effective change in his or her life. Such hopelessness or negative cognitive style confers a vulnerability to depression and, according to Abela et al. (2011), consists of several specific tendencies. First, the individual attributes negative events to stable and global causes, which he or she perceives as external and uncontrollable. Second, the individual views negative events as having disastrous consequences. Moreover, the individual infers negative characteristics about the self-due to experiencing negative events (Abela et al., 2011). In their study of youth delinquency and violence, Duke et al. (2011) found that youth who felt hopeless responded to their conditions with violence, aggression, and anger, which may lead to undesirable outcomes, such as incarceration and recidivism.

Bolland, Lian, and Formichella (2005) surveyed a sample of inner-city youth from Mobile, Alabama, and found that 50% of study participants reported feeling

hopeless. Youth who were hopeless were three times more likely to have a mental health diagnosis compared with their peers with more positive outlook (Marsiglia, Kulis, Perez, & Parsai, 2011). Stoddard, Henly, Sieving, and Bolland (2011) found that youth were more likely to engage in violent behaviors due to feeling the effects of hopelessness. The researchers surveyed a sample of 136,549 6th through 12th graders. According to their findings, 25% of the sample reported feeling hopeless at one time during a one-month period. A further 12% reported experiencing moderate to high levels of hopelessness and showed strong tendency for violent behaviors, such as carrying a weapon to school, physical fighting, and brandishing a weapon.

The hopelessness theory of depression suggests that suicide may be another consequence of hopelessness depression. Kuo, Gallo, and Eaton (2004) found that feelings of hopelessness served as a significant predictor for suicide. Chapman and Ford (2008) reported high potential for suicide among detained youth; nearly 22% of their study sample experienced suicidal thoughts, 20% had a plan in place, and 16% attempted suicide, 50% of whom seriously hurt themselves.

According to the hopelessness theory of depression, hopelessness is a subtype of major depression and manifests as suicidal ideation, depression-anxiety, anger-irritation, alcohol-drug-use, and violent offending (Duke et al., 2011). Persistent juvenile offenders who recidivate may have a predisposition to respond negatively to environmental stressors, which makes them vulnerable to feeling hopeless (Cole et al., 2008). Due to stressors encountered in everyday life and limited positive social opportunities embedded within socially disorganized communities, juveniles lack the coping abilities to make

good choices upon reintegration to their communities following detention (Mennis, Harris, Obradovic, Izenman, Grunwald, & Lockwood, 2011). They develop a sense of hopelessness depression and anger, as they often feel cut off from mainstream social mobility, which leads to stress, isolation, and frustration expressed in the form of violence, crime, and alcohol and drug use (Drummond et al., 2011). Continuing to reoffend may not be purely a result of choice, but likely stems from maintaining a belief that negative life outcomes are the norm and are likely to continue (Haeffel et al., 2008). This theory informs the research questions guiding this present study.

Nature of the Study

The present study is quantitative in nature, based on a predictive correlational design. I conducted regression analyses to establish whether aspects of hopelessness depression, such as suicidal ideation, depression-anxiety, anger-irritation, and alcohol-drug-use, as well as offense-type, significantly predict recidivism frequency and survival time in the community while controlling for, age, gender, and race. A regression analysis is appropriate when the research goal is to assess the relationship among a group of predictor variables, while controlling for the effects of additional variables (Stevens, 2009). The predictor (independent) variables examined in the present study are suicidal ideation, depression-anxiety, anger-irritation, alcohol-drug-use, and offense-type. The dependent variables are recidivism frequency and survival time in the community (measured as the number of days). The participants' age, gender, and race served as control variables. This study fills a knowledge gap in the juvenile recidivism field. I

gathered data required to meet the study objectives from archival records. Chapter 3 contains a detailed discussion of the research design and study objectives.

Definitions of Terms

This section contains definitions of frequently used terms throughout the study.

Anger: Feelings of displeasure (APA, 2015).

Anxiety: Extreme thoughts of worry and distress due to the anticipation of some dangerous or harmful event (APA, 2015).

Depressive symptoms: The feelings of sadness that lead to apathy, hopelessness, and lack of motivation to perform everyday activities (APA, 2015).

Hopelessness depression manifests as anger, anxiety, irritation, depression, and suicidal ideation, emotional states which often lead to drug and alcohol abuse resulting in criminal activity that may lead to incarceration. Juveniles are hopeless due to an expectation that adverse conditions are not likely to improve; they lack hope that positive changes in their circumstances will occur in the future (Abramson et al., 1989).

Irritation: Extreme sensitivity to minor extraneous stimuli (APA, 2015).

Offenses: Criminal actions that violate established state statutes and laws (CJLR, 2007).

Recidivism: The propensity to repeatedly engage in criminal activities after at least one episode of conviction, incarceration, and reintegration into the community (Harris et al., 2011).

Suicidal ideation: The thought of ending one's life (APA, 2015).

Alcohol-drug-use: The use of illicit alcohol and drugs (APA, 2015).

Survival time in the community: The amount of time a criminal offender remains free within the community after reintegration prior to reoffending and returning to custody (Harris et al., 2011).

Assumptions

I made several specific assumptions in this study. First, because the MAYSI-2 (Grisso & Barnum, 2006) is widely used within juvenile detention settings across the United States, its appropriateness as a data collection instrument is implicitly. Because this is a self-report instrument, and because this study utilizes archival data, I further assumed that the juvenile offenders answered the questions truthfully. However, there is the possibility that juvenile offenders may not have admitted their mental health symptoms due to fear of repercussions or of others' perceptions.

Trained forensic Ph.D. intern students and juvenile correctional officers administered the computerized version of the MAYSI-2. I assumed that these parties followed the MAYSI-2 protocol accurately and collected the archival data used in this study appropriately.

Scope and Delimitations

The scope of this study was limited to the examination of whether hopelessness as a subtype of depression and its aspects (suicidal-ideation, depression-anxiety, anger-irritation, and alcohol-drug-use), as well as offense type, can serve as predictors of juvenile recidivism frequency and survival time in the community. Research has shown that the components of hopelessness depression are significant to juvenile delinquency, in particular violence, fighting, and weapon carrying. Juveniles often use this specific type

of behavior as a copying strategy, as they struggle to deal with hopelessness depression. All the juvenile offenders in the study resided within, California, and had experienced detention in the Juvenile detention facility. They completed the MAYSI-2 instrument from January 1st, 2009, to December 31st, 2012. Therefore, I collected data used in this study from these archival records. Archival data was appropriate due to ethical and confidentiality constraints, making it difficult to obtain permission to conduct research on minors under the age of 18. The population of interest for the present study includes male and female offenders aged 12 through 18 of diverse racial backgrounds, including European American, African American, Hispanic, Native American, and Asian. All participants whose records were included in the archival dataset used in this investigation had recidivated.

All individuals whose data were included in the study had completed MAYSI-2, which comprises several sub-scales, namely suicidal ideation (SI), with scores ranging from 0 to 5, depression-anxiety (DA), with scores ranging from 3 to 6, anger-irritation (AI), with scores ranging from 0 to 9, and alcohol-drug-use (SU), with scores ranging from 0 to 8 (Grisso & Barnum, 2006).

Hopelessness depression and its aspects may be predictive of recidivism and survival time in the community. Studying the clinical utility of juvenile offender mental health in relationship to recidivism and survival time in the community for those who fall outside boundaries and limits of this research, such as juveniles in psychiatric facilities, is clearly of value; however, time restraints prevented the inclusion of other groups in this study.

The results of this study may be generalizable to all adolescent juvenile offenders detained within the United States correctional system and abroad. I believe that all juvenile offenders experience some level of mental health distress, such as suicidal ideation, depression-anxiety, anger-irritation, and alcohol and drug-use, due to which they may commit various offenses and repeat the offending behavior. The dataset utilized in the present study pertains to juvenile offenders who endorsed specific mental health criteria on the MAYSI-2.

Limitations

This study is not without its limitations. The MAYSI-2 is a screening instrument used to identify individuals who may be experiencing mental health distress upon entry to the detention facility. Internal consistency for the MAYSI-2 ranges from .37 to .63, which signifies an appropriate relationship between specific items within their subscales (Archer et al., 2010; Grisso & Barnum, 2006). Proctor, Hoffman, and Corwin (2011) reported that offenders are most likely to underreport symptoms when assessed by a custody staff member. Thus, the authors recommended that mental health professionals assess these individuals, as this minimizes their concerns regarding the stigma attached to being mentally ill. However, this instrument is common within juvenile justice settings across the United States (Grisso, Paiva-Salisbury, & Williams, 2012). Marczyk, Heilbrun, Lander, and DeMatteo (2003) used the MAYSI-2 to detect mental health disorders and recidivism in a detained population.

In the present study, I categorized offense types as (1) violent offenses, (2) sexual offenses, and (3) other offenses (e.g., property, drug sales and use). This classification

may present a limitation, as some offenders may fall into more than one category. For this study, I considered only the index offense. Furthermore, there are only three categories for offense types to reduce the likelihood of a type II error occurring. The larger the offense category, the more likely it will be to fail to reject the null hypotheses. Although I recognize that certain confounders may be present within the sample, such as posttraumatic stress disorder, conduct disorder, and oppositional defiant disorder, the aim of the present study is neither to measure nor to account for such confounders.

Significance

This study addresses the current gap in the pertinent literature by determining whether suicidal ideation, depression, anxiety, anger, alcohol-drug-use, and offense type are predictive of juvenile recidivism frequency and survival time in the community when controlling for age, gender, and race. The findings make an original contribution towards juvenile recidivism research and could raise awareness of the association between hopelessness and juvenile recidivism. The findings may assist mental health professionals and probation staff working within juvenile detention facilities in perhaps revealing the need for treatment.

Insights gained through this study are important because they may prompt professionals to change their approaches to assessing and treating delinquent populations. Due to stress and the lack of opportunities within socially disorganized communities, juveniles do not possess the coping abilities that would enable them to make good choices upon reintegration into their communities post detention (Mennis et al., 2011). They thus develop a sense of hopelessness, depression, and anger when they feel cut off

from mainstream social mobility, leading to stress, isolation, and frustration that is expressed in the form of violence, crime, and alcohol and drug use (Drummond et al., 2011). Many juveniles do not repeatedly reoffend by choice, but may do so due to a belief that negative life outcomes are the norm and will likely continue (Haeffel et al., 2008). Therefore, the findings of this study may prompt development and implementation of emotional awareness programs in schools or youth clubs. They will also likely motivate introduction of education for probation officers and social workers on how to identify and address such issues.

In line with Walden University's mission for social change, I sought to reveal a significant relationship among the hopelessness depression variables and demonstrate their link with recidivism frequency and survival time in the community. This study may also motivate future research in this field, particularly regarding hopelessness as a dynamic risk factor for repeat reoffending. Newly developed psychometric instruments should include hopelessness as a part of the assessment protocols used in detention settings, allowing early detection of persistent recidivism and initiation of appropriate treatment. Early detection of persistent hopelessly depressed juvenile offenders will facilitate directing those juvenile offenders toward more effective treatment and rehabilitation. The rehabilitation and treatment of youth is the primary goal of the Department of Juvenile Justice and Delinquency, because it is the main factor in reducing future juvenile recidivism (Haeffel et al., 2008). Rehabilitation will help reduce recidivism, thus benefitting, not only the youth, but also the wider community.

Summary

This chapter provided a summary of the present study, including a background of juvenile offender recidivism and hopelessness depression. A review of hopelessness depression theory intends to explain a potential relationship with recidivism. Most of the extant research in this field has focused on individual demographic risk factors in isolation, such as age, gender, race, offense type, alcohol and drug use, and general mental health problems. Therefore, in exploring a potential correlation between hopeless depression and the propensity of juvenile offenders to persistently recidivate, the aim is to ascertain whether hopelessness depression can predict recidivism among detained populations. To date, social risk factors, such as age, gender, race, offense type, and alcohol and drug use, have proven to be associated with juvenile recidivism.

Chapter 2 contains a more detailed discussion of hopelessness depression and juvenile offender recidivism. Chapter 3 contains a detailed explanation of the study methodology, measures, sample population, data collection, research questions, and ethical considerations. Chapters 4 and 5 contain a presentation and discussion of the results, respectively.

Chapter 2: Literature Review

Introduction

The high prevalence of juvenile offender mental health problems and recidivism frequency are critical issues facing U.S. society today. Statistics as of 2011 show that approximately 316,497,531 U.S. youth were under the control of the Department of Juvenile Justice (DJJ), either through out-of-home placement, probation, or parole (Zhang, 2011). In a one-day national census measuring detained populations, Snyder and Sickmund (2006) found that 92,000 U.S. youth were in public and private juvenile detention settings. There are 307 offenders for every 100,000 youth under the age of 18 who are under the supervision of the DJJ (Osho & Grant, 2011). Three quarters of juvenile offenders recidivate at some time and remain under the supervision of the DJJ (Trupin, Kerns, Walker, DeRobertis, & Stewart, 2011).

In response to the growing issue of juvenile recidivism, research on risk factors related to juvenile recidivism has increased over the past decades. Researchers have examined static factors (e.g., age, gender, race, and offense history; Mulder et al., 2010) and dynamic factors (e.g., school problems, family conflict, alcohol and drug use; Mulder et al., 2010). Extant studies indicate that risk assessment instruments can predict static and dynamic risks for repeat offending (Bechtel, Lowenkamp, & Latessa, 2007; Minor, Wells, & Angel, 2008; Vincent, Perrault, Guy, & Gershenson, 2012).

In 2015, Baglivio, Wolff, Jackowski, and Greenwald (2015) recommended examination of factors connected to youth recidivism frequency, which may include psychological factors. However, there is a paucity of studies on mental health risk factors

for juvenile recidivism, resulting in a limited understanding of the role of mental health in juvenile recidivism and recidivism frequency (McReynolds, Schwalbe, & Wasserman, 2010). Studying mental health risk factors that predict recidivism is important because the prevalence of mental health problems among detained youth is almost three times higher than among the general population (Becker et al., 2012). Consequently, identifying mental health risk factors that predict recidivism and recidivism frequency is a research priority for the U.S. juvenile justice system (McReynolds et al., 2010). The goal is to provide information that may assist community psychologists and intervention counselors in developing ways to help prevent juvenile recidivism (Becker et al., 2012). Research also shows that recidivism relates to alcohol and drug use, onset of offending behavior, offense type, and survival time in the community (Becker et al., 2012). The purpose of the present study was to examine whether mental health risk factors (i.e., suicidal ideation, depression-anxiety, and anger-irritability), as well as alcohol and drug use and offense type, predict recidivism frequency and survival time in the community after controlling for age, gender, and race.

This chapter begins with a description of the literature search strategy I used for identifying sources to include in the literature review. Following is a discussion of the hopelessness theory of depression (Abramson et al., 1989), which provided the theoretical foundation for the study. The chapter continues with sections on the study variables, including mental health risk factors (i.e., suicidal ideation, depression-anxiety, anger-irritability) as well as alcohol-drug-use and offense type. The final sections of

Chapter 2 include discussions of recidivism measures, risk assessment and screening, and a summary.

Literature Search Strategy

I conducted a comprehensive online literature search using library databases from Walden University; California State University, Fresno; Fresno City College; the University of California Los Angeles; and the University of La Verne. The databases used in this process included EBSCO, SAGE, PsycARTICLES, PsycINFO, and Academic Search Complete. I used the following key search terms to identify recent, peer-reviewed, scholarly journal articles on risk factors related to juvenile recidivism: juvenile recidivism, mental health, hopelessness, suicidal ideation, depression, anxiety, anger, irritability, age, gender, race, alcohol-drug-use, offense type, survival time, and recidivism assessment instruments. Additional searches using official websites of relevant institutions, such as the Office of Juvenile Justice and Delinquency Prevention (OJJDP), the CDJJ, the Federal Bureau of Investigation Uniform Crimes Reporting, and the National Criminal Justice Reference Services, yielded valuable background for the present investigation, as well as statistical information reported in this chapter. To ensure relevancy of the findings, I strove to limit research included in the review to studies published in 2010 or later. However, when I found important or seminal theoretical or empirical articles published earlier than 2010, I included them in the review for completeness.

Theoretical Foundation

The hopelessness theory of depression (Abramson et al., 1989) served as the theoretical foundation for this study. Abramson et al. (1989) developed the hopelessness theory of depression to help explain the role that hopelessness plays in depression. Abramson and colleagues argued that, when a person has an expectation that adverse conditions are not likely to improve, he or she will lack hope that positive conditions will occur in the future. A hopeless or negative cognitive style can lead to the onset of depression, whereby a person gradually develops the belief of being helpless to produce effective change in his or her life (Abela et al., 2011). This hopelessness or negative cognitive style confers a vulnerability to depression and is characterized by the following tendencies: (a) the individual attributes negative events to stable and global causes, which he or she perceives as external and uncontrollable; (b) the individual perceives negative events as having disastrous consequences; and (c) the individual infers negative characteristics about the self after negative events (Abela et al., 2011). In their study of youth delinquency and violence, Duke et al. (2011) found that youth who felt hopeless responded to their conditions with violence, aggression, and anger, which often resulted in undesirable outcomes, such as incarceration.

Bolland et al. (2005) surveyed a sample of inner-city youth from Mobile, Alabama, and found that 50% of the study participants reported feeling hopeless. Youth who were hopeless were three times more likely to have a mental health–related diagnosis (Marsiglia et al., 2011). Stoddard et al. (2011) found that youth were more likely to engage in violent behaviors as a result of feeling the effects of hopelessness. The

researchers surveyed a sample of 136,549 6th through 12th graders, of whom 25% reported feeling hopeless at one time during a one-month period. In addition, 12% reported experiencing moderate to high levels of hopelessness and showed a strong propensity for several types of violent behaviors, such as carrying a weapon to school, physical fighting, and brandishing a weapon (Stoddard et al., 2011).

In addition, Abramson et al. (1989) posited that suicide might be another consequence of hopelessness depression. Kuo et al. (2004) found that hopelessness alone was a significant indicator for suicide. Chapman and Ford (2008) found that the potential for suicide was high in detained youth; nearly 22% of their study sample reported having suicidal thoughts while 20% actually had a plan in place. Sixteen percent of Chapman's and Ford's sample attempted suicide, with 8% seriously hurting themselves, as a result. The hopelessness theory of depression was an appropriate foundation for the present study, I concluded, because depression rates are usually high during adolescence, thereby increasing the likelihood of hopelessness depression, which may be predictive of recidivism (Abela et al., 2011; Morris, Gisela, & Garber, 2008). I derived my research questions from this theory in order to identify predictors for persistent recidivism due to hopelessness depression.

Literature Review Related to Key Variables and Concepts

In this section, I review literature pertaining to the research topic, with particular emphasis on the variables of interest. Each subsection contains a review of literature on a particular concept as it relates to youth recidivism. The concepts reviewed, in their connection with youth recidivism, include mental health factors, hopelessness,

depression-anxiety, anger-irritability, alcohol-drug-use, offense type, early versus late onset, gender, and race. Additionally, I review literature related to measures of recidivism to understand how researchers have measured recidivism in past studies. The final two subsections contain reviews of work on survival time in the community and literature related to the methodology for this study.

Mental Health Factors and Youth Recidivism

Researchers often overlook mental health components when examining recidivism and recidivism frequency (Duke et al., 2011). Several researchers have highlighted the need to focus on mental health factors among detained populations and to establish how mental health factors predict recidivism (Becker et al., 2012; Dalton et al., 2009). A dearth of studies exists, however, on the potential relationship between mental health risk factors (such as hopelessness, depression-anxiety, and anger-irritability) and recidivism. Research on the mental health risk factors that predict recidivism is important because the rates of mental health problems for detained youth are almost three times higher than those noted among the general population (Becker et al., 2012). Mental health factors may be significant predictors of recidivism and the frequency of recidivism, along with juvenile delinquent risk factors (Becker et al., 2012). Several researchers pointed out that detained youth populations meet the standards for a diagnosable mental health disorders (Chapman & Ford, 2008; Karnik et al., 2009; Stathis, Litchfield, Letters, Doolan, & Martin, 2008). According to Dalton et al. (2009), an estimated 20% to 70% of detained youth have a serious mental health disorder. However, other psychological factors, such as suicidal ideation, depression-anxiety, and anger-irritability, might also

influence youth recidivism and recidivism frequency and, therefore, warrant further investigation (Archer et al., 2010; Becker et al., 2012; Brozina & Abela, 2006).

Hopelessness and Offender Recidivism

Extant studies have insufficiently explored the effects of hopelessness depression among detained youth (Kuo et al., 2004; Stewart et al., 2011). In particular, empirical evidence supporting a possible relationship between hopelessness and youth recidivism, including recidivism frequency, is lacking (Becker et al., 2012). Drummond et al. (2011) found that youth who felt hopeless and thus powerless to change their circumstances were more likely to participate in offending behavior than those who did not feel hopeless. Duke et al. (2011) found that youth who engaged in violence, such as carrying weapons, fighting, and delinquent behaviors, did so in an attempt to cope with their feelings of hopelessness. Youth delinquency and violent behavior may be a strategy employed by youth to cope with hopelessness and stressful, adverse life events (Duke et al., 2011). Studies that link hopelessness to delinquent and criminal behavior suggest that hopelessness may predict recidivism, as well as recidivism frequency rates.

Hopelessness depression is associated with the onset of juvenile offending behavior (Caprara et al., 2010). Therefore, there is a pressing need to understand the relationship between hopelessness and its effects as a predictor of recidivism among youth, as well as the connection between hopelessness and youth demographics, such as age, gender, and race (Becker et al., 2012; Brozina & Abela, 2006). There is a need for the present study because researchers have largely ignored hopelessness as a potential factor that influences juvenile recidivism (Becker et al., 2012). In addition, conviction for

a crime may exacerbate feelings of hopelessness, which may connect to recidivism (Abela et al., 2011). Difficulties finding employment because of criminal records and prior incarceration may intensify negative cognitive styles in individuals and lead to feelings of hopelessness (Abela et al., 2011).

Depression-Anxiety and Recidivism

There is a paucity of research on the relationship between depression-anxiety and youth recidivism (Kubak & Salekin, 2009), including recidivism frequency. Adolescents often express depression through aggression, anger, and irritation (Matsuura et al., 2013). However, in their study of psychopathy, anxiety, and recidivism among 130 juvenile offenders, Kubak and Salekin (2009) found that high levels of anxiety were associated with increased levels of psychopathy and recidivism in juvenile offenders. This assertion counters Cleckley's (1976) theory that psychopathic individuals experience low levels of anxiety. Kubak and Salekin (2009) concluded that juvenile offenders who presented with symptoms of psychopathy and anxiety were at an increased risk for repeat offending because the idea of being involved again with the legal system may produce increased levels of anxiety in youth. This study is important because it provides evidence that anxiety relates to youth recidivism.

In addition, several researchers have studied hopelessness depression in relation to children's early life paths, their cognitive styles, and posttraumatic stress (Becker et al., 2012; Brozina & Abela, 2006; Najman, Hayatbakhsh, Clavarion, & Williams, 2010). For example, in their study of children aged 8 through 13, Brozina and Abela (2006) sought to test the hopelessness theory of depression by measuring whether a negative

cognitive style about hassles, defined as distressing demands of children's everyday interactions with their environments, predicted increased depression and anxiety levels. The researchers found that, consistent with the hopelessness depression theory, a negative cognitive style interacted with hassles to predict an increase in depressive symptoms. Brozina and Abela concluded that children's thinking styles, in conjunction with experiencing negative events, will likely increase depressive and anxious symptoms. Although the authors did not focus on recidivism, their work is relevant for the present investigation, because it shows that the hopelessness theory of depression could help explain how negative cognitive styles relate to hopelessness depression, which may relate to recidivism in youth populations. Abela et al. (2011) also found that the hopelessness theory of depression explained depressive and anxiety symptoms after the occurrence of negative events in Chinese adolescents.

In an earlier study, Atkins, Bullis, and Yovanoff (2007) revealed important connections between recidivism and poverty, which researchers have linked to depression and anxiety in adolescents and young adults (Najman et al., 2010). Using logistic regression models, Atkins et al. found that juvenile offenders of a low socioeconomic status (SES) were more likely to recidivate, compared with youths of a high SES, at 12-month follow-up. In addition, a high prevalence of juvenile offenders is characteristic of socially disorganized communities marked by poverty and absence of natural social support systems (Siegal & Welsh, 2008). The effects of community and family poverty, when experienced over long durations, relate to stress, depression, and anxiety in adolescents (Najman et al., 2010). Low, Sinclair, and Shortt (2012) found that economic

hardship experienced within the family unit increases the effects of mental health, compromised wellbeing, family conflict, stress, depression, and anxiety. Several researchers have postulated that poverty has an association with juvenile offender recidivism (Atkins et al., 2007; Low et al., 2012; Najman et al., 2010). Findings of their studies indicate that poverty contributes to hopelessness, depression, and anxiety. However, these researchers have not explored the connections among the frequency of juvenile offender recidivism, hopelessness, and depression.

Anger-Irritability and Recidivism

As already discussed, few researchers have examined the connection between mental health problems and recidivism. However, the relationship between anger-irritability and recidivism, including whether anger-irritability predicts youth recidivism, is important to establish (Becker et al., 2012). More than two decades ago, Agnew (1992) suggested that the onset of delinquency was due to negative affective states, such as anger, frustration, depression, and hopelessness, which youth experience while attempting to achieve goals. More recently, Siegal and Welsh (2008) confirmed that anger was one of the key symptoms of depression in adolescents; however, the relationship between anger and youth recidivism is less clear. It is likely that psychological factors, such as anger-irritability, predict high frequency rates of recidivism.

In their study of juvenile offenders (417 boys and 170 girls aged 11 to 17), Becker et al. (2012) found connections among anger-irritability, age, and gender in detained youth. Girls reported higher levels of anger-irritability than boys did, and younger age

related to higher levels of anger-irritability irrespective of gender. These findings are important for the present investigation, as they indicate that anger-irritability is a prevalent mental health issue among detained youth. This is in line with the results that Siegal and Welsh (2008) reported, noting that anger-irritability connected to youth delinquency and, consequently, related to youth recidivism as well. It is well documented that anger predicts aggression, which researchers have linked to violent recidivism in adult populations (Birkley & Eckhardt, 2015; Chereji, Pineta, & David, 2013; Gilbert, Daffern, Talevski, & Ogloff, 2013). However, extant research has not investigated the connections between anger-irritability and youth recidivism or youth recidivism frequency.

Alcohol-Drug-Use and Recidivism

Drug use among youth in the general population is a significant problem and is highly prevalent within detained juvenile delinquent populations (Mauricio et al., 2009). In addition, juvenile offenders who commit a greater number of offenses and are drug users are more likely to be repeat offenders and recidivate (Deitch, Koutsenok, & Ruiz, 2000), suggesting direct links between drug use and recidivism frequency. Juvenile offenders addicted to drugs and alcohol frequently recidivate upon reintegration into their communities. Deitch et al. (2000) found that untreated drug-using offenders were likely to recidivate within three months of release from incarceration.

Several researchers have also found links between alcohol-drug-use and psychological factors, such as hopelessness, that may influence recidivism (Stewart, Sherry, Comeau, Mushquash, Collins, & Van Wilgenburg, 2011; Trupin et al., 2011).

Furthermore, Stewart et al. (2011) used the hopelessness theory of depression in part to explain juvenile offender drug use. According to the self-medication and hopelessness models that these researchers adopted, individuals who are experiencing depressive symptoms consume alcohol as a means of obtaining relief from negative states of emotional distress (e.g., anger, depression, hopelessness, and frustration). In addition, Trupin et al. (2011) found that participants of the Family Integrated Transitions (FIT) program, designed to reduce juvenile recidivism among a sample of incarcerated offenders, had co-occurring alcohol-drug-use and mental health concerns when attempting to reintegrate into their communities.

Stewart at al. (2011) found positive correlation among hopelessness, depressive symptoms, and frequent alcohol consumption as a means to cope in adolescent Aboriginal youth from Canada. The researchers also noted that these youths had higher than average levels of hopelessness and depressive symptoms, making them more susceptible to consuming alcohol as a coping strategy. Structural equation analysis conducted as a part of their study revealed two patterns, namely (a) increased frequency and (b) severity of youth alcohol consumption. More specifically, according to Stewart et al., youth who experienced extreme hopelessness were likely to consume significantly greater amounts of alcohol to cope with depressive symptoms. In addition, youth attempted to block their pessimistic thoughts through the consumption of alcohol, which aligned with the findings of Neff and Waite (2011) that youth consumed alcohol to cope with and ease distress. In their study, Archer et al. (2010) employed a one-year recidivism follow-up check with youth offenders and found a strong correlation between

recidivism and alcohol-drug use, as well as the anger-irritability subscale on the MAYSI-2, for both males and females.

Offense Type and Recidivism

Offense type may be a significant predictor of youth recidivism. The available self-report data indicate that specific types of offenses are highly predictive of repeat offending (Siegel & Welsh, 2008), again suggesting a direct link with recidivism frequency. Grunwald, Lockwood, Harris, and Mennis (2010) found that the juvenile arrest and offense types most associated with repeat offending behaviors included drug, violent, and property offenses. According to the study findings, 14% of juvenile offenders recidivated due to some type of drug offense, either possession or trafficking, or committed an act of violence while in the process of a drug-related offense. Grunwald et al. estimated that there is a 10% likelihood that repeat offenders will reoffend after committing a violent offense. Additionally, there is an 11% possibility that they will recidivate after committing a property offense.

Debate continues among researchers as to how diversity, frequency, and severity of offense types influence juvenile offending populations and repeat offending (Qudekerk, Erbacher, & Reppucci, 2012). Qudekerk et al. (2012) examined a sample of females aged 13 through 19, reporting that individuals who showed the greatest diversity in their offense types committed crimes more frequently, suggesting that offense types may predict recidivism. According to the OJJDP (2013), criminal offending will usually cease in mid-to-late adolescence and will typically decline upon reaching adulthood. Qudekerk et al. (2012) reported that females who engaged in violent offenses during mid-

to-late adolescence did not continue reoffending into early adulthood. Females who had a high frequency of reoffending as delinquents went on to become felonious as adults. However, Barrett, Katsiyennis, and Zhang (2006) found that juvenile offenders who committed violent crimes were more likely to experience prosecution and incarceration compared with those who committed nonviolent crimes. Barrett et al. noted that severity of offense was associated with age, gender, and race. The authors further stated that the age at which youths committed their first offense was associated with the likelihood of repeat offending. Additionally, African American males committed more serious and violent offenses and were more likely to experience prosecution and incarceration. These findings revealed limited diversity in offense types among repeat violent offenders.

Mennis and Harris (2011) also found support for specialization for specific offense types in relation to recidivism. Similarly, Harris et al. (2009) reported that juvenile offenders who resided in disadvantaged neighborhoods where there was poor social control committed offenses similar to the kinds of criminal activities found in their communities. Variances across neighborhoods contribute to a significant variability in offense types (Harris et al., 2009). For example, drug offenses are associated with repeat offending in neighborhoods where drug trade and use is prevalent (Harris et al., 2009). Mennis and Harris (2011) found that spatial contagion recidivism (whereby an individual's proximity to offending behavior increases his or her likelihood of engaging in offending behavior) was high within neighborhoods where offenders lived near one another, significantly influencing repeat drug offenses. Generally, juveniles continue to commit the same types of offenses that brought them into contact with the juvenile justice

system upon their first arrest. However, among some juveniles, offense types escalate into more serious crimes over time (Grunwald et al., 2010). Identifying latent offense types more closely associated with recidivism would be beneficial in identification of individual and environmental risks factors for recidivism (Grunwald et al., 2010).

Vinkers, DeBeurs, Barendregt, Riune, and Hock (2011) have also linked offense type to recidivism among populations with mental health disorders. Vinkers et al. (2011) found that forensic offenders with mental health disorders tended to show specialization in specific offense types, but did not show specialization associated with reoffending. For instance, offenders who specialized in offense type tended to commit certain crimes, such as arson, assault, homicide, and sexual assault. Property crimes were the least related to mental disorders among repeat offenders, while there was a high prevalence of mental disorders related to specific types of offenses, such as arson (Vinkers et al., 2011).

Early Versus Late Onset Age and Recidivism

Several researchers have studied the link between the onset of juvenile offending behavior and recidivism (Cottle, Lee, & Heilbrun, 2001; Hoge, Vincent, & Guy, 2012; Jennings, 2010). For example, in their meta-analysis of predictive factors of recidivism in juveniles, Cottle et al. (2001) found that age at first arrest, age at first contact with law enforcement, and age at first commitment were significant predictors of juvenile recidivism. In addition, they found that age was not only predictive for recidivism, but also influenced the time in life when juveniles would most likely decrease their criminal offending. As juvenile offenders age, their likelihood to recidivate decreases (Cottle et al., 2001), suggesting that age may be linked to recidivism frequency.

In an effort to find consistent trajectories for juvenile offenders, several researchers have explored repeat offending using two models, namely, the life-course persistence delinquency model and adolescent limited delinquency model (Hoge et al., 2012; Jennings, 2010). These models address onset of offending behavior in relation to future patterns of offending behavior (Hoge et al., 2012). Life-course persistence delinquents have a history of negative behaviors that started prior to entering grade school (Hoge et al., 2012). This negative behavior escalates during early childhood through adolescence, and can continue into adulthood (Hoge et al., 2012). On the other hand, adolescent-limited delinquents start their criminal behavior during middle adolescence (at around age 14), but cease offending prior to early adulthood (Hoge et al., 2012).

Researchers have also used various pathway studies to identify elements that influence juveniles to engage in criminal career paths at early versus late age. For example, Chamberlain (2003) found that children that start offending early in life often experience externalizing or internalizing problems, which family conflict and parental antisocial behavior can exacerbate. This, in turn, places youth at an increased risk of experiencing their first arrest between ages 10 and 13. Chamberlain reported that 89% of study participants had prior arrests by these ages. Domburgh, Vermeiren, Blokland, and Doreleijers (2009) found that, at five-year follow up, a group of young offenders had over 19 law enforcement contacts prior to the age of 12. These researchers contended that alcohol-drug-use and depression influenced the age at first arrest.

Research conducted on developmental trajectories using different methods, longitudinal designs, and statistical practices has shown promising results. For example, Jennings (2010) reported that the use of longitudinal design allowed observation of specific trajectories for longer periods of time to evaluate life-course persistence in offenders' criminal pathways. Diamantopoulou, Verhulst, and Ende (2010) analyzed data from a seven-wave longitudinal study to determine the relationship between developmental trajectories associated with early versus late offending. Their findings indicated that disrupted behavioral issues and conduct problems, when present during early childhood, could perpetuate through adolescence. Early disruptive childhood behavior is an indicator of antisocial personality problems (Kubak & Salekin, 2009). Ingoldsby, Shaw, Winslow, Schonberg, Gilliom, and Criss (2006) found that family influence and conflict, neighborhood disadvantage, and deviant peer relationships were critical developmental trajectories associated with early age onset. These particular developmental trajectories are likely to remain present from early childhood through late adolescence.

Gender-specific pathways may also predict criminal behaviors. Empirical evidence points to some gender similarities and differences among male and female early- versus late-onset developmental trajectories. Pepler, Jiang, Craig, and Connolly (2010) found that early-onset offenders had a moderate recidivism rate at ages 13 to 14, while noting differences by age 17, as recidivism tended to decrease during late adolescence. Both male and female study participants described similar experiences, such as lack of parental monitoring, high levels of conflict with parents, and deviant peer

relationships. The late onset group had minimal delinquent behaviors by age 10, and delinquent behaviors increased during late childhood and early adolescence, between ages 11 and 15. Both males and females who exhibited late onset reported similar experiences, such as destructiveness, aggression, theft, alcohol and drug use, problems with parents, lack of parental monitoring, and peer pressure susceptibility. The only gender differences that Pepler and colleagues identified related to late onset among a group of females; they reported above-average levels of family conflict with their mothers when compared with the late-onset male group.

Gender and Offender Recidivism

Gender is highly predictive of juvenile and adult recidivism, and gender differences exist in offense types (Conrad, Tolou-Shams, Rizzo, Placella, & Brown, 2013). Therefore, in the present study, gender serves as a control variable. Males are significantly more likely to recidivate when compared with females (Benner et al., 2010; Minor et al., 2008), suggesting a relationship between gender and recidivism frequency. Minor et al. (2008) found that males were twice as likely to recidivate as females were. In system where male offenders outnumber female offenders by 18 to 1, it is necessary to compare male and female offenders in terms of recidivism rates in order to establish gender differences in recidivism and identify the issues and risk factors that make them likely to reoffend (OJJDP, 2013).

The OJJDP (2013) performed a recidivism analysis on a sample of highly violent male and female offenders incarcerated within the CDJJ. They defined recidivism as an offender discharged from the institution and placed on parole, who either reoffended or

returned to state-level incarceration within a three-year follow-up period. The male violent offenders had higher three-year follow-up recidivism rates when compared with female violent offenders. The Department of Corrections Oregon Youth Authority (OYA) analyzed data on recidivism rates for offenders released from custody between fiscal years 2001 and 2005. They defined recidivism as felony adjudication (juvenile court), felony conviction (adult court), and returned to community. The results yielded by this investigation showed that, at the 36-month recidivism follow up, the rates increased from 12.5% to 18%, and this increase was particularly prominent among male offenders. However, it was not possible to obtain statistical significance in the results pertaining to females' due to the small number of female offenders in the study sample. Other research has shown that males are more likely to recidivate than are females (Fields & Abrams, 2010; Minor et al., 2008; Schwalbe, Fraser, & Day, 2007; Snyder & Stickmund, 2006).

When correctional facilities release youth, the youth will most likely return to their homes and communities (Fields & Abrams, 2010). These individuals will most likely face extreme challenges and barriers to overcome the risk factors that are prevalent in their communities, which will compromise their reintegration (Fields & Abrams, 2010). Fields and Abrams (2010) performed a cross-sectional survey study including a small sample of youthful offenders, 60 days prior to their release from a juvenile correctional setting in Southern California. The sample comprised male and female offenders under the age of 18 who were high-risk offenders and who had received adjudication within the juvenile court system. Researchers aimed to determine whether male and female juvenile offenders had gender-specific experiences that affected their

reintegration into the community. They hypothesized that male and female offenders would have different perceptions of their anticipated needs and barriers upon reentry, which would help them to succeed or encourage recidivism (Fields & Abrams, 2010). Study findings revealed gender differences in terms of education, employment, family, and housing. For instance, both male and female offenders reported interest in obtaining their high school diplomas or GEDs upon return to the community. Participants of both genders also experienced some apprehension about their academic skills and the amount of high school credits needed to graduate. However, females had more confidence about their academic abilities to move forward towards their educational achievement when compared with males. On the other hand, males reported needing more assistance with developing educational plans (Fields & Abrams, 2010). In the area of employment development, only half of the sample reported prior employment or job experience. Both genders expressed interest in obtaining employment upon release; however, males expressed more interest in working instead of obtaining an education. Males also indicated that they would engage in illegal activities in order to obtain money, due to the fear that they would not be able to obtain employment that could sustain them financially, partly due to their criminal histories (Fields & Abrams, 2010).

The propensity for reoffending is high for female offenders, due to serious obstacles in their family and social environments (Fields & Abrams, 2010). This finding is consistent with the results reported by Cauffman (2008), who noted that female adolescents involved with the juvenile justice system were most likely to become delinquent and recidivate due to family relational conflicts. Family and home instability

appears to be a significant issue for adolescent females, along with and child welfare involvement, running away, and out-of-home placement (Fields & Abrams, 2010; Minor et al., 2008). For example, Thompson and McGrath (2012) found that female adolescents endorsed family domain items on the Youth Level of Service/Case Management Inventory (YLS/CMI) at a frequency of 7% to 10% of the time, and experienced more negative family living circumstances. The authors further stated that 42% of the female adolescents reported having issues with their mothers, compared to 28.9% of male adolescents. Minor et al. (2008) found that out-of-home placement was a significant risk factor and predictor for female recidivism. Schwalbe et al. (2007) reported that, the longer a youth remained in out-of-home placement, the greater the risk for recidivism. The researchers explained this finding by arguing that dynamic risk factors are susceptible to change with intervention, but longer placement terms prevent the occurrence of change.

Race and Offender Recidivism

Empirical evidence points to racial differences in recidivism rates, as racial minorities encounter unique circumstances that make them highly susceptible for repeat offending and increased frequency of recidivism (Jung, Spjeldnes, & Yamatani, 2010). Consequently, the present study treats race as a control variable. The risk factors that pertain to racial minorities and European Americans are often economically different (Jung et al., 2010). For example, upon release from a detention facility, racial minorities are more likely to return to communities that are poverty stricken and plagued by criminal activity (Jung et al., 2010). Minority offenders are often at a disadvantage

individually and contextually compared with European American offenders (Jung et al., 2010). Furthermore, minority offenders' risk factors make them vulnerable to continue repeat offending because their parents may lack access to adequate transportation, be unable to take time off work, or lack access to a phone. These factors make it difficult for parents to provide assistance to their children upon arrest or rearrest (Moor & Padavic, 2011). On the other hand, European American offenders are less likely to encounter such extreme environmental circumstances (Moor & Padavic, 2011). Mallett, Fukushima, Stoddard-Dare, and Quinn (2011) found that European American juvenile offenders were likely to recidivate when met with noneconomic challenges, such as a documented special education disability, a behavioral handicap, a court related offense, or a violation of a court order.

Wehrman (2011) identified race as a critical predictor of recidivism in juvenile and adult detained populations. Some racial groups are more likely than others to recidivate (Wehrman, 2011). Wehrman found that minorities were more likely to recidivate than European Americans were. Jung et al. (2010) studied racial disparities in recidivism rates among an all-male sample that consisted of individuals from various races that had previously recidivated and had experienced recommitment to the Allegheny, Pennsylvania, detention facility. The recidivism rate measured on a three-year follow-up period for the entire sample was 55.9%, whereas the recidivism rate for African American and European American males was 65% and 47%, respectively. Both African American and European American males' recidivism rates increased over the

three-year follow-up period. The mean total survival time for African Americans was 596 days, compared with 732 days for European Americans.

Measures of Recidivism

The purpose of the OJJDP agency is to provide oversight and policy guidelines for the JJS. Juvenile recidivism is the measure most widely used to determine program performance and system success. However, contextual inconsistencies within the JJS make it difficult to ascertain an accurate juvenile recidivism prevalence at the national level, given that 52 different juvenile justice systems are currently operating within the United States (Harris et al., 2011). Each state agency operates under its own guidelines; therefore, there are wide variances among recidivism rates, policy, and practices, as well as age jurisdiction, aftercare programs, convictions, and arrest (Harris et al., 2011). Differences in agencies' guidelines make it difficult for state and county agencies to compare program performance, examine accountability, and make assumptions about research findings, thus limiting the potential for generalization of research results across agencies (Harris et al., 2011).

Additionally, researchers and practitioners have failed to establish national recidivism standards, such as definitions, measurements, and follow-up periods. Historically, the OJJDP has performed poorly in decreasing juvenile recidivism outcomes (Benner et al., 2010; Harris et al., 2009). This lack of standardization has caused inconsistencies in communication within the JJS (Harris et al., 2011). Inconsistencies in standardization and communication challenges exacerbate the already difficult task of

identifying the many factors that may lead to juvenile recidivism, as well as arriving at accurate recidivism frequency rates.

If many risk factors for recidivism exist, there is a serious need to identify those juvenile offenders most likely to recidivate upon return to their communities. The Juvenile Justice Delinquency and Prevention Act (JJDPA) was established by the Department of Justice and Delinquency Prevention in 1974 to provide assistance at the state level with the development and implementation of risk assessment instruments to identify sanctions to best fit the criminal behaviors that delinquents exhibit (Vincent et al., 2012). The juvenile court system uses juvenile risk assessment instruments to identify offenders most likely to reoffend and to make recommendations for treatment and sentencing practices (Schwalbe, 2007).

Over the past two decades, juvenile arrest rates among offenders with major mental health disorders has increased (Stewart, Rapp-Paglicci, & Rowe, 2009), necessitating research on the mental health disorders as dynamic factors that may influence juvenile recidivism. However, static risk factors, including age, gender, race, and offense type, remain important because scholars frequently use these demographic risk factors to understand juvenile recidivism and recidivism frequency. Consequently, actuarial risk assessment instruments should include both static and dynamic variables in the measure of juvenile recidivism (Thompson & McGrath, 2012).

Survival Time in the Community

Survival time is the time between release from detention and incidence of recidivism (Harris et al., 2011). While several authors, whose research is discussed in this

section, have focused on different time periods when examining recidivism, so far none have examined predictors of survival time or psychological factors in relation to frequency of recidivism. This presents a notable gap in the pertinent literature, which this study aims to address. To this end, this section presents an overview of studies in which researchers used different time periods to study recidivism.

Researchers must provide more clarity and come to a consensus for determining which follow-up periods provide the most substantiating recidivism outcome data that can help clarify measurements of recidivism frequency rates (Harris et al., 2011). Authors of extant studies have measured recidivism rates from various beginning and ending points and have used diverse follow-up periods, which can last 12, 24, or 36 months (Harris et al., 2011). For example, Boulger and Olson (2011) found that, when using a 36-month follow-up period on a sample of juvenile offenders released on probation, 45% recidivated. In addition, 28.9% of the participants reoffended and returned to a youth detention facility, while 14.4% returned to an adult and youth facility. Stockdale, Wong, and Oliver (2010) used a follow-up period of seven years in their study, wherein they measured psychopathy with the Psychopathy Checklist: Youth Version (PCL: YV). They found that scores on the conviction of violent reoffending scale were significant when compared to nonviolent reoffending. The average mean survival time in the community was 16.9 months on first nonviolent conviction, while 21.7 months elapsed until first violent conviction.

Using a 36-month follow-up period in relation to survival time, Qudekerk et al. (2012) revealed important recidivism trends. For example, youth between the ages of 16

and 17 years old had higher recidivism rates when compared with young adults between the ages of 18 and 20 (Qudekerk et al., 2012). Offenders over the age of 21 had the lowest rates of recidivism. Juvenile males had higher rates of recidivism relative to females, which is consistent with previous research findings (Fields & Abrams, 2010; Minor et al., 2008; Schwalbe et al., 2007; Snyder & Stickmund, 2006). Although the sample was 90% European American, minorities had higher recidivism frequency rates at the 36-month follow up. Lastly, when the researchers examined offense types at the 36-month follow up, those that committed robbery offenses had higher recidivism frequency when compared with participants who committed sexual offenses (Qudekerk et al., 2012).

There is an ongoing debate among researchers regarding the most suitable tracking periods to evaluate 12-, 24-, or 36-month recidivism frequency rates (Harris et al., 2009). The Department of Corrections Oregon Youth Authority uses a 36-month follow-up period. This duration allows for the collection of individual statistical data on juvenile recidivism across various subgroups and helps identify predictive risks over longer periods of time. Harris et al. (2009) posited that program evaluators should apply two-year follow-up periods as a minimum to collect individual statistical data on juvenile recidivism across various subgroups and predictive risks over longer periods of time. However, due to timing concerns, many program evaluators choose to apply shorter follow-up periods (Harris et al., 2009).

Impoverished neighborhood characteristics can influence juvenile recidivism frequency and survival time in the community. In a longitudinal study, Atkins et al. (2007) followed a cohort of juvenile offenders (n = 531) through transition from a

community detention facility to release into the community. Their aim was to determine if socioeconomic status (SES) had an impact on adjustment and return to the community to reduce recidivism. The used a prospective survey as a data collection instrument, and the follow-up period ranged from one to four years. Researchers collected data at 6- and 12-month intervals, dividing participants into low-SES and high-SES groups. Using logistic regression models, Atkins et al. found that juvenile offenders in the low-SES group were more likely to recidivate by the 12-month follow up compared with those from the high-SES group. Both the low-SES group (45%) and the high-SES group (33%) recidivated at the 12-month follow up. The researchers attributed differences between the two groups, in terms of recidivism, to 80% of the high-SES group being European American and from affluent communities. This group also participated in and took advantage of additional community services upon release. The low-SES group showed poor school and community engagement when compared with the high-SES group.

Following another study of recidivism survival time, Mennis et al. (2011) reported that, based on their multivariate ordinary least squares analysis results, there were higher levels of recidivism within low-SES communities. However, the authors did not find higher than average levels of juvenile recidivism within these communities. The researchers concluded that, when assessing recidivism survival time at the community level, variables such as collective efficacy, SES, and crime may not be appropriate to measure recidivism frequency. Conversely, Barrett, Katsiyannis, and Moore (2015) have recently shown that there is a relationship between poverty, recidivism frequency, and survival time in the community. The average survival time a subject remained free within

the disadvantaged community was 24 months. In an earlier study, Contreras, Molina, and Del Carmen Cano (2011) found that 51.8% of the recidivist group lived in a poverty-stricken community, compared with only 26.6% of the nonrecidivist group. In addition, 67.7% of the recidivist group came from families of low SES, compared with 44.5% of the nonrecidivist group. According to the California Office of Juvenile Justice Administration, in 2004 and 2005, 81.1% of juvenile offenders recidivated and 56.5% returned to state-level incarceration facilities within three years. However, 23.7% of those that returned to state-level incarceration remained free in the community for approximately three months after release from detention (Harris et al., 2009).

Literature Related to the Method of Recidivism Assessment

Ernest Watson Burgess, a well-known sociologist of criminality, was the first to research and develop actuarial prediction models for dangerous criminals to assess possible recidivism. In 1928, he was the leading authority in this field and hypothesized that the likelihood of criminal reoffending could decline if governments and organizations addressed certain factors. Burgess measured over 21 variables likely related to recidivism. He instituted and developed a specific quantitative method known as multiple regression analysis. Therefore, researchers have used quantitative research methods in recidivism studies for nearly 90 years. This remains the preferable method of analysis in prediction studies (Schwalbe, 2007).

For the purpose of the present study, quantitative analysis is deemed best suited for determining whether hopelessness depression can predict the likelihood of juvenile recidivism. In predictive studies of recidivism, quantitative analysis has been the most

prevalent approach to examine the relationships among the predictor variables of recidivism (Landrum & Garza, 2015). Cottle et al. (2001) noted that regression analyses allow testing the magnitude of the relationships among predictor and outcome variables.

However, more recent recidivism studies in which researchers employed qualitative methodologies are limited (Schwalbe, 2007). Qualitative methods require nonnumerical data and yield findings in terms of descriptive narratives in which the relationships among variables are not distinguishable and it is not possible to make inferences concerning the outcomes (Landrum & Garza, 2015).

Summary

There is a need for more research on the role of mental health in juvenile recidivism, because the rates of mental health problems among detained youth are almost three times higher than in the general population (Becker et al., 2012; McReynolds et al., 2010). Identifying mental health risk factors that predict recidivism and recidivism frequency may inform community psychology and intervention counseling in ways that can help prevent juvenile recidivism. However, research also indicates that recidivism relates to alcohol and drug use, offending onset, offense type, and survival time in the community (Becker et al., 2012). Consequently, the present study is designed to examine whether mental health risk factors (i.e., suicidal ideation, depression-anxiety, anger-irritability), as well as alcohol-drug-use and offense type, predict recidivism frequency and survival time in the community after controlling for age, gender, and race. Examining the connections among mental health risk factors, social risk factors, and juvenile recidivism can provide a more comprehensive understanding of the range of factors

influencing juvenile recidivism, as well as yield valuable information on effective ways to reduce juvenile recidivism.

This study aims to fill the gap in the pertinent literature and expand the current knowledge on the likelihood that suicidal ideation, depression-anxiety, anger-irritation, alcohol-drug-use, and offense type are predictive of juvenile recidivism frequency and survival time in the community. Chapter 3 contains a discussion of the research methods employed in the study.

Chapter 3: Research Method

Introduction

The aim of the present study was to quantitatively examine whether suicidal ideation, depression-anxiety, anger-irritation, alcohol-drug-use, and offense type predict recidivism frequency and survival time in the community within a sample of detained juvenile offenders, while controlling for age, gender, and race. This chapter provides a general description of the research design, approach, population, instrumentation, and data analysis associated with the research study. Additionally, the chapter contains a description of threats to validity and ethical considerations of this research.

Research Design and Rationale

The present study was quantitative in nature and involved use of a predictive correlational design. I conducted multiple logistic regression to determine whether suicidal-ideation, depressed-anxiety, anger-irritation, alcohol-drug-use, and offense-type significantly predict recidivism frequency, while controlling for age, gender, and race. A multiple logistic regression is an appropriate statistical analysis method when the goal of the research is to assess the relationship among a group of predictors and continuous variables, while controlling for the effects of additional variables (Stevens, 2009). In addition, conducting a multiple regression analysis enabled me to determine whether the independent variables predict survival time (measured in days) in the community. Participants' age, gender, and race served as the control variables.

This study is unique because all hopelessness depressive aspects (suicidal-ideation, depression-anxiety, anger-irritation, and alcohol-drug-use), as well as offense

type, were examined to determine whether they served as predictors of recidivism frequency and survival time in the community among detained juvenile populations. In so doing, this study helps fill a gap in juvenile recidivism research. I used a predictive, correlational design to examine juvenile recidivism frequency and survival time in the community, specifically to explore predictive variables that might influence the likelihood of recidivism.

Methodology

In this section, I describe the population of the study and the procedures through which I selected the sample. The section also contains a description of participation procedures. Finally, in this section, I list the instrumentation used in this research and present the operationalization of variables.

Population

The target population consisted of male and female adolescent juvenile offenders aged 12 through 19. They were of European American, African American, Hispanic, Asian, and Native-American descent.

Sampling and Sampling Procedures

I used purposive sampling in the study. Specifically, the sample included all juvenile offenders, both male and female, detained at the Juvenile Detention facility during the period from January 1, 2009, through December 31, 2012. My analysis method increased the likelihood that the selected sample was representative of the target population of all detained juvenile offenders in the United States. Using this approach eliminated the potential for bias by increasing the likelihood of obtaining a sample

representative of the population (Green & Salkind, 2008). At the time of the study, the Juvenile Detention facility had a detained population that was culturally representative of the juvenile population of the county and that had completed the MAYSI-2. During the second update of this instrument, researchers used a sample population from the California Youth Authority, which is in the Central Valley, 150 miles north of Fresno, California (Grisso & Barnum, 2006). Thus, the MAYSI-2 has been normed on a very similar sample to the one used in this study.

To determine a sufficient sample size for the research, I conducted a power analysis using G*Power 3.1.9 (Faul, Erdfelder, Buchner, & Lang, 2009). I chose a one-tailed test for the regression analysis. Due to some of the independent variables being continuous, I used an X distribution with the probability of success equal to 0.50 in G*Power to calculate the sample size *a priori*. Under the alternative hypothesis, a probability of .30 resulted. For power ranging from .80 to .99, the calculation revealed a need for 404 participants. Since there were more than 404 cases available for analysis, I ordered them by identification number and chose the first 404.

Procedures for Participation and Data Collection

The deputy chief of the Probation Department approved my use of the MAYSI-2 datasets and provided access to them. The Department's automation administrator manager compiled the necessary datasets and provided me with a written letter of authorization (see Appendix A). I used archival data obtained from the Juvenile Justice facility in the present study. Employees gathered the data for each juvenile offender as part of the standard intake screening procedure required at the time of booking, in the

period from January 1, 2009, through December 31, 2012. Trained forensic Ph.D. intern students and juvenile correctional officers administered the computerized version of the MAYSI-2. Participants were not required to give informed consent when completing the questionnaire. I used archival data because accessing juvenile offenders' personal information and recruiting them for primary research would have required additional ethical considerations and would therefore not have been feasible for this study given time and resource constraints. The Walden University does not require informed consent for studies using archival data. The Walden University Internal Review Board approved this study with the following approval number: 12-12-16-0065775.

Instrumentation and Operationalization of Constructs

The Massachusetts Youth Screening Instrument, Second Version (MAYSI-2) is a 52-item, self-report inventory, which is administered in either paper-pencil or electronic format (Grisso & Barnum, 2006). Practitioners use the MAYSI-2 to screen juvenile offenders to detect suicidal ideation, as well as anger-irritability, depressed-anxious, and alcohol-drug use symptoms and thought disturbance; traumatic experiences; and somatic complaints (Grisso & Barnum, 2006). Youth aged 12 to 17 who can read at a fifth-grade level are the intended users of the MAYSI-2, which takes approximately 15 minutes to complete (Grisso & Barnum, 2006). The required response to each question is "yes" or "no." Male and female offenders of all races may complete the questionnaire.

Because the MAYSI-2 is popular within juvenile detention settings across the United States (Grisso & Barnum, 2006), I concluded that it was appropriate for use in this present study. The MAYSI-2 does not diagnose mental health disorders. Rather, its

purpose is to alert juvenile custody staff of any pre-existing mental health or safety concerns at the time of intake (Grisso & Barnum, 2006). If needed, staff can make mental health referrals to clinical staff, who can then follow up and determine the severity of the distress (Grisso & Barnum, 2006).

Scoring. The scores for the MAYSI-2 are calculated based on the number of "yes" or "no" responses endorsed by the juvenile offender for each scale (Grisso & Barnum, 2006). In addition, caution and warning cutoffs are set for each scale (Grisso & Barnum, 2006). In this context, a caution score indicates that the offender is likely to experience symptoms related to distress and may need follow up while at the juvenile detention center (Grisso & Barnum, 2006). A warning score on any scale requires immediate attention by a trained mental health or medical staff for further assessment (Grisso & Barnum, 2006).

Thomas Grisso, Ph.D., and Richard Barnum, M.D., developed the first edition of the Massachusetts Youth Screening Instrument in 1998. They conducted rigorous research to establish conceptualization of the instrument, and they pilot tested the initial version of MAYSI with a sample of 1,279 juvenile offenders detained in a juvenile correctional facility in upper Massachusetts and the surrounding areas (Grisso & Barnum, 2006). Since then, researchers have compared findings from the pilot test to the Child Behavior Checklist (CBC) and the Milton Adolescent Clinical Inventory (MACI) in an effort to establish the psychometric properties, reliability, and validity of the instrument (Vincent, Grisso, Terry, & Banks, 2008).

The pilot study of the MAYSI-2 (Grisso & Barnum, 2006) had a sample size of 1,279 participants, which was large when compared with that used in the original MAYSI-2 study; in that study, a sample comprised of 23 males and 42 female juvenile offenders was used to establish instrument reliability and validity (Grisso & Barnum, 2006). Grisso and Barnum (2006) allowed 8.3 days for juvenile males and 5.6 days for juvenile females when assessing test-retest reliability. The resulting test-retest reliability ranged from .73 to .89 for the suicidal ideation, depression-anxiety, anger-irritation, and alcohol-drug use subscales, while the anger-irritation subscale for female offenders achieved only .64 (Grisso & Barnum, 2006). In the present study, I only utilized scores on the MAYSI-2 suicidal-ideation, depression-anxiety, anger-irritation, and alcohol-drug-use subscales. Archer et al. (2010) reported test-retest correlations in the mid to high range (.60 to .82), which they obtained after a gap of 15 days between test and retest using MAYSI-2. More recently, Grisso et al. (2012) found that test-retest reliability was lower when the time between the tests was 111 days and the correlations among all the subscales ranged from .27 to .70.

The MAYSI-2 is reliable, with an internal consistency in the .37 to .63 range, which signifies an appropriate relationship between items within subscales (Archer et al., 2010; Grisso & Barnum, 2006). The internal consistency among the subscales is equivalent to the coefficient scores on other noted psychometric tests, such as the Child Behavior Checklist-Youth Self-Report (CBCL-YSR; Grisso et al., 2012), Minnesota Multiphasic Personality Inventory Adolescent (MMPI; Grisso et al., 2012), and Milton Adolescent Clinical Inventory (MACI; Grisso et al., 2012). The depression-anxiety,

suicide-ideation, alcohol-drug-use, and anger-irritation subscales are consistently related (Grisso et al., 2012). The MAYSI-2 is reliable in terms of internal consistency.

The MAYSI-2 is also conceptually appropriate based on analyzing predictive validity and other variables with similar theoretical associations (Archer et al., 2010). For example, Archer et al. (2010) conducted a study on recidivism in which a one-year survival time in the community was used to measure recidivism. The study results indicated that recidivism strongly correlated with alcohol-drug use, depression-anxiety, and anger-irritation subscales on the MAYSI-2 for both males and females.

Subscales. The MAYSI-2 consists of seven structured subscales, namely suicidal ideation, depression-anxiety, anger-irritation, alcohol-drug use, somatic complaints, thought disturbance, and traumatic experiences. For this study, I omitted the thought disturbance, traumatic experiences, and somatic complaints subscales. The developers of the instrument reported that the thought disturbance subscale is not applicable to females, because the methods used in construction of items included in these subscales failed to identify thought disturbance in females (Grisso & Barnum, 2006). I thus omit the subscale because some of the participants in this study are female. The other two omitted subscales (traumatic experiences and somatic complaints) fail to align with the theoretical foundation of this research.

Operationalization of variables. The suicide ideation subscale captures thoughts and intent to commit self-harm (Grisso & Barnum, 2006). This subscale comprises five questions aiming to screen for thoughts of committing and intent to commit self-harm. Thus, the subscale scores range from 0 to 5 (Grisso & Barnum, 2006). Archer et al.

(2010) reported that juvenile offenders who had a history of suicidal ideation and attempts had higher caution and warning cut-off scores on the MAYSI-2 suicide-ideation subscale.

The depressed-anxious subscale screens for comorbidity of depression and anxiety. Youth can experience both depression and anxiety simultaneously. While this subscale comprises nine questions, five specifically assess for anxiety and depression. The subscale scores range from 3 to 6, where a high score indicates that the respondent is experiencing some level of distress (Grisso & Barnum, 2006).

Grisso and Barnum (2006) indicated that the anger-irritation MAYSI-2 subscale had a strong correlation with externalizing behaviors. Youth prone to anger-irritation have the impulsive propensity for getting involved in fights. There are nine questions on this subscale, four of which allow screening for angry moods and thoughts, while three assess for irritation and impulsiveness. The subscale scores range from 0 to 9. Because anger is typical of youth who present with depressive symptoms (Grisso & Barnum, 2006), this scale is pertinent to the present study's objectives.

The alcohol-drug-use (ADU) subscale identifies alcohol and drug use regularity, dependence, or abuse. For juvenile offenders who struggle with drug dependence, not having access to illicit substances while incarcerated can cause withdrawal symptoms such as depression, anger, and irritability. Of the eight questions in this subscale, five assess for negative consequences of drug use, and the remaining three assess for characteristics in line with potential drug risk behaviors (Grisso & Barnum, 2006). Thus, the subscale scores range from 0 to 8. Archer et al. (2010) reported that ADU scores are

higher for juvenile offenders with a history of alcohol and drug use when compared with those with no such history. In the context of the present study, offense type, as previously noted, includes (1) violent, (2) sexual, and (3) other (e.g., property and drug use). The study uses only three categories for offense type to avoid having an overly complex model.

I derived recidivism frequency from records associated with each offender's rebooking. Recidivism frequency is the number of rearrests and is determined based on the number of times each participant completed the MAYSI-2 at intake processing at the detention facility. I operationally defined recidivism frequency for this research on two levels, thus allowing formation of groups of chronic and nonchronic offenders. Each time a juvenile offender goes through booking, he or she must take the MAYSI-2; therefore, the number of times a juvenile offender has taken the instrument serves as a measure of recidivism frequency.

Survival time in the community corresponds to the amount of time (measured in days) since last arrest that an offender remained free within the community rearrest and return to custody (Harris et al., 2011).

Finally, gender, as of the covariates, refers to the participants' gender as specified on detention records. I coded gender as 0 = female and 1 = male. Race pertains to the participants' race as specified on detention records, and I coded race as 0 = European American, 1 = African American, 2 = Hispanics, 3 = Asian, and 4 = other.

Data analysis plan. I entered the archival data pertinent to the present study in SPSS version 21.0. I calculated descriptive statistics for all variables and included only

data pertaining to subjects that have recidivated in the dataset prior to analysis, I cleaned and screened for missing data. I conducted Little's MCAR test to examine if missing values were random, in which case I replaced them; otherwise, I removed missing data using the pairwise deletion method (Tabachnick & Fidell, 2012). I examined other assumptions associated with using multiple regression, including independence of observations/residuals, linearity of independent variables and log odds, and multicollinearity.

Research questions. The research questions and associated hypotheses are as follows:

RQ1: Do suicidal-ideation, depression-anxiety, anger-irritation, alcohol-drug-use, and offense type, as measured by the MAYSI-2, positively predict recidivism frequency when controlling for age, gender, and race?

RQ2: Do suicidal ideation, depression-anxiety, anger-irritation, alcohol-drug-use, and offense type, as measured by the MAYSI-2, positively predict survival time when controlling for age, gender, and race?

The alternative hypotheses follow.

H_a1: Suicidal ideation, depression-anxiety, anger-irritation, alcohol-drug-use, and offense type, as measured by the MAYSI-2, will positively predict recidivism frequency when controlling for age, gender, and race.

H_a2: Suicidal ideation, depression-anxiety, anger-irritation, alcohol-drug-use, and offense type, as measured by the MAYSI-2, will positively predict survival time when controlling for age, gender, and race.

To address RQ1, I conducted a multiple regression to examine the predictive relationship between suicide-ideation, depression-anxiety, anger-irritation, alcohol-drug-use, offense type (chronic or nonchronic), and recidivism frequency. According to Tabachnick and Fidell (2012), using multiple regression analysis is appropriate when the research aim is to assess the predictive relationship between a group of predictors and a continuous criterion variable. Prior to analysis, I assessed the normality, homoscedasticity, and absence of multicollinearity assumptions pertinent to a multiple regression.

To address RQ2, I used a multiple regression to examine the predictive relationship between suicide ideation, depression-anxiety, anger-irritation, alcohol-drug-use, offense-type, and survival time in the community. Again, I assessed parametric assumptions of normality, homoscedasticity, and absence of multicollinearity.

Threats to Validity

A threat to validity is that a subject's "caution" and "warning" scores on the MAYSI-2 instrumentation can have some effect on outcomes. Statistical regression may pose a threat to validity due to the selection of subjects according to their "caution" and "warning" scores and characteristics. In addition, for those who completed the MAYSI-2 more than once, there is the possibly of multiple-treatment interference. However, due to the use of archival data in the study, it is not possible to control for multiple-treatment interference at this stage. Additionally, social desirability bias is a potential threat to validity, as it is possible that subjects may have been distressed at the time of arrest. Hence, their responses might not indicate how they generally feel when they experience a

stressful situation. Researchers should not over- or underreport the generalizability of findings beyond the scope of the sample characteristics such as size, developmental makeup, statistical methodology, background, and theoretical conception (Ferguson, 2004).

Ethical Procedures

The IT automation administrator compiled and approved use of archival MAYSI-2 data for this dissertation. The automation manager granted authentication in a signed letter, provided in Appendix A.

The Information Technology Department kept all MAYSI-2 intake results electronically on file at the facility. Passwords and encryption safeguarded confidential data. In addition, no identifiable personal information remained in the files during access. I stored all data in paper format within a locked file cabinet and used access privileges and passwords to make computer-based files available to committee members when required.

Summary

In summary, the present study is quantitative in nature, and I adopted a correlation design to predict the relationship between aspects of hopelessness depression (suicidal ideation, depression-anxiety, anger-irritation, and alcohol-drug-use) and offense-type as predictors of recidivism frequency and survival time in the community. A correlation design helped me determine whether there is a predictive relationship or no relationship among the variables (Creswell, 2009). I used archival data to identify the impact of the aforementioned variables on recidivism among persistent juvenile offenders.

This chapter presented the methods, design, research questions, and hypotheses employed when analyzing the data, as well as limitations, ethical considerations, and the research instrument. The next chapter contains the results, and Chapter 5 contains a discussion of the findings.

Chapter 4: Results

Introduction

The primary aim of the current study was to examine whether hopelessness depression (operationalized as suicidal ideation, depression-anxiety, anger-irritation, and alcohol-drug-use using the subscales from the MAYSI-2) predicted recidivism frequency and survival time among a sample of detained juvenile offenders in the Juvenile Detention facility, while controlling for age, gender, and race. The research questions concerned whether the facets of hopelessness depression and offense type predict recidivism and survival time among participants when controlling for demographic factors. I hypothesized that hopelessness depression and offense type would statistically significantly predict recidivism frequency and survival time in the community when controlling for demographics.

In this chapter, I present findings from my analysis of data. The chapter includes discussion of the procedures I used for pre-analysis screening, calculation of descriptive statistics, and conduction of two hierarchical linear regressions to examine the predictive relationships. Significance for all inferential analyses was determined at the conventional alpha level of .05.

Data Collection

This study included data from 404 archival records taken from intake screenings of male and female juvenile offenders detained in the Juvenile Justice Detention facility during the period of January 1, 2009, through December 31, 2012. All juvenile offenders, upon entering the detention facility, take the MAYSI-2 to alert juvenile custody staff of

any pre-existing mental health or safety concerns at the time of intake. If needed, intake staff make a mental health referral so that clinical staff can follow up and determine the severity of the distress. All participants had completed the MAYSI-2 on one or more occasions. Each time a juvenile offender goes through booking, he or she must take the MAYSI-2; therefore, the number of times a juvenile offender had taken the instrument served as a measure of recidivism frequency. Survival time in the community corresponded to the amount of time since last arrest (measured in days) that an offender remained free within the community before rearrest.

There was one discrepancy in data collection from my original plan. I removed offense type from the analysis because the data collected showed that participants who recidivated often committed different crimes, and it would have been impossible to assign one label to them. Chapter 5 includes a discussion of the implications of this decision.

The Automation Administrator manager entered data in a Microsoft Excel spreadsheet and compiled the necessary dataset. After pre-analysis data cleaning, I entered data in Statistical Package of the Social Sciences (SPSS version 21.0). The MAYSI-2 dataset contained over 1,300 participants. Results of the power analysis described in Chapter 3 showed that a total of 404 cases would be necessary for the regression analysis. I arranged the Person ID column in ascending order and selected the first 404 unique participants, ensuring random sampling. There were no cases with missing data, and all 404 cases underwent descriptive analysis. The covariates age,

gender, and race were included in the model. This was a planned decision stemming from current research literature, as outlined in Chapter 3. No further covariates were included.

Results

This section contains a presentation of the results of the study, including descriptive statistics for the sample and the variables. The section also includes the results of hierarchical multiple linear regression analysis and analysis of variance (ANOVA), along with results of assumption testing for each statistical test. I conducted posthoc ANOVAs. However, no additional statistical tests were necessary for hypothesis testing other than those I planned to conduct.

Sample Descriptive Statistics

Most the participants were male (n = 345, 85.4%). This is similar to the national juvenile-detained population, where female offenders accounted for 17% of detained youth in 2015 (OJJDP, 2017a). Most of the participants were of Hispanic decent (n = 218, 54%), followed by participants of African American (n = 109, 27%) and European American (n = 60, 14.9%) descent. In the United States, minorities accounted for 69% of committed and detained juveniles in 2015, making the sample of the present study slightly more heavily composed of minorities compared to the national population (OJJDP, 2017b). However, in the state of California, minority youth accounted for 87% of the juvenile detained population in 2015 (OJJDP, 2017b). This figure is very close to the proportion of minorities (85.1%) in the present sample. Therefore, racially, the sample is representative of the juvenile detained population, especially in California.

One quarter of the sample (n = 101) had a caution or warning for suicidal ideation. Approximately half of the sample (n = 209) had a caution or warning for depression-anxiety. Around two thirds of the sample (n = 299) had a caution or warning for anger-irritation. A total of 233 participants (57.7%) had a caution or warning for alcohol-drug-use. Those who did not recidivate accounted for 34.4% of the sample (n = 139). Approximately a quarter of the participants (n = 95) recidivated exactly one time. Table 1 includes the frequencies and percentages of demographic data.

Table 1

Frequencies and Percentages of Demographic Data

Demographic category	*N*	%
Gender		
Female	59	14.6
Male	345	85.4
Race		
European American	60	14.9
African American	109	27.0
Hispanic	218	54.0
Asian	12	3.0
Other	5	1.2
Suicidal-ideation		
N/A	303	75.0
Caution	35	8.7
Warning	66	16.3
Depression-anxiety		
N/A	195	48.3
Caution	154	38.1
Warning	55	13.6
Anger-irritation		
N/A	105	26.0
Caution	215	53.2
Warning	84	20.8
Alcohol-drug-use		
N/A	171	42.3
Caution	186	46.0
Warning	47	11.6
Recidivism frequency		
0	139	34.4
1	95	23.5
2	54	13.4
3	29	7.2
4	26	6.4
5	20	5.0
6	11	2.7
7	12	3.0
8	7	1.7
9	5	1.2
10	2	0.5
11	3	0.7
13	1	0.2

Note. Due to rounding error, percentages did not always sum to 100.

Descriptive Statistics of Continuous Variables

I computed descriptive statistics for the continuous variables of interest. Age at first booking for the participants ranged from 12 to 19 years old, with a mean of 16.64 and a standard deviation of 1.23. Recidivism frequency ranged from 0 to 13 occurrences, with a mean of 2.01 and a standard deviation of 2.46. The average amount of days between arrests (survival time) ranged from 0 to 953 days, with a mean of 109.42 and a standard deviation of 139.69. According to Kline (2010), skewness values between -2.00 and 2.00 meet the threshold for normality. The skewness value for average days between arrests was slightly above 2.00, suggesting that the data for this variable were slightly skewed to the right. Table 2 includes descriptive statistics for the continuous variables of interest.

Table 2

Descriptive Statistics of Continuous Variables

Continuous variable	*Min*	*Max*	*M*	*SD*	*Median*	*Skew*
Age at first booking	12.00	19.00	16.64	1.23	17.00	-0.69
Recidivism frequency	0.00	13.00	2.01	2.46	1.00	1.60
Average days between arrests (survival time)	0.00	953.00	109.42	19.69	78.00	2.24

Pearson correlations.

I conducted a Pearson correlation to examine the associations between suicide ideation, depression-anxiety, anger-irritation, and alcohol-drug use. There was a significant association between suicide ideation and depression-anxiety ($r = .45$, $p <$

.001), and anger-irritation (r = .32, p < .001). There were also significant associations between depression anxiety and anger-irritation (r = .37, p < .001), and alcohol-drug use (r = .11, p = .035). Table 3 includes the findings of the Pearson correlation.

Table 3

Correlations Among MAYSI Subscales

Variable	1	2	3	4
1. Suicide ideation	-			
2. Depression-anxiety	.45**	-		
3. Anger-irritation	.32**	.37**	-	
4. Alcohol-drug use	.08	.11*	.04	-

Note. * p < .05 (two-tailed t-test) ** p < .01 (two-tailed t-test).

RQ1: Do suicidal-ideation, depression-anxiety, anger-irritation, alcohol-drug-use, and offense type, as measured by the MAYSI-2, positively predict recidivism frequency when controlling for age, gender, and race?

$H_0$1: Suicidal ideation, depression-anxiety, anger-irritation, alcohol-drug-use, and offense type, as measured by the MAYSI-2, will not positively predict recidivism frequency when controlling for age, gender, and race.

H_a1: Suicidal ideation, depression-anxiety, anger-irritation, alcohol-drug-use, and offense type, as measured by the MAYSI-2, will positively predict recidivism frequency when controlling for age, gender, and race.

To address research question one, I conducted a hierarchical multiple linear regression to examine the predictive relationship. A multiple linear regression is an appropriate statistical analysis when examining the predictive relationship between a group of predictor variables and a continuous criterion variable, while controlling for the

effect of additional variables (Tabachnick & Fidell, 2013). In this analysis, the predictor variables were suicidal-ideation, depression-anxiety, anger-irritation, alcohol-drug-use, and offense type. Each of the predictor variables was ordinal, with 0 = N/A, 1 = Caution, and 2 = Warning. The control variables corresponded to age, gender, and race. Age was a continuous variable representing age at first booking. Gender was a dichotomous nominal variable, with 0 = Female and 1 = Male. Female was the reference group for the gender variable. Due to the categorical nature of race, I dummy coded the variable with European American as the reference group. I originally intended to include "offense type" as a predictor variable in the research questions. However, individuals who recidivated often committed different crimes, and there was not a way to include one offense type for these participants. Recidivism frequency was a continuous dependent variable.

Assumption Testing

Prior to analysis, I assessed assumptions of normality, homoscedasticity, and absence of multicollinearity. I examined the normality assumption by visual inspection of a normal P-P plot between the observed cumulative probability and the expected cumulative probability. The data slightly deviated from the trend line, suggesting that the data did not meet the assumption of normality (see Figure 1). Therefore, there is a need for caution in further interpretations of the regression below. I assessed homoscedasticity by inspection of a residual scatterplot, validating the assumption due to there not being a recurring pattern in the data (see Figure 2). I checked the absence of multicollinearity assumption by variance inflation factors (VIFs). Owing to the all VIF values being below

10, there was not high collinearity between the predictor and control variables (Stevens, 2009).

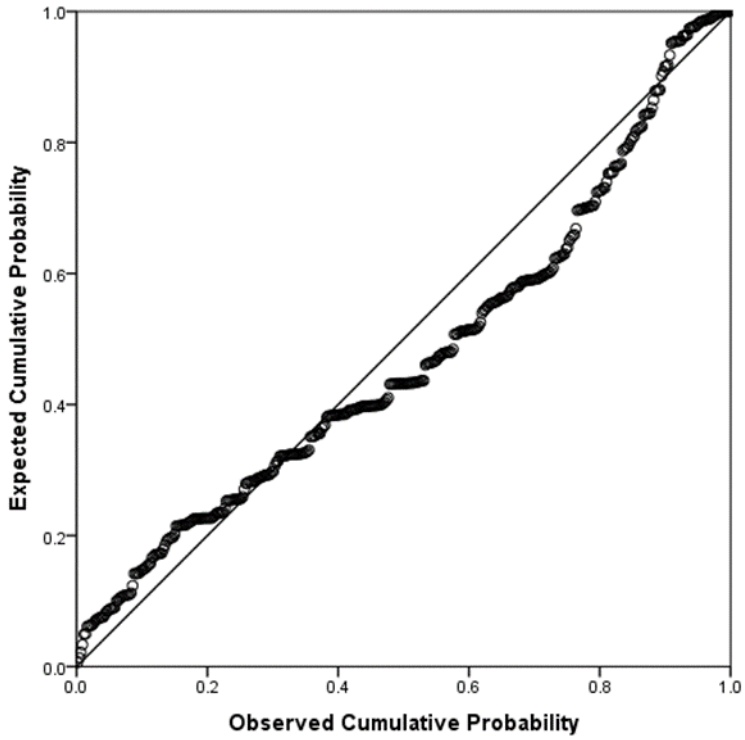

Figure 1. Normal P-P plot for recidivism frequency.

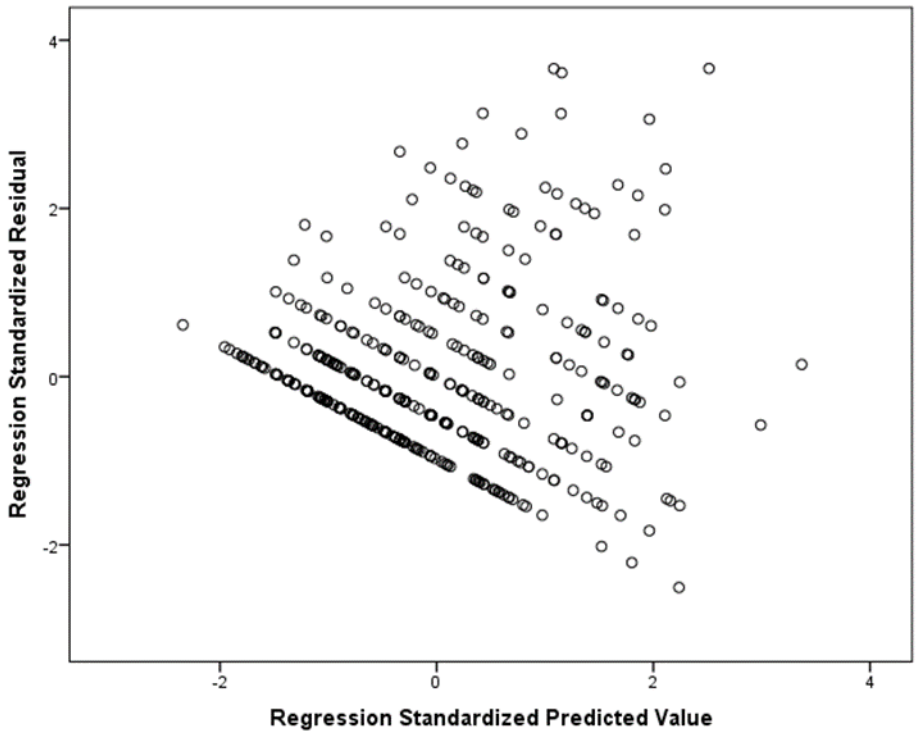

Figure 2. Standardized predicted values versus standardized residuals for the regression on recidivism frequency.

Results of Hierarchical Multiple Linear Regression

Results for the first step of the hierarchical multiple linear regressions indicated that there was a collective significant predictive relationship between age, gender, race, and recidivism frequency ($F(5, 398) = 31.32$, $p < .001$, $R^2 = .282$). The R^2 coefficient of determination value suggests that approximately 28.2% of the variability in recidivism frequency is explainable by the demographic factors. I further examined the individual demographic variables.

Age at first booking ($t = -12.29$, $B = -1.05$, $p < .001$) was a significant predictor in the model. With every one-year increase in age at time of first booking, recidivism frequency decreased on average by 1.05 occurrences. Gender ($t = 2.84$, $B = 0.87$, $p =$

.005) was a significant predictor in the model. For every male, recidivism frequency increased by an average of 0.87 occurrences in comparison with females. None of the dummy-coded race variables were significant in the first step of the model.

Results for the second step of the multiple linear regression indicated that there was a collective significant predictive relationship of age, gender, race, suicidal-ideation, depression-anxiety, anger-irritation, and alcohol-drug-use in predicting recidivism frequency ($F(9, 394) = 20.82$, $p < .001$, $R^2 = .322$). The R^2 value suggests that approximately 32.2% of the variability in recidivism frequency is explainable by the predictor and control variables. The R^2 increased by approximately 4% after inclusion of the predictor variables. The result of the R^2 change F-test was also statistically significant, ($F(4, 394) = 5.80$, $p < .001$), indicating that there was a significant difference in the R^2 between the two steps of the regression model. I examined individual predictor and control variables further.

Age at first booking ($t = -11.98$, $B = -1.00$, $p < .001$) was a significant predictor in the model. With every one-year increase in age at first booking, recidivism frequency decreased on average by 1.00 occurrences. Gender ($t = 2.81$, $B = 0.85$, $p = .005$) was a significant predictor in the model. For every male, recidivism frequency increased by an average of 0.85 occurrences in comparison with females. Race (African American vs. European American; $t = 2.02$, $B = 0.67$, $p = .045$) was a significant predictor in the model. For every African American participant, recidivism frequency increased by an average of 0.67 occurrences in comparison with European American participants. Anger-irritation ($t = 2.43$, $B = 0.40$, $p = .016$) was a significant predictor in the model. For every

one-unit increase in anger-irritation, recidivism frequency increased by an average of 0.40 occurrences. Alcohol-drug-use ($t = 3.55$, $B = 0.58$, $p < .001$) was a significant predictor in the model. For every one-unit increase in alcohol-drug-use, recidivism frequency increased by an average of 0.58 occurrences. Suicidal ideation ($t = 0.72$, $B = 0.11$, $p = .475$) and depression-anxiety ($t = -0.05$, $B = -0.01$, $p = .958$) were not significant predictors in the regression model due to the p values being greater than .05. Due to non-significance of suicidal ideation and depression-anxiety, it is not possible to reject the null hypothesis ($H_0 1$) for this research question. Table 4 presents the results for of the hierarchical multiple linear regression.

Table 4

Results for Hierarchical Regression with Age, Gender, Race, Suicidal-Ideation, Depression-Anxiety, Anger-Irritation, and Alcohol-Drug-Use Use Predicting Recidivism Frequency

Source	*B*	*SE*	β	*t*	*p*	*VIF*
Step 1 of the model						
Age at time of booking	-1.05	0.09	-.53	-12.29	<.001	1.02
Gender (reference: female)	0.87	0.31	.13	2.84	.005	1.07
Race (reference: European American)						
African American	0.36	0.32	.07	1.11	.267	1.87
Hispanic	0.24	0.29	.05	0.85	.396	1.88
Other	0.79	0.98	.04	0.81	.419	1.08
Step 2 of the model						
Age at time of booking	-1.00	0.08	-.50	-11.98	<.001	1.03
Gender (reference: female)	0.85	0.30	.12	2.81	.005	1.10
Race (reference: European American)						
African American	0.67	0.33	.12	2.02	.045	2.13
Hispanic	0.42	0.29	.09	1.49	.138	1.95
Other	0.42	0.96	.02	0.44	.662	1.09
Suicidal ideation	0.11	0.16	.03	0.72	.475	1.34
Depression-anxiety	-0.01	0.17	-.00	-0.05	.958	1.37
Anger-irritation	0.40	0.17	.11	2.43	.016	1.23
Alcohol-drug-use	0.58	0.16	.16	3.55	<.001	1.15

Note. Step One: F (9, 398) = 31.32, $p < .001$, $R^2 = .282$
Step Two: F (9, 394) = 20.82, $p < .001$, $R^2 = .322$

Analyses of Variance

As a post-hoc examination to research question one, I conducted two analyses of variance (ANOVAs) to examine for differences in alcohol-drug-use and anger irritation scores between races. Results of the first ANOVA indicated that there were statistically significant differences in alcohol-drug-use between European Americans, African Americans, Hispanics, Asians, and Other races ($F(4, 399) = 14.14$, $p < .001$). By

examination of post-hoc tests, African Americans had significantly lower alcohol-drug-use levels in comparison with Caucasian Americans, Hispanics, and Other races.

Results of the second ANOVA indicated that there were statistically significant differences in anger-irritation levels between European Americans, African Americans, Hispanics, Asians, and Other races ($F(4, 399) = 4.76$, $p = .001$). By examination of post-hoc tests, African Americans had significantly higher anger-irritation levels in comparison with Hispanics and Asians.

RQ2: Do suicidal ideation, depression-anxiety, anger-irritation, alcohol-drug-use, and offense type, as measured by the MAYSI-2, positively predict survival time when controlling for age, gender, and race?

$H_0$2: Suicidal ideation, depression-anxiety, anger-irritation, alcohol-drug-use, and offense type, as measured by the MAYSI-2, will not positively predict survival time when controlling for age, gender, and race.

H_a2: Suicidal ideation, depression-anxiety, anger-irritation, alcohol-drug-use, and offense type, as measured by the MAYSI-2, will positively predict survival time when controlling for age, gender, and race.

To address research question two, I conducted a hierarchical multiple linear regression to examine the predictive relationship. In this analysis, the predictor and control variables were in the same format as research question one. Survival time was the continuous dependent variable. Individuals who did not recidivate were not included in this analysis. Therefore, the sample of interest for this research question included 265 participants.

Assumption Testing

Prior to analysis, I assessed the assumptions of normality, homoscedasticity, and absence of multicollinearity. The data slightly deviated from the trend line, suggesting that the data did not meet the assumption of normality (see Figure 3). Therefore, there is a need for caution in further interpretations of the regression below. The data met the assumption of normality because they closely followed the normality trend line (see Figure 3). The data met the homoscedasticity assumption due to there not being a recurring pattern in the data (see Figure 4). Due to all the VIF values being below 10, the data met the absence of multicollinearity assumption as well (Stevens, 2009).

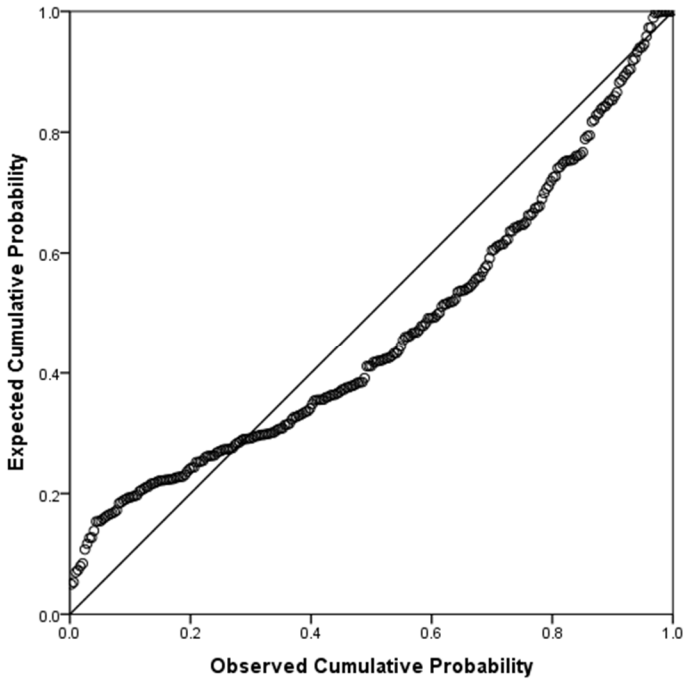

Figure 3. Normal P-P plot for survival time.

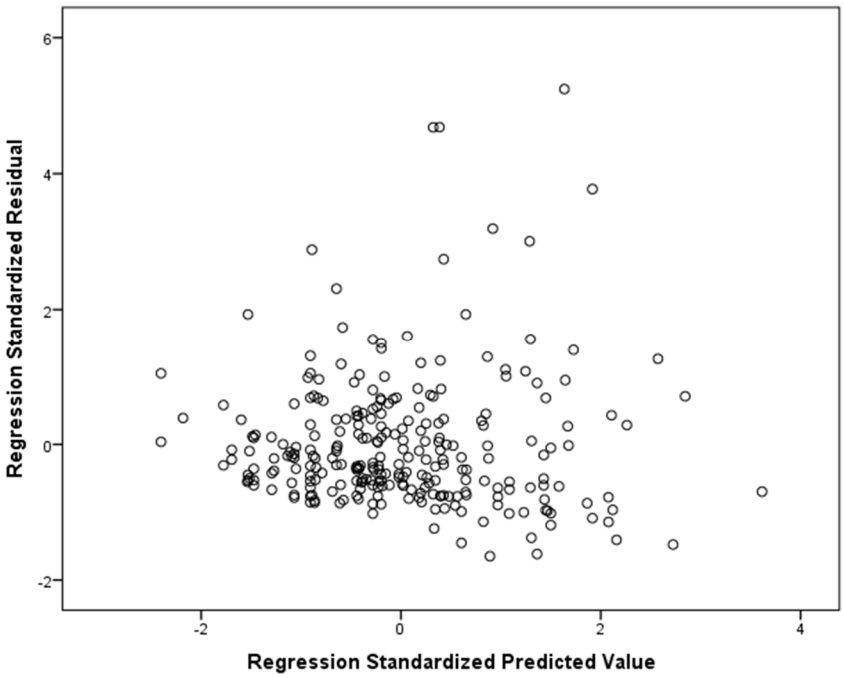

Figure 4. Standardized predicted values versus standardized residuals for the regression on survival time.

Results of Hierarchical Multiple Linear Regression

Results for the first step of the multiple linear regression indicated that there was a collective significant predictive relationship between age, gender, race, and survival time ($F(5, 259) = 9.06$, $p < .001$, $R^2 = .149$). The R^2 value suggests that approximately 14.9% of the variability in survival time is explainable by the demographic factors. I examined the individual demographic variables further.

Age at first booking ($t = -5.47$, B = -37.90, $p < .001$) was a significant predictor in the model. With every one-year increase in age at time of booking, survival time decreased on average by 37.90 days. Due to the p value being greater than .05, gender was not a significant predictor of survival time in the linear regression model. Race

(African American vs European American; t = -2.69, B = -69.92, p = .008) was a significant predictor in the model. For every African American participant, survival time decreased by an average of 69.92 days in comparison with European American participants.

Results for the multiple linear regression indicated that there was a collective significant predictive relationship between age, gender, race, suicidal-ideation, depression-anxiety, anger-irritation, alcohol-drug-use, and survival time (F(9, 255) = 5.82, p < .001, R^2 = .170). The R^2 value suggested that approximately 17.0% of the variability in survival time is explainable by the predictor and control variables. The R^2 increased by approximately 2.1% after inclusion of the predictor variables. The result of the R^2 change F-test was not statistically significant, (F(4, 255) = 1.65, p = .161), suggesting that there were not significant differences in the R^2 between the two steps of the regression model. I further examined individual predictor and control variables.

Age at time of booking (t = -5.24, B = -36.66, p < .001) was a significant predictor in the model. With every one-year increase in age at time of booking, survival time decreased by an average of 36.66 days. Due to the p value being greater than .05, gender was not a significant predictor of survival time in the linear regression model. Race (African American vs European American; t = -3.27, B = -90.62, p = .001) was a significant predictor in the model. For every African American participant, survival time decreased by an average of 90.62 days in comparison with European American participants. Alcohol-drug-use (t = -2.03, B = -26.23, p = .044) was a significant predictor in the model. For one-unit increase in alcohol-drug-use, survival time decreased by an

average of 26.23 days. Suicidal ideation (t = -0.51, B = -6.12, p = .614), depression-anxiety (t = 0.97, B = 12.90, p = .333), and anger-irritation (t = 1.15, B = 15.29, p = .251) were not significant predictors in the regression model due to the p values being greater than .05. Due to non-significance of suicidal-ideation, depression-anxiety, and anger irritation, it is not possible to reject the null hypothesis for research question one ($H_0$2). Table 5 presents the results for the hierarchical multiple linear regression.

Table 5

Results for Hierarchical Regression with Age, Gender, Race, Suicidal-Ideation, Depression-Anxiety, Anger-Irritation, and Alcohol-Drug-Use Predicting Survival Time

Source	***B***	***SE***	**β**	***t***	***p***	***VIF***
Step 1 of the model						
Age at time of booking	-37.90	6.93	-.32	-5.47	<.001	1.03
Gender (reference: female)	-39.24	26.41	-.09	-1.49	.139	1.09
Race (reference: European American)						
African American	-69.92	25.96	-.21	-2.69	.008	1.83
Hispanic	-30.54	22.51	-.11	-1.36	.176	1.87
Other	-28.34	71.10	-.02	-0.40	.691	1.14
Step 2 of the model						
Age at time of booking	-36.66	6.99	-.31	-5.24	<.001	1.06
Gender (reference: female)	-35.66	26.81	-.08	-1.33	.185	1.14
Race (reference: European American)						
African American	-90.62	27.68	-.27	-3.27	.001	2.10
Hispanic	-39.59	22.97	-.14	-1.72	.086	1.97
Other	-36.84	71.00	-.03	-0.52	.604	1.15
Suicidal ideation	-6.12	12.13	-.03	-0.51	.614	1.37
Depression-anxiety	12.90	13.30	.07	0.97	.333	1.39
Anger-irritation	15.29	13.28	.07	1.15	.251	1.28
Alcohol-Drug-Use	-26.23	12.95	-.12	-2.03	.044	1.13

Note. Step one: F (5, 259) = 9.06, p < .001, R^2 = .149
Step two: F (9, 255) = 5.82, p < .001, R^2 = .170

Summary

The aim of this study was to quantitatively examine whether the components of hopelessness depression (suicidal ideation, depression-anxiety, anger-irritation, and alcohol-drug-use) and offense type predicted recidivism frequency and survival time in the community within a sample of detained juvenile offenders, while controlling for age, gender, and race. This chapter presented the findings of the data collection and data analysis processes. Findings for research question one indicated that there was a collective significant predictive relationship between age, gender, race, suicidal-ideation, depression-anxiety, anger-irritation, alcohol-drug-use, and recidivism frequency. Findings of two post-hoc ANOVAs indicated that there were statistically significant differences in alcohol-drug-use and anger-irritation levels between races. Findings for research question number two indicated that there was a collective significant predictive relationship between age, gender, race, and suicidal-ideation, depression-anxiety, and anger-irritation, alcohol-drug-use, and survival time. However, suicidal-ideation and depression-anxiety were not significant predictors in regression model number one. Suicidal-ideation, depression-anxiety, and anger-irritation were not significant predictors in regression model number two. Therefore, I did not reject the null hypotheses for research question one and two. The next chapter contains an interpretation of the statistical findings and connections to the literature. It also contains recommendations for future research.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this study was to determine whether hopelessness depression, measured as suicidal-ideation, and depression-anxiety, anger-irritation, and alcohol-drug-use predicted recidivism frequency and survival time in juveniles. Suicidal-ideation, depression-anxiety, anger-irritation, and alcohol-drug-use were the independent variables, while age, gender, and race were the covariates. The dependent variables were recidivism frequency and survival time in the community.

There is a lack of research on the relationship between mental health factors and recidivism, according to McReynolds et al. (2010). Investigating such factors is important, noted Baglivio et al. (2015). By focusing on mental health factors, I hoped to better understand whether such factors affect recidivism and, by extension, survival time among juveniles. The main findings of the study showed that there were no statistically significant associations between hopelessness depression and either recidivism frequency or survival time. However, anger-irritation positively predicted an increase in recidivism frequency. Although anger-irritation did not predict survival time, alcohol-drug-use did. In addition, African Americans in the sample reported higher levels of anger-irritation compared with Hispanic and Asian participants, and they reported lower alcohol-drug-use levels compared with all other racial groups. Finally, the control variables explained a significant portion of the variability of the dependent variables.

In this chapter, I will interpret the results for the independent and predictor variables in the context of previous literature on juvenile recidivism and hopelessness

depression. Then, I will interpret the results associated with the control variables and comparisons between races. After doing so, I will discuss the limitations and implications of my research for youth offender treatment and offer recommendations for future research and youth offender treatment.

Interpretation of Findings

In this section, I interpret and discuss the findings presented in the previous chapter, comparing and contrasting with existing literature and presenting possible explanations for the findings in light of what we know about the variables of interest. The interpretation contains three sections. First, I interpret the findings in light of the theoretical framework of hopelessness depression. Next, I focus on the predictor variables, presenting possible explanations for findings for those variables. Finally, I briefly discuss the control variables, their role in the model, and the possible explanations for these results.

Theoretical Framework

For this study, the predictor variables functioned as subtypes of the variable hopelessness depression, which was the theoretical framework for this study. The predictor variables, when examined together, were not associated with recidivism or survival time in this study. Anger-irritation and substance-use were significant predictors in this study's model; suicide-ideation and anxiety-depression were not. This finding has implications for interpreting the relationship between the phenomenon of hopelessness depression and recidivism. I posited, based on the literature, that four predictor variables would signify underlying hopelessness depression. For example, Duke et al. (2011)

described anger-irritation and substance use as expressions of hopelessness depression among juvenile offenders. Elsewhere, researchers have linked hopelessness depression to suicide (Abram, Choe, Washburn, & Teplin, 2008) and anxiety among juvenile offenders (Drummond et al., 2011).

The results of this study suggest that two aspects of hopelessness depression, anger-irritation and substance use, link to recidivism. We can hypothesize, but not conclude given the results of my analysis, that when youth experience depression arising from the beliefs that adverse conditions will not improve and that they have little control over circumstances and outcomes, they may experience anger-irritation and turn to alcohol and drugs as a coping mechanism. This hypothesis is in line with Wanklyn, Day, Hart, and Girard's (2012) statement that the link between depression and substance use is well established and finding, in their own study, that hopelessness was one variable that contributed to substance use. These manifestations, in turn, may predispose the depressed juvenile offender population to reoffend (Duke et al., 2011; Wanklyn et al., 2012). Although suicide-ideation may relate to hopelessness depression, that link may not have manifested itself in terms of offending behavior in the same way that anger-irritation and substance use did for my study's sample. In addition, substance use was the only significant predictor of survival time in my study. Therefore, this study suggests that, because substance use is indicative of hopelessness depression, hopelessness depression in this study relates to survival time. I discuss implications of this finding for the theoretical framework of hopelessness depression later in this chapter.

Predictor Variables

Hopelessness depression is a multi-factor construct consisting of four factors: suicidal-ideation, depression-anxiety, anger-irritation, and alcohol-substance use. When examining these factors individually, two (anger-irritation and alcohol-substance use) were found to be significantly correlated with recidivism frequency and survival time. Suicidal-ideation and depression-anxiety were not significantly correlated with recidivism frequency or survival time. When testing the correlation between hopelessness depression (as an overall construct) recidivism frequency and survival time, the results indicated a significant correlation, but we cannot conclude that hopelessness depression as such predicts recidivism (see results for the second step of hierarchical multiple linear regression analysis for research question 1). Rather, when attempting to prevent or predict recidivism among juvenile offenders, correctional staff and stakeholders should focus on reducing anger-irritation and alcohol-substance use, rather than on hopelessness depression as such. This finding is in keeping with current recommendations in existing literature (e.g., Denney & Connor, 2016; Van der Put, Creemers, & Hoeve, 2014; Wolff & Baglivio, 2016).

As noted, anger-irritation and substance use were significant predictors of recidivism in my study. Also, substance use was the only significant predictor in the model for survival time. These findings suggest that a model that includes anger-irritation and substance use may be more appropriate when considering the role that mental health factors play in recidivism and, also, that substance use may be the only important variable when considering survival time. (The result for survival time did not include the full

sample; thus, readers should interpret the results with care.) For the target population, this result means that avoiding drug and alcohol use may be a crucial step to remaining in the community and avoiding incarceration. However, it is not possible to conclude a causative link here; further research is required to establish a causal relationship between the variables.

With respect to anger-irritation and recidivism, the independent variable positively correlated with recidivism in this study, which corroborates findings in the literature. For example, Becker et al. (2012) found that anger-irritability was associated with youth delinquency and posited that anger-irritability may relate to youth recidivism. Becker et al. described anger-irritability as a prevalent mental health issue among detained youth. In this study's sample, juvenile offenders who experienced higher levels of anger-irritation compared with other juvenile offenders may have been predisposed to reoffending, given the observation that higher levels of anger and poor anger control often results in offending (Connor, 2012). Accordingly, anger-irritation may be one of the more relevant mental antecedents to violent and aggressive behavior. Anger strengthens aggressive attitudes, weakens beliefs that antisocial behavior is unacceptable, and increases the likelihood that youth will associate with criminal peers (Brenzia, 2010). These observations may help explain why those in the current sample who reported higher levels of anger-irritation also reoffended more often, on average, than those who reported lower levels of anger-irritation.

Readers should note, however, that anger-irritation was not a significant predictor of survival time. The lack of association between anger-irritation and survival time may

be explainable by anger-irritation being an antecedent activated around the time of the offense, rather than continuous mental state that has a sustained potential to affect behavior (Fernandez, 2013). The noncontinuous nature of anger-irritation would explain why anger-irritability was associated with reoffending events in my study, independent of length of time between release and rearrest.

With respect to substance use and recidivism, the current study revealed a statistically significant link between reported alcohol-drug-use and recidivism. These results are in line with prior research that generally finds strong and significant associations between substance use and recidivism (Archer et al., 2010; Stewart et al., 2011; Trupin et al., 2011). In addition to predicting recidivism, alcohol-drug-use predicted survival time. According to my review of the literature, researchers studying substance use and recidivism have not examined survival time in relation to substance use; thus, this result develops the current literature base. Unlike anger-irritation, which only predicted recidivism, substance use exists even outside events that are chronologically proximate to rearrest. Particularly for juvenile offenders who experience hopelessness depression, substance use can be a persistent phenomenon, marked by higher degrees of frequency and use (Stewart et al., 2011). Substance use is less dependent on circumstantial triggering and therefore possesses a different chronological relationship to the events surrounding offending behavior.

I found no relationship between suicide-ideation and recidivism frequency, and no relationship between suicide-ideation and survival time. These results do not reflect the findings in previous research (Mallet et al., 2013). Previous researchers have primarily

compared detained versus nondetained youth populations, finding that detained populations experience a higher proportion of suicidal thoughts and behaviors (Chapman & Ford, 2008; National Action Alliance for Suicide Prevention, 2013). A possible reason that results from the current study do not reflect observations in the literature is that the current study examined only detained populations, rather than comparing detained versus nondetained populations. Therefore, although suicide-ideation may be a characteristic of juvenile offender populations, variation of suicide-ideation within the population of juvenile offenders may not say anything significant about propensity to reoffend.

With respect to depression-anxiety, the results of the current study do not corroborate the findings described in the literature, either when examining the variable depression-anxiety in conjunction with the other three predictor variables or when examining the variable itself. For example, results of a study of 130 juvenile offenders by Kubak and Salekin (2009) indicated that higher levels of anxiety and fear were associated higher levels of offending. According to these researchers, future involvement with the legal system may produce increased levels of anxiety in youth. This is also relevant because increased rates of poverty link to higher rates of recidivism among youth (Atkins et al., 2007). Although higher levels of anxiety may associate with increased rates of offending, the current study shows that reoffending may not be affected in the same way by depression-anxiety. One reason why depression-anxiety many not have been a significant predictor of recidivism for this study is that depression-anxiety varies according to age and according to posttraumatic stress disorder (Becker et al., 2012). This study did not test how age or mental disorders may have mediated depression-anxiety

scores with respect to recidivism. In addition, differences according to race and gender remained unexamined.

Control Variables

The control variables for this study included age, gender, and race and explained a significant proportion of the variability in both recidivism frequency and survival time. In this study, age showed the most predictive value. This is in line with previous research. In a meta-analysis of 23 published studies, Cottle et al. (2001) discovered that, among demographic factors, age of first commitment and age at first law enforcement contact were two of the strongest predictors of recidivism. The reason that age predicted recidivism in this study may be that juveniles who offend at earlier ages are more vulnerable to the persistent effects of social risk factors, such as poverty, antisocial parental behavior, abusive home environments, inadequate schooling, and spatial contagion (Jung et al., 2010; Mennis & Harris, 2011; Mulder et al., 2010). Gender and race were also significant demographic predictors of recidivism. African Americans and males were more likely to reoffend. Similar results existed for survival time, with survival time decreasing, on average, based on whether participants were male and African American.

The results of the current study show, in line with existing research, that demographic factors are likely better indicators of recidivism and survival time compared with mental health factors when examining mental health factors in aggregate. However, as Benner et al. (2010) pointed out, researchers study many factors related to juvenile recidivism, including demographic ones, in isolation. In my more recent review of the

relevant literature on recidivism, this trend has continued. They also argue that the interaction of several variables is likely responsible for juvenile recidivism. Although the current study did not measure cumulative or interactive effects of gender, race, anger-irritation, and alcohol-drug-use, anger-irritation and alcohol-drug-use may vary according to gender and race. Indeed, results of the current study show that African Americans reported lower average substance use compared with their European American counterparts and more anger-irritation than their Asian and Hispanic counterparts. These results suggest that recidivism is a complex phenomenon that can vary with different psychological and demographic aspects of a given population.

Racial disparities with respect to anger-irritation have not been a focal point in previous studies (Grisso et al., 2012); therefore, the current results provide useful additional information. Specifically, these findings may enable stakeholders to develop culturally sensitive interventions that take into account differences in racial backgrounds when addressing key predictive factors for recidivism. Because anger-irritation positively correlated with recidivism in this study, the role of anger may be important when considering its role for African Americans and the behavior of reoffending.

One explanation for why African Americans reported higher levels of anger-irritation in this study is that racial socialization practices may contribute to an increased chance that African American youth may fail to develop normal bonds with schools, employers, and other important conventional institutions. A model developed by Unnever and Gabbidon (2011) suggests that African American youth disconnected from important social institutions will more likely express negative emotions, such as anger. African

American youth may react to racial discrimination, whether overt or systemic, with anger, hostility, and defiance (Unnever & Gabbidon, 2011).

Limitations of the Study

As with other screening instruments, the construct validity of the MAYSI-2 is subject to the accuracy and certainty of participant response. As Proctor et al. (2011) noted, offenders are prone to underreport mental health symptoms to custody staff members. Although, according to these authors, using mental health professionals to administer the MAYSI-2 may help to minimize this issue, the present study still suffers from the limitation that participants in the sample may have underreported their symptoms.

A second limitation is that the MAYSI-2 is not specifically for measuring hopelessness depression. The theoretical framework formed the rationale for conceptualizing the three predictor variables as subtypes of hopelessness depression. Whereas the MAYSI-2 directly measured the subtype variables, none of the items that measured the predictor variables measured hopelessness depression, although hopelessness was implicit in the subscales.

A third limitation is that there was a discrepancy in data collection from the original plan. I removed initial offense type because individuals who recidivated often committed different crimes, and it would have been impossible to assign one label to those participants. Offense types, particularly drug, violent, and property offenses, are strongly associated with repeat offenses (Grunwald et al., 2010). Additionally, individuals who show greater variety in offense types committed crimes more frequently

(Qudekerk at al., 2012). Therefore, the impossibility of examining offense type in this study represents a limitation.

The sample used may have involved bias because most of the participants in the sample had recidivated at least once, but not all youth recidivate (Durose, Copper, & Snyder, 2014). Additionally, the overwhelming majority of participants was male; therefore, the results may only be generalizable to male adolescent juvenile offenders, representing a limitation to generalizability, despite the representative nature of the sample. Finally, there may have been confounding variables for which this study did not account. For example, recidivism may relate to socioeconomic status, which I did not examine here. Therefore, readers should interpret the results with caution.

Recommendations

To address the limitation that hopelessness depression as measured in this study compromised validity, there is a need for further research on the correlation between hopelessness depression, as measured by an alternative instrument, and the predictor variables, as measured by the MAYSI-2. Doing so will provide better empirical evidence for determining the degree to which suicide-ideation, depression-anxiety, anger-irritation, and alcohol-drug-use capture or represent hopelessness depression. One way to do this is to conduct a correlational analysis between a direct measure of hopelessness depression, such as the Beck Hopelessness Scale (Beck, 1988), and the MAYSI subscales. Additional exploration and testing of the relationship between hopelessness depression, as measured by an alternative tool to the MAYSI-2, on the one hand, and recidivism frequency and

survival time rate, on the other hand, may lead to a better understanding of the role hopelessness depression among juvenile offenders.

Other recommendations would be to study further the interactive effects of gender and ethnicity and substance use and anger-irritation, particularly including a more evenly distributed sample with respect to gender and ethnicity. Benner et al. (2010) noted that not enough research exists on reciprocal, cumulative, and interactive factors pertaining to juvenile recidivism. This study showed that both anger-irritation and substance use predicted recidivism. It also showed that self-reporting for these factors varied by race. Given these results, further research might examine whether such factors show variation in predictive values according to race and gender. Further, although depression-anxiety did not predict recidivism, other researchers have found that depression-anxiety varies among subpopulations of juveniles (Becker et al., 2012). According to these authors, younger offenders, as well as those who suffer from posttraumatic stress disorder, report higher levels of depression-anxiety.

In addition, analyses indicated that African Americans had significantly higher levels of anger-irritation compared with Hispanics and Asians. This suggests that race may mediate anger-irritation as a predictor variable. Additional tests involving age, gender, race, and anger-irritation levels may reveal a more detailed picture of how demographic variables interact with anger-irritation and may also lead to a better understanding of the relationship between demographic variables and hopelessness depression. More exploration using qualitative approaches in addition to quantitative ones may provide further insight into why African Americans reported more anger.

Although there exists a body of qualitative research related to detained African American youths' experiences and perceptions (e.g., Barnert et al., 2015; Feinstein, 2015; Marshall & Haight, 2014), to my knowledge no such research yet exists that focuses specifically on differential levels of anger by race among detained youths.

Qualitative research may allow the research to learn about lived experiences to gain an understanding of how African-American youth view their own anger, given that qualitative approaches emphasize the worldview from the participant's perspective, often elicited through interviews (Wincup, 2017).

Implications

Because it was not possible to reject the null hypotheses and the alternative hypotheses remained unsupported, the implications for social practice remain unclear. However, of the four predictor variables tested, anger-irritation positively predicted recidivism frequency among the participants in the sample. This result suggests that aspects of mental health programs that specifically address juvenile offenders' experiences, feelings, and thoughts centered on anger and irritation may be beneficial to those offenders. Anger management programs focusing on improving the perspective of juvenile offenders by focusing on anger and irritation improve angry behavior, relational and physical aggression, and uncontrolled emotions while promoting prosocial behavior (Goldstein et al., 2013).

Additionally, results in this study indicate that African Americans experience statistically significantly higher levels of anger-irritation compared with Hispanic and Asian youth in the sample. Anger management programs tailored to the experiences of

African American youth may lead to socially beneficial results for this group, much in the same way that female-specific programs have been beneficial to juvenile female offenders (Goldstein et al., 2013). Such examinations need to be culturally appropriate. For example, Unnever and Gabbidon (2011) noted that, in addition to structural racism, African Americans may perceive unfair targeting at the hands of the criminal justice system and react with anger, hostility, and defiance. By taking racism into consideration, the lived experiences of African American youth can be integrated into more a culturally relevant approach to treating anger. To date, many interventions focus on life experience such as trauma (e.g., McCoy, Leverso, & Bowen, 2016) and specific behaviors such as aggressive behavior (e.g., Frazier & Vela, 2014), but few recent researchers have made racial differences and racism a primary focus (Neblett, Sosoo, Willis, Bernard, Bae, & Billingsley, 2016; Zapolski, Garcia, Jarjoura, Lau, & Aalsma, 2016).

Additionally, results associated with the control variables have implications for social change and rehabilitation practices. In fact, because the control variables predicted more of the variability in the dependent variables and were statistically significant, treatment and intervention programs that consider demographic variables may lead to lower rates of recidivism. For example, of all the variables examined in this study, age was the most strongly associated with recidivism frequency. Therefore, programs that emphasize or place resources in early treatment and intervention may help prevent juveniles from repeating behaviors that lead to their arrest and detention. This contributes to social change because, if juvenile recidivism is reducible through early intervention, individuals, communities, and society at large could experience a reduction in crime and

negative consequences of juvenile offense. In a long-term context, reduced juvenile recidivism could lead to the presence of youth with more positive outcomes, who can then become productive members of society upon entering adulthood, improving social and economic outcomes in their communities.

Finally, this study has some methodological implications for future researchers. Most prominently, the difficulty in analyzing data related to offense type suggests that researchers should work to develop a sound method for understanding the relationship between offense type and recidivism. Such research could include examination of differing combinations of offenses in cases where offenders committed multiple offense types. For example, researchers could consider whether committing both drug-related offenses and property offenses predisposes youth to recidivism, and whether the order of the various offense types matters in recidivism prediction. Such an analysis was outside the scope of the present research but could, if conducted in the future, help correctional staff and other stakeholders prevent recidivism by focusing on particular offense patterns in those at high risk of reoffending.

Conclusion

The purpose of this study was to determine whether hopelessness depression represented by suicide-ideation, depression-anxiety, anger-irritation, and alcohol-drug-use would predict recidivism frequency and survival time in the community for juvenile offenders while controlling for age, gender, and race. No statistically significant link existed between the predictor variables taken together and either recidivism frequency or survival time. However, recidivism frequency increased by an average of 0.40

occurrences for every unit of anger-irritation and increased by an average of 0.58 occurrences for every unit of alcohol-drug-use. Anger-irritation and alcohol-drug-use were the only predictor variables by themselves that showed a statistically significant relationship with recidivism frequency. In addition, African Americans reported higher levels of anger-irritation compared with other ethnic minorities.

These results suggest that, insofar as anger-irritation and alcohol-drug-use represent hopelessness depression, hopelessness depression relates to recidivism. In addition, the demographic variables of age, gender, and race explained 28% of the variability in recidivism frequency and 19% of the survival time for the sample studied. This is in line with previous research and suggests that demographic variables may have more explanatory power compared with the mental health variables examined.

It is crucial that treatment takes account of these findings; specifically, anger experienced by African Americans needs to be addressed through culturally appropriate interventions, especially since anger-irritation predicted recidivism and African Americans reported higher levels of anger-irritation compared with Hispanics and Asians. Furthermore, there is a need for more work with younger offenders, who are more prone to recidivate. This will support these young people to develop a crime-free lifestyle.

Juvenile justice staff and stakeholders can reduce recidivism in the juvenile through an in-depth understanding of the factors that predict recidivism, as well as through appropriate interventions that target specific factors. Although there have been some strides made in this direction, there is a need for more research. The present study

demonstrates the potential utility of intake assessment in recidivism prediction and suggests some important directions for research and practice. When we understand juvenile recidivism more thoroughly, we can take steps to help delinquent youth remain on positive life paths, improving the strength of individuals, families, and communities in the United States.

References

Abela, J. R. Z., Stolow, P., Mineka, S., Yao, S., Zhu, X. Z., & Hankin, B. L. (2011). Cognitive vulnerability to depressive symptoms in adolescents in urban and rural Hunan, China: A multiwave longitudinal study. *Journal of Abnormal Psychology, 120*(4), 765-778. doi:10.1037/a0025295

Abram, K. M., Choe, J. Y., Washburn, J. J., Teplin, L. A., King D. C., & Dulcan M. K. (2008). Suicidal ideation and behaviors among youths in juvenile detention. *Journal of the American Academy of Child and Adolescent Psychiatry, 47,* 291–300. doi:10.1097/CHI.0b013e318160b3ce

Abramson, Y. L., Metalsky, I. G., & Alloy, B. L. (1989). Hopelessness depression: A theory-based subtype of depression. *Psychological Review, 96*(2), 358-372. doi:10.1037/0033-295X.96.2.358

Agnew, R. (1992). Foundation for a general strain theory of crime and delinquency. *Criminology, 30*(1), 47-88. doi:10.1111/j.1745-9125.1992.tb01093.x

American Psychological Association. (2015). *Diagnostic and Statistical Manual of Mental Disorders: DSM-5* (5th ed.). Washington, DC: Author.

Archer, R. P., Simonds-Bisbee, E., Spiegel, D. R., Handel, R. W., & Elkins, D. E. (2010). Validity of the Massachusetts Youth Screening Instrument-2 (MAYSI-2) scales in juvenile justice settings. *Journal of Personality Assessment, 92*(4), 337-348. doi:10. 1080/00223891.2010.482009

Atkins, T., Bullis, M., & Yovanoff, P. (2007). Wealthy and wise? Influence of socioeconomic status on the community adjustment of previously incarcerated

youth. *Behavioral Disorders, 32*(4), 254-266. Retrieved from http://www.ccbd.net/publications/behavioraldisorders

Baglivio, T. M., Wolff, T. K., Jackowski, K., & Greenwald, A. M. (2015). A multilevel examination of risk/need change scores, community context, and successful reentry of committed juvenile offenders. *Youth Violence and Juvenile Justice,* 15(1), 38-61. doi:10.1177/1541204015596052

Barnert, E. S., Perry, R., Azzi, V. F., Shetgiri, R., Ryan, G., Dudovitz, R., ... Chung, P. J. (2015). Incarcerated youths' perspectives on protective factors and risk factors for juvenile offending: A qualitative analysis. *American Journal of Public Health, 105*(7), 1365-1371. doi:10.2105/AJPH.2014.302228

Barrett, D., Katsiyannis, A., & Zhang, D. (2006). Predictors of offense severity, prosecution, incarceration and repeat violations for adolescent male and female offenders. *Journal of Child and Family Studies, 15,* 709-719. doi:10.1007/s10826-006-9044-y

Barrett, E. D., Katsiyannis, A., & Moore, T. E. (2015). Juvenile delinquency recidivism: Are Black and White youth vulnerable to the same risk factors? *Behavioral Disorders, 40*(3), 184-195. doi:10.17988/0198-7429-40.3.184

Bechtel, K., Lowenkamp, T. C., & Latessa, E. (2007). Assessing the risk of reoffending for juvenile offenders using the youth level of service/case management inventory. *Journal of Offender Rehabilitation, 45,* 85-108. doi:10.1300/J076v45n03_04

Beck, A.T. (1988). *Beck Hopelessness Scale*. New York, NY: Psychological Corp. and

Harcourt Brace Jovanovich.

Becker, P. S., Kerig, K. P., Lim, Y. J., & Ezechukwu, N. R. (2012). Predictors of recidivism among delinquent youth: interrelations among ethnicity, gender, age, mental health problems, and posttraumatic stress. *Journal of Child & Adolescent Trauma, 5*, 145-160. doi:10.1080/19361521.2012.671798

Benner, G. J., Stage, S. A., Nelson, J. R., Laederich, M., & Ralston, N. C. (2010). Predicting the cumulative recidivism of juvenile detainees. *The Journal of Behavior Analysis of Offender and Victim Treatment and Prevention, 2*(1), 51-62. doi:10.1037/h0100473

Birkley, E., & Eckhardt, C. I. (2015). Anger, hostility, internalizing negative emotions, and intimate partner violence perpetration: A meta-analytic review. *Clinical Psychology Review, 37*, 40-56. doi:10.1016/j.cpr.2015.01.002

Bolland, M. J., Lian, E. B., & Formichella, M. C. (2005). The origins of hopelessness among inner-city African-American adolescents. *American Journal of Community Psychology, 36*(3/4), 293-305. doi:10. 1007/s10464-005-8627-x

Boulger, J. K., & Olson, D. E. (2011). Distinguishing between return to juvenile versus adult prison in juvenile recidivism analyses. *Justice Research Policy, 13*(1), 1-21. doi:10.3818/JRP.13.1.2011.1

Brezina, T. (2010). Anger, attitudes, and aggressive behavior: Exploring the affective and cognitive foundations of angry aggression. *Journal of Contemporary Criminal Justice, 26*(2), 186-203. doi:10.1177/1043986209359849

Brozina, K., & Abela, Z. R. J. (2006). Symptoms of depression and anxiety in children:

specificity of the hopelessness theory. *Journal of Clinical Child and Adolescent Psychology, 35*(4), 515-527. doi:10.1207/s15374424jccp3504_3

Caprara, V. G., Gerbino, M., Paciello, M., Giunta, D. L., & Pastorelli, C. (2010). Counteracting depression and delinquency in late adolescence the role of regulatory emotional and interpersonal self-efficacy beliefs. *European Psychologist, 15*(1), 34-48. doi:10.1027/1016-9040/a000004

Cauffman, E. (2008). Understanding the female offender. *The Future of Children, 18*(2), 119-142. doi:10.1353/foc.0.0015

Chamberlain, P. (2003). *Treating chronic juvenile offenders' advances made through the Oregon multidimensional treatment foster care model*. Washington, DC: American Psychological Association. doi:10.1037/10596-000

Chapman, F. J., & Ford, D. J. (2008). Relationships between suicide risk, traumatic experiences, and substance use among juvenile detainees. *Archives of Suicide Research, 12*, 50-61. doi:10.1080/13811110701800830

Chereji, S. V., Pintea, S., & David, D. (2013). The Relationship of Anger and Cognitive Distortions with Violence in Violent Offenders' Population: A Meta-Analytic Review. *The European Journal of Psychology Applied to Leagal Context, 5*(1), 59-77. doi : 10.1177/0145445514539346

Cleckley, H. (1976). *The mask of sanity* (5th ed.). St Louis, MO: Mosby.

Cole, A. D., Ciesla, A. J., Dallaire, H. D., Jacquez, M. F., Pineda, Q. A., LaGrange, B., . . . Felton, W. J. (2008). Emergence of attributional style and its relation to depressive symptoms. *Journal of Abnormal Psychology, 117*(1), 16-31.

doi:10.1037/0021-843X.117.1.16

Colins, O., Vermeiren, R., Vahl, P., Markus, M., Broekaert, E., & Doreleijers, T. (2011). Psychiatric disorder in detained male adolescents as risk factor for serious recidivism. *The Canadian Journal of Psychiatry, 56*(1), 44-50. doi:10.1177/070674371105600108

Connor, D.F. (2012). *Aggression and antisocial behavior in children and adolescents: Research and treatment.* New York, NY: Guilford Press.

Conrad, M. S., Tolou-Shams, M., Rizzo, C., Placella, N., & Brown, K. L. (2013). Gender differences in recidivism rates for juvenile justice youth: the impact of sexual abuse. *Journal of Law and Human Behavior. Advance online publication.* doi:10.1037/lhb0000062

Contreras, L., Molina, V., & Del Carmen Cano, M. (2011). In search of psychological variables linked to the recidivism in young offenders. *The European Journal of Psychology Applied to legal Context, 3*(1), 77-88. Available from: https://www.journals.elsevier.com/the-european-journal-of-psychology-applied-to-legal-context/

Cottle, C. C., Lee, J. R., & Heilbrun, K. (2001). The prediction of criminal recidivism in juveniles a meta-analysis. *Journal of Criminal Justice and Behavior, 28*(3), 367-393. doi:10.1177/0093854801028003005

Creswell, W. J. (2009). *Research design qualitative, quantitative, and mixed methods approach* (3rd ed.). Thousand Oaks, CA: Sage Publishing Ltd.

Dalton, F. R., Evans, J. L., Cruise, R. K., Feinstein, A. R., & Fendrick, F. R. (2009). Race

differences in mental health service access in a secure male juvenile justice facility. *Journal of Offender Rehabilitation, 48*, 194-209. doi:10.1080/10509670902766570

Deitch, D., Koutsenok, I., & Ruiz, A. (2000). The relationship between crime and drugs: what we have learned in recent decades. *Journal of Psychoactive Drugs, 32*(4), 391-397. doi:10.1080/02791072.2000.10400241

Denney, A. S., & Connor, D. P. (2016). Serious juvenile offenders who have experienced emerging adulthood: Substance use and recidivism. *Children and Youth Services Review, 67*, 11-19. doi:10.1016/j.childyouth.2016.05.014

Diamantopoulou, S., Verhulst, C. F., & Ende, D. V. J. (2010). Testing developmental pathways to antisocial personality problems. *Journal of Child Psychology, 38*, 91-103. doi:10.1007/s10802-009-9348-7

Domburgh, L. van, Vermeiren, R., Blokland, A.A.J., & Doreleijers, Th.A.H.: (2009). Delinquent development in Dutch childhood arrestees: developmental trajectories, risk factors and comorbidity with adverse outcomes during adolescence. *Journal of Abnormal Child Psychology, 37, 93-105.* doi:10.1007/s10802-008-9260-6.

Drummond, H., Bolland, M. J., & Harris, A. W. (2011). Becoming violent: evaluating the mediating effect of hopelessness on the code of the street thesis. *Deviant Behavior, 32*, 191-223. doi:10. 1080/01639621003748746

Duke, N. N., Borowsky, W. I., Pettingell, L. S., & McMorris, J. B. (2011). Examining youth hopelessness as an independent risk correlate for adolescent delinquency and violence. *Journal of Maternal and Child Health, 15*, 87-97. doi:10.107/s10

995-0550-6

Durose, M.R., Cooper, A.D., & Snyder, H. N. (2014). Recidivism of Prisoner Released in 30 States in 2005: Patterns from 2005 to 2010 (Report No. 2442005). Washington, D.C.: Department of Justice.

Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analyses using G* power 3.1: test for correlation and regression analyses. *Behavior Research Methods, 41*(4), 1149-1160. doi:10.3758/BRM.41.4.1149

Feinstein, R. A. (2015). White privilege, juvenile justice, and criminal identities: a qualitative analysis of the perceptions and self-identification of incarcerated youth. *Contemporary Justice Review*, *18*(3), 313-333. doi:10.1080/10282580.2015.1057708

Ferguson, L. (2004). External validity, generalizability, and knowledge utilization. *Journal of Nursing Scholarship, 36*(1), 16-22. doi:10.1111/j.1547-5069.2004.04006.x

Fernandez, E. (2013). *Treatment for anger in specific populations: Theory, application, and outcome.* New York, NY: Oxford University Press. doi:10.1093/med:psych/9780199914661.001.0001

Field, D., & Abrams, L. S. (2010). Gender differences in the perceived needs and barriers of youth offenders preparing for community reentry. *Child & Youth Care Forum, 39*(4), 253-269. doi:10. 1007/a10566-010-9102

Fleming, J., Gately, N., & Kraemer, S. (2012). Creating HoPE: Mental health in Western Australian maximum security prisons. *Psychiatry, Psychology and Law, 19(1),*

60-74. doi:10.1080/13218719.2010.543405

Frazier, S. N., & Vela, J. (2014). Dialectical behavior therapy for the treatment of anger and aggressive behavior: A review. *Aggression and Violent Behavior*, *19*(2), 156-163. doi:10.1016/j.avb.2014.02.001

Gilbert, F., Daffern, M., Talevski, D., & Ogloff, J. R. P. (2013). The role of aggression-related cognition in the aggressive behavior of offenders: A general aggression model perspective. *Criminal justice and behavior*, *40*(2), 119-138. doi:10.1177/0093854812467943

Goldstein N.E., Serico J.M., Riggs R., Zelechoski A.D., Kalbeitzer R., Kemp K., Lane C. (2013). Development of the juvenile justice anger management treatment for girls. *Cognitive and Behavioral Practice, 20*(2), 171-188. doi:10.1016/j.cbpra.2012.06.003.

Grande, L. T., Hallman, M. J., Underwood, A. L., Warren, M. K., & Rehfuss, M. (2012). Treating detained juveniles: measuring mental health traits and gender differences. *Review of European Studies, 4*(5), 14-23. doi:10. 5539/res. v4n5p14

Green, B. S., & Salkind, J. N. (2008). *Using SPSS for Windows and Macintosh: analyzing and understanding data* (5th ed.). Upper Saddle River, NJ: Pearson/Prentice Hall.

Grisso, T., & Barnum, R. (2006). *Massachusetts Youth Screening Instrument-Version 2: User's Manual and Technical Report*. Worcester, MA: University of Massachusetts Medical School.

Grisso, T., Paiva-Salisbury, M., Williams, V., Fusco, S., Perrault, R., & Barnum, R.

(2012). *The Massachusetts Youth Screening Instrument-Version 2 (MAYSI-2): comprehensive research review*. Worcester, MA: University of Massachusetts Medical School.

Grunwald, E. H., Lockwood, B., Harris, P., & Mennis, J. (2010). Influences of neighborhood contacts, individual history and parenting behavior on recidivism among juvenile offenders. *Journal of Youth Adolescence, 39*, 1067-1079. doi:10.1007/s10964-010-9518-5

Haeffel, J. G., Abramson, Y. L., Brazy, C. P., & Shah, Y. J. (2008). Hopelessness theory and the approach system: cognitive vulnerability predicts decreases in goal-directed behavior. *Journal of cognitive Theory Research, 32*, 281-290. doi:10.1007/s10608-007-9160-z

Harris, W. P., Lockwood, B., & Mengers, L. (2009). *Defining and measuring recidivism. Council of Juvenile Correctional Administrators white paper: defining and measuring recidivism*. Washington, DC: Office of Justice Programs.

Harris, W. P., Lockwood, B., Mengers, L., & Stoodley, H. B. (2011). *Measuring recidivism in juvenile corrections*. Washington, DC: Office of Justice Programs.

Hoge, D. R., Vincent, G., & Guy, L. (2012). *Predictions and risk/needs assessments*. Unpublished report to the United States Department of Justice. doi:10.1093/acprof:oso/9780199828166.003.0006

Ingoldsby, M. E., Shaw, S. D., Winslow, E., Schonberg, M., Gilliom, M., & Criss, M. M. (2006). Neighborhood disadvantage, parent-child conflict, neighborhood peer relationship, and early antisocial behavior problem trajectories. *Journal of*

Abnormal Child Psychology, 34, 303-319. doi:10.1007/s10802-006-9026-y

Jennings, G. W. (2010). Special issue: new directions in research examining crime over the life-course. *American Journal of Criminal Justice, 35*, 87-92. doi:10.1007/s12103-010-9077-z

Jung, H., Spjeldnes, S., & Yamatani, H. (2010). Recidivism and survival time: racial disparity among jail ex-inmates. *The National Association of Social Workers, 34*(3), 181-189. doi:10.1093/swr/34.3.181

Karnik, S. N., Soller, M., Redlich, A., Silverman, M., Kraemer, C. H., Haapanen, R., & Steiner, H. (2009). Prevalence of and gender differences in psychiatric disorders among juvenile delinquents incarcerated for nine months. *Journal of Psychiatric Services, 60*(6), 838-841. doi:10.1176/ps.2009.60.6.838

Kline, R. B. (2010). Principles and practice of structural equation modeling (3rd ed.). New York: The Guilford Press.

Kubak, A. F., & Salekin, T. R. (2009). Psychopathy and anxiety in children and adolescents: new insights on development pathways to offending. *Journal of Psychopathology Behavior Assessment, 31*, 271-284. doi:10.1007/s10862-009-9144-2

Kuo, H. W., Gallo, J. J., & Eaton, W. W. (2004). Hopelessness, depression, substance disorder, and suicidality, a 13-year community-based study. *Journal of Social Psychiatry Psychiatric Epidemiology, 39*, 497-501. doi:1007/s00127-004-0775-z

Landrum, B., & Garza, G. (2015). Mending fences: defining the domains and approaches of quantitative and qualitative research. *Qualitative Psychology, 2*(2), 199-209.

doi:1037/qup0000030

Low, S., Sinclair, R., & Shortt, J. W. (2012). The role of economic strain on adolescent delinquency: a microsocial process model. *Journal of Family Psychology, 26*(4), 576-584. doi:10.1037/a0028785

Mallett, A. C., Fukushima, M., Stoddard-Dare, P., & Quinn, M. L. (2012). Significant race differences in factors related to the detention recidivism of youthful offenders. *Journal of Ethnicity in Criminal Justice, 10*(24), 24-40. doi:10.1080/15377938.2012.642727

Marczyk, R. G., Heilbrun, K., Lander, T., & DeMatteo, D. (2003). Predicting juvenile recidivism with the PCL: YV, MAYSI, and YLS/CMI. *International Journal of Forensic Mental Health, 2*(1), 7-18. doi:10.1080/14999013.2003.10471175

Marshall, J. M., & Haight, W. L. (2014). Understanding racial disproportionality affecting African American Youth who cross over from the child welfare to the juvenile justice system: Communication, power, race and social class. *Children and Youth Services Review*, *42*, 82-90. doi:10.1016/j.childyouth.2014.03.017

Marsiglia, F. F., Kulis, S., Perez, G., & Parsai, B. (2011). Hopelessness, family, stress, and depression among Mexican-heritage mothers in the southwest. *Journal of Health Social Work, 36*(1), 7-18. doi:10.1093/hsw/36.1.7

Matsuura, N., Hashimoto, T., & Toichi, M. (2013). Association among adverse childhood experiences, aggression, depression, and self-esteem, in serious female offenders in Japan. *The Journal of Forensic Psychiatry & Psychology, 24*(1), 111-127. doi:10. 1080/14789949.2012.746384

Mauricio, M. A., Little, M., Chassin, L., Knight, P. G., Piquero, R. A., Losoya, H. S., & Vargas-Chanes, D. (2009). Juvenile offenders' alcohol and marijuana trajectories: risk and protective factor effects in the context of time in a supervised facility. *Journal of Youth Adolescence, 38*, 440-453. doi:10. 1007/s10964-008-9324-5

McCoy, H., Leverso, J., & Bowen, E. A. (2016). What the MAYSI-2 can tell us about anger–irritability and trauma. *International Journal of Offender Therapy and Comparative Criminology*, *60*(5), 555-574. doi:10.1177/0306624X14555855

McReynolds, L., Schwalbe, S. C., & Wasserman, A. G. (2010). The contribution of psychiatric disorders to juvenile recidivism. *Criminal Justice and Behavior, 37*(2), 204-216. doi:1177/0093854809354961

Mennis, J., & Harris, W. P. (2011). Contagion and repeat offending among urban juvenile delinquents. *Journal of Adolescents, 34*, 951-963. doi:10.1016/j.adolescence.2010.12.001

Mennis, J., Harris, W. P., Obradovic, Z., Izenman, J. A., Grunwald, E. H., & Lockwood, B. (2011). The effect of neighborhood characteristics and spatial spillover on urban juvenile delinquency and recidivism. *The Professional Geographer, 63*(2), 174-192. doi:10.1080/00330124.2010.547149

Minor, I. K., Wells, B. J., & Angel, E. (2008). Recidivism among juvenile offenders following release from residential placement: multivariate predictors and gender differences. *Probation and Parole: Current Issues,* 171-188. doi:10.1080/10509670802143474

Morris, C. M., Giesla, A. J., & Garber, J. (2008). A prospective study of the cognitive-

stress model of depressive symptoms in adolescents. *Journal of Abnormal Psychology, 117*(4), 719-734. doi:10: 1037/a0013741

Mulder, E., Brand, E., Bullens, R., & Van Marle, H. (2010). A classification of risk factors in serious juvenile offenders and the relation between patterns of risk factors and recidivism. *Journal of Criminal Behavior and Mental Health, 20*, 23-38. doi:10.1002/cbm.754

Najman, M. J., Hayatbakhsh, R. M., Clavarion, A., Bor, W., O'Callaghan, J. M., & Williams, M. G. (2010). Family poverty over the earl life course and recurrent adolescent and young adult anxiety and depression: a longitudinal study. *American Journal of Public Health, 9*, 1719-1723. doi:10.2105/AJPH.2009.180943

National Action Alliance for Suicide Prevention. (2013). Suicidal ideation and behavior among youth in the juvenile justice system: A review of the literature. *Youth in Contact with the Juvenile Justice System Task Force*. Washington, DC: Author.

Neblett, E. W., Sosoo, E. E., Willis, H. A., Bernard, D. L., Bae, J., & Billingsley, J. T. (2016). Chapter two-racism, racial resilience, and African American youth development: Person-centered analysis as a tool to promote equity and justice. *Advances in Child Development and Behavior*, *51*, 43-79. doi:10.1016/bs.acdb.2016.05.004

Neff, L. J., & Waite, E. D. (2007). Male versus female substance abuse patterns among incarcerated juvenile offenders: comparing strain and social learning variables. *Justice Quarterly, 24*(1), 106-131. doi:10. 1080/07418820701201024

Office of Juvenile Justice and Delinquency Prevention. (2013). *Juvenile offenders and victims: 2013 national report*. Washington, DC: Office of Juvenile Justice Programs.

Office of Juvenile Justice and Delinquency Prevention. (2017). Juveniles in corrections. *OJJDP Statistical Briefing Book*. Washington, DC: Author. Retrieved 13 July, 2017, from http://www.ojjdp.gov/ojstatbb/corrections/qa08202.asp?qaDate=2015

Office of Juvenile Justice and Delinquency Prevention. (2017). Juveniles in corrections. *OJJDP Statistical Briefing Book*. Washington, DC: Author. Retrieved 13 July, 2017, from http://www.ojjdp.gov/ojstatbb/corrections/qa08208.asp?qaDate=2015

Osho, S. G., & Grant, M. (2011). Substance use of repeat juvenile offenders: an empirical investigation. *European Journal of Social Sciences, 19*(4), 492-498. Available from http://www.europeanjournalofsocialsciences.com/

Pepler, J. D., Jiang, D., Craig, M. W., & Connolly, J. (2010). Development trajectories of girls' and boys' delinquency and associated problems. *Journal of Abnormal Child Psychology, 38*, 1033-1044. doi:101007/s10802-010-9389-y

Proctor, S. L., Hoffman, N. G., & Corwin, C. J. (2011). Response bias in screening county jail inmates for addictions. *Journal of Drug Issues, 41*(1), 117-134. doi:10.1177/002204261104100106

Qudekerk, A. B., Erbacher, K. M., & Reppucci, D. N. (2012). A comparison of diversity, frequency, and severity self-report offending scores among female offending youth. *Journal of Psychological Assessment, 24*, 738-750. doi:10.1037/a0026791

Schwalbe, S. C., Fraser, W. M., & Day, H. S. (2007). Predictive validity of the joint risk

matrix with juvenile offenders: a focus on gender and race/ethnicity. *Journal of Criminal Justice and Behavior, 34*, 348-361. doi:10. 1177/0093854806292244

Schwalbe, S. G. (2007). Risk assessment for justice: a meta-analysis. *Law and Human Behavior, 31*, 449-462. doi:10.1007/s10979-006-9071-7

Siegel, J. L., & Welsh, C. B. (2008). *The delinquency the core* (3rd ed.). Belmont, CA: Wardsworth.

Snyder, H. N., & Stickmund, M. (2006). *Juvenile offender and victims: 2006 national report.* Washington, DC: Office of Juvenile Justice and Delinquency Prevention.

Stathis, S., Letters, P., Doolan, I., Fleming, R., Heath, K., Arnett, A., & Cory, S. (2008). Use of the Massachusetts Youth Screening Instrument to assess mental health problems in young people within an Australian youth detention center. *Journal of Pediatrics and Child Health, 44*, 438-443. doi:10.1111/j.1440-1754.2008. 01324.x

Stevens, P. J. (2009). Applied multivariate statistics. *International Statistical Review, 77*(3), 463-482. doi:10. 1111/j.1751-5823.2009. 00095.x

Stewart, C., Rapp-Paglicci, L., & Rowe, W. (2009). Evaluating the efficacy of the prodigy prevention program across urban and rural locales. *Child and Adolescent Social Work Journal, 26*(1), 65-75. doi:10.1007/s10560-008-0142-0

Stewart, H. S., Sherry, B. S., Comeau, N. M., Mushquash, J. C., Collins, P., & Wilgenburg, V. H. (2011). Hopelessness and excessive drinking among aboriginal adolescents: the mediating roles of depressive symptoms and drinking to cope. *Depression and Research Treatment, 2011*, 1-11. doi:10. 1155/2011/970169

Stockdale, C. K., Wong, P. C. S., & Oliver, E. M. (2010). The psychopath checklist: considerations with respect to gender, ethnicity, and age. *Journal of Psychological Assessment, 22*(4), 768-781. doi:10.1037/a0020044

Stoddard, A. S., Henly, J. S., Sieving, E. R., & Bolland, J. (2011). Social connections, trajectories of hopelessness, and serious violence and impoverished urban youth. *The Journal Youth Adolescence, 3*, 278-295. doi:10.1007/s10964-010-9580-z

Tabacknick, G. B., & Fidell, S. L. (2012). *Using multivariate statistics* (6th ed.). Old Tappan, NJ: Allyn and Bacon.

Thompson, P. A., & McGrath, A. (2012). Subgroup differences and implications for contemporary risk-need assessment with juvenile offenders. *Journal of Law and Human Behavior, 36*(4), 345-355. doi:10. 1037/h0093930

Trupin, J. E., Kerns, U. E. S., Walker, C. S., DeRobertis, T. M., & Stewart, G. D. (2011). Family integrated transitions: a promising program for juvenile offenders with co-occurring disorders. *Journal of Child & Adolescent Substance Abuse, 20*, 421-436. doi:10. 1080/1067828X.2011.614889

Unnever, J. D., & Gabbidon, S. L. (2011). *A theory of African American offending: Race, racism, and crime.* New York, NY: Routledge.

Van der Put, C. E., Creemers, H. E., & Hoeve, M. (2014). Differences between juvenile offenders with and without substance use problems in the prevalence and impact of risk and protective factors for criminal recidivism. *Drug and Alcohol Dependence, 134*, 267-274. doi:10.1016/j.drugalcdep.2013.10.012

Vincent, G. M., Grisso, T., Terry, A., & Banks, S. (2008). Sex and race differences in

mental health symptoms in juvenile justice: The MAYSI-2 national meta-analysis. *Journal of the American Academy of Child & Adolescent Psychiatry, 47*(3), 282-290. doi:10.1097/CHI.0b013e318160d516

Vincent, M. G., Perrault, T. R., Guy, S. L., & Gershenson, G. B. (2012). Developmental issues in risk assessment: implications for juvenile justice. *Journal of Victims and Offenders, 7*, 364-384. doi:10. 1080/15564886.2012.713900

Vinkers, J. D., De Beurs, E., Barendregt, M., Rinne, T., & Hoek, W. H. (2011). The relationship between mental disorders and different types of crime. *Criminal Behavior and Mental Health, 21*, 307-320. doi:10.1002/cbm.819

Wanklyn, S.G., Day, D.M., Hart, T.A., & Girard, T.A. (2012). Cumulative childhood maltreatment and depression among incarcerated youth: Impulsivity and hopelessness as potential intervening variables. *Child Maltreatment, 17, 306-317.* doi:10.1177/1077559512466956

Wehrman, M. M. (2011). Examining race and sex inequality in recidivism. *Sociology Compass, 5*(3), 179-189. doi:10.1111/j.1751-9020.2011.00362x

Wincup, E. (2017). *Criminological research: Understanding qualitative methods*. London: Sage.

Wolff, K. T., & Baglivio, M. T. (2016). Adverse childhood experiences, negative emotionality, and pathways to juvenile recidivism. *Crime & Delinquency*, *Jan 2016*, 1-27. doi:10.1177/0011128715627469

Zapolski, T. C., Garcia, C. A., Jarjoura, G. R., Lau, K. S., & Aalsma, M. C. (2016). Examining the influence of ethnic/racial socialization on aggressive behaviors

among juvenile offenders. *Journal of Juvenile Justice*, *5*(1), 65-79. Retrieved from http://www.journalofjuvjustince.org

Zhang, D., Hsu, Y. H., Katsiyannis, A., Barrett, E. D., & Ju, S. (2011). Adolescents with disabilities in the juvenile justice system: patterns of recidivism. *Exceptional Children, 77*(3), 283-298. doi:10.1177/001440291107700302