

CUMBERLAND COUNTY ADULT TREATMENT COURT  
COMPARING OPIOID PARTICIPANTS' SUCCESSFUL AND  
UNSUCCESSFUL COMPLETION

Lisa Matteson Harrison

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Philosophy

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APPROVED BY:

Dr. Vincent Giordano Ph.D., Committee Chair

Dr. Nicole Stottlemyre Ph.D., Committee Member

## ABSTRACT

The purpose of this quantitative, retrospective, causal comparative study was to determine if differences existed between opioid-addicted participants who successfully completed or failed to complete the Cumberland County Adult Treatment Court. The current study was formulated on the theoretical framework of therapeutic jurisprudence and structural ritualization. The research questions were developed to determine whether there were differences in the demographics (age, gender, and education level) and treatment services utilized between participants who successfully completed and failed to complete the program. The study sample comprised 105 opioid addicted participants including 55 who successfully completed and 50 who unsuccessfully completed the program from 2006 to 2021. Secondary archival data were collected from the Cumberland County Adult Treatment Court. This research utilized the Chi square test of independence tests to identify differences between opioid-addicted participants who successfully completed or failed to complete the program. Results indicated no significant differences existed in program completion as a function of demographics. The Chi-square showed four of the treatment methods including inpatient ( $\chi^2 = 9.336, p = .025$ ), halfway house ( $\chi^2 = 4.646, p = .031$ ), outpatient ( $\chi^2 = 31.769, p < .001$ ), and CBT ( $\chi^2 = 26.312, p < .001$ ) showed significant differences in program completion when participants experienced the modality. The treatment modality analysis showed that seven of the 11 remaining treatment methods offered showed no significant differences in program completion when participants experienced the different modalities.

*Keywords:* drug treatment court, opioid addicted participants, treatment services

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### **Dedication**

This dissertation is dedicated to my husband, Bill Harrison; thank you for all your love, support, and guidance you have given to me throughout this doctoral process. Your patience and willingness to be my sounding board and to provide honest feedback throughout this challenging journey made it possible to persevere. To our sons Joshua, Jesse, and Noah, you encouraged me throughout this process when I thought I was too old to go back to school, and I pray I have provided an example for you to believe in yourself and to always strive to do your best, reach for your dreams, and work toward your goals. Additionally, to my mother, Estella Matteson, and sister, Diana Matteson, thank you for always believing in me and encouraging me. Thank you to God who has provided me with many life blessings and the knowledge that you are always with me through the many seasons of life. To my friends who believed in me and encouraged me when I didn't believe in myself, thank you for your unconditional friendship, patience, support, and willingness to listen. Finally, this study is dedicated to all the individuals suffering from a substance abuse disorder and striving to obtain and maintain sobriety.

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### **List of Abbreviations**

Alcoholics Anonymous (AA)

Annual Social and Economic (ASEC)

Liberty University Institutional Review Board (IRB)

Medication-assisted treatment (MAT)

Narcotics Anonymous (NA)

Pennsylvania's Problem Solving Adult and Juvenile Court Information System (PAJCIS)

Survey of Key Informants Patients (SKIP)

Supplement of the Current Population Survey (CPS)

## **CHAPTER ONE: INTRODUCTION**

### **Overview**

Substance abuse within the United States has been an ongoing problem, with opioid use reaching epidemic proportions. As such, there is a need to identify existing research on the topic and for future research to address the opioid crisis (Kawasaki et al., 2018). A review of the literature found topics relating to substance use, opioid use, drug treatment courts, predictors of success, and medication-assisted treatment. The researcher identified a need to examine the differences between drug treatment court opioid-addicted participants' successful and unsuccessful completion of the program.

Pennsylvania and specifically Cumberland County has experienced opioid use and opioid overdoses in epidemic proportions, overwhelming the criminal justice system and drug treatment court and making it crucial to identify the differences between success and failure in drug treatment court to improve participant outcomes (Kawasaki et al., 2018). Because of this, it was important to examine any differences existing between Cumberland County Adult Treatment Court opioid-addicted participants who completed versus those who did not complete. This examination identified the demographic differences between participants who successfully completed or failed to complete the program, which will assist program administrators in pinpointing the level of services that an opioid-addicted participant might utilize to successfully complete drug treatment court. Additionally, the differences examined provided crucial information regarding the implementation of program practices to improve opioid-addicted participant outcomes.

The Cumberland County Adult Treatment Court, established in 2006, is an accredited treatment addiction court in Pennsylvania that provides participants with treatment-oriented activities while diverting individuals from traditional prosecution (Cumberland County PA, n.d.). The Cumberland County Adult Treatment Court utilizes a four-phase program based on the 10 key components of drug courts, designed to be completed in 18 months (Cumberland County PA, n.d.). Participants are required to participate and complete treatment activities such as Alcoholics Anonymous, Narcotics Anonymous, group and individual therapy, weekly court appearances, probation appointments, drug screening, and other drug court team identified interventions. Compliance is encouraged by utilizing incentives and sanctions to encourage treatment court participants. Sanctions have included demotion in phase, curfew, fines, incarceration, and termination from the program. Incentives have been determined by the drug court team and may include gift cards, recognition, and certificates. Following graduation from the program, a graduate may petition the court to either dismiss, reduce, or expunge their criminal charges. Finally, the Cumberland County Adult Treatment Court provides the participant an opportunity to become substance free and to maintain sobriety.

It was unknown whether differences existed in demographics and treatment services utilized between opioid-addicted participants who completed versus those who failed to complete the Cumberland County Adult Treatment Court. The study focused on the application of therapeutic jurisprudence and structural ritualization theories with the expectation that age, gender, education, and type of treatment services utilized explained the differences between opioid-addicted participants who successfully completed and

those who failed to complete the Cumberland County Adult Treatment Court.

Additionally, the study comprised a quantitative causal comparative study utilizing secondary ex post facto data to conduct a Chi-square test to identify the retrospective differences between opioid-addicted participants who successfully completed and those who failed to complete the Cumberland County Adult Treatment Court.

### **Background of the Problem**

Drug treatment courts have increasingly become a significant part of the criminal justice process. Drug treatment courts were introduced in Florida in 1989 to break the continuous cycle of continued drug use and subsequent court involvement (Rundle & Talpins, 2021). Drug treatment courts were designed to reduce substance abuse through effective treatment, reduce the rate of recidivism, and decrease the number of offenders incarcerated, easing the burden on the criminal justice system (Liang et al., 2016b). Drug treatment courts have required abstinence from drug and alcohol use by providing structure, judicial intervention, treatment, and accountability with the incentive of the dismissal or reduction of sentences upon successful completion (Thielo et al., 2019). Additionally, drug courts have provided regular judicial interaction, frequent monitoring, substance abuse treatment, regular drug testing, status hearings, and coordinated efforts from drug court team members (Henry, 2018). Drug courts are managed by a team comprised of non-adversarial and multidisciplinary members, including judges, prosecutors, defense attorneys, treatment staff, probation officers, and social workers (Lanier & DeVall, 2017). Successful completion of drug court is often celebrated through graduation attended by the drug court treatment team, participants, and family members



(Henry, 2018). Finally, drug treatment courts have provided the avoidance of harsh sentences, cost savings, and enhanced public safety (Thielo et al., 2019).

With the increasing number of opioid drug overdoses, the need to address opioid addiction has become critical to drug treatment courts as evidenced by a 300% increase in opioid dependent drug treatment court participants in the United States over the past 10 years (Robertson & Swartz, 2018). Research has shown sociodemographic factors including age, sex, race, education, and employment are risk factors related to criminality and opioid use, creating the need for drug treatment courts to focus on the identification of at-risk individuals to improve outcomes for participants in their program (Montiel Ishino et al., 2020). Additionally, Gallagher et al. (2017) found education was the most significant predictor of successful completion of drug treatment court. Participants who did not obtain a high school diploma or GED were 2.6 times less likely to successfully complete the program (Gallagher et al., 2017).

Treatment services utilized by Cumberland County Adult Treatment Court included inpatient treatment, individual counseling, group therapy, Alcoholics Anonymous (AA) meetings, Narcotics Anonymous (NA) meetings, and medication-assisted treatment. Medication-assisted treatment (MAT) has provided the opportunity to utilize medications to control conditions for individuals during recovery from opioid use disorders to sustain recovery (Gallagher et al., 2021). Gallagher et al. (2021) found MAT improved participant treatment engagement and successful outcomes for opioid use drug court participants. Additionally, Shannon et al. (2020) found opioid-use participants had unique treatment needs that required individualized treatment options to increase program completion. As a result, drug treatment courts have shifted to a combination of traditional

treatment and MAT (Robertson & Swartz, 2018). Comparing treatment services utilized by individual participants, which have increased the success of opioid participants, and resulted in increased effectiveness of drug treatment courts.

### **Pennsylvania's Opioid Crisis**

Pennsylvania experienced an increase in the rate of opioid overdose deaths from 2008 to 2016, from 4.9 to 18.5 individuals per 100,000 (Hacker et al., 2018). In 2017, Pennsylvania experienced the third highest rate of drug overdose deaths in the United States, primarily due to opioid drug overdoses, with a rate of 44.3 per 100,000 compared to the national rate of 21.7 per 100,000 (Kawasaki et al., 2018). Pennsylvania's state prison inmate population increased from 46,028 to 49,911 between 2007 and 2016, with a recidivism rate of 60% as a result of legislative changes to the sentencing guidelines for drug-related offenses (Alladin & Hummer, 2018). Additionally, in 2019, 82% of the Pennsylvania Department of Corrections inmate admissions from Cumberland County were diagnosed with a substance abuse disorder and 29.3% of Cumberland County admissions used opioids within the last 12 months (Pennsylvania Office of Attorney General, n.d.).

### **Drug Treatment Court**

Concern for the number of state prison admissions due to opioid use created the need for the Cumberland County Adult Treatment Court to address both opioid use and other drug dependencies. Drug courts began to break the continuous cycle of drug use and court involvement to improve the lives of offenders and reduce the financial burden of incarceration (Rundle & Talpins, 2021). Wexler and Winick's therapeutic jurisprudence, developed in 1990, provided the theoretical foundation for drug treatment

court with the belief that the drug treatment court's structure provides therapeutic effects through the incorporation of mandatory treatment, supportive measures, and accountability through court monitoring and treatment while improving offenders' likelihoods of becoming productive members of society (Arstein-Kerslake & Black, 2020; Mei et al., 2019; Thielo et al., 2019). Treatment services utilized by participants within the Cumberland County Adult Treatment Court reinforce the individual treatment needs of opioid-addicted participants and the impact of therapeutic jurisprudence on improving the outcomes of individual opioid-addicted participants.

J. David Knottnerus' structural ritualization, developed in 1997, provides disruption of the old ritual of substance use through the threat of imprisonment, sanctions and rewards, and the establishment of new rituals through treatment and drug court monitoring to establish and maintain sobriety (Liang et al., 2016; Mei et al., 2019). The Cumberland County Adult Treatment Court has provided individual opioid-addicted participants the opportunity to develop new rituals to improve their outcomes based on their age, gender, and education level attained utilizing structural ritualization. The implementation of drug courts has grown dramatically, with more than 4,000 drug courts operating today to divert participants from traditional incarceration and provide a cost savings (Rundle & Talpins, 2021).

Existing research has focused on criminal justice policy response to offending drug users and relationships between drug usage and criminal behavior (Hayburst et al., 2017). Research regarding the success of drug courts has been readily available; however, little research has been completed regarding the impact of drug treatment court on

participants with opioid addiction coupled with successful completion. This is also true for the participants of the Cumberland County Adult Treatment Court.

### **Indicators of Opioid-Addicted Participants' Successful Completion**

Age, gender, race, employment, education, rural/urban residency, prior criminal justice involvement, and substance use have been found to impact a participant's successful completion of drug treatment court (Gallagher et al., 2018; Shannon et al., 2021). Gallagher et al. (2018) found opioid-addicted drug treatment court participants were 80% less likely to successfully complete drug treatment court compared to non-opioid addicted participants, confirming the need for the utilization of medication-assisted treatment to improve the probability of successful completion. Additionally, participants who were employed or had at least a high school diploma were more likely to successfully complete drug treatment court, which supported the need for drug courts to incorporate education into their programs (Lanier & DeVall, 2017; Shannon et al., 2021).

Shannon et al. (2021) found education, age, and employment impacted successful completion of opioid-addicted drug court participants, with 66.1% of graduates having a high school education or higher and 29.3% being employed, as well as being significantly older (31.08 years). Additionally, they confirmed the need to identify individual factors and risks of opioid-addicted participants, such as age and education, in developing services to improve successful completion of drug treatment court. Identifying existing research that addressed predictors of completion and factors related to those who did not complete drug treatment court provided crucial guidance for the development of this

study and provided administrators with critical information to improve the successful completion and outcomes of opioid-addicted participants.

### **Problem Statement**

It is not known whether differences exist between opioid-addicted participants who complete versus those who do not complete the Cumberland County Adult Treatment Court based on the types of treatment services received (inpatient treatment, Alcoholics Anonymous [AA] meetings, Narcotics Anonymous [NA] meetings, group and individual therapy, weekly court appearances, probation appointments, urine testing, and medication-assisted treatment), as well as the demographic make-up of the client (age, gender, and education). The specific population for the study was opioid-use participants who identified opioids as their drug of choice and participated in the Cumberland County Adult Treatment Court from 2006 to 2021. Substance abuse within the United States has been an ongoing problem, having resulted in 632,331 drug overdose deaths from 1999-2016 and 351,630 opioid overdose deaths over the same 17 years, driving policy development and creating significant financial constraints (Seth et al., 2018). The number of fatal opioid drug overdoses have increased to epidemic proportions, with opioid fatal overdoses increasing 200% from 2010 to 2015 (Brinkley-Rubinstein et al., 2018). In 2010, 84% of state prison inmates utilized or abused alcohol and other drugs and in 2016, and 58% of state prisoners displayed drug dependence, confirming the link between substance abuse and criminal activity (Rundle & Talpins, 2021). Current drug policy has been driven by the link between drug usage and criminal activity, necessitating the need to identify the differences between opioid-addicted inmates who successfully completed

or failed to complete drug treatment court to provide administrators the ability to modify current policies to improve opioid-addicted participant outcomes.

### **Purpose Statement**

The purpose of this quantitative, causal comparative study was to determine if differences existed between opioid-addicted participants' successful completion or failure to complete the Cumberland County Adult Treatment Court, with the expectation that age, gender, education, and type of treatment services utilized would explain the differences between successful completion and failure to complete the program. The specific population of the study was comprised of past participants of the Cumberland County Adult Treatment Court. The sample was drawn from former opioid-use drug treatment court participants of the Cumberland County Adult Treatment Court. The individuals included in this study were participants of the Cumberland County Adult Treatment Court who successfully completed all phases of the program or were discharged from the program for failing to successfully complete from 2006 to 2021. Permission was not needed from individual participants because the data was obtained from archival data recorded by the Cumberland County Adult Treatment Court, of which individual participants were unidentifiable. Archival data requests by individuals are reviewed and approved by the Cumberland County Adult Treatment team. Successful completion was identified as individual participants who completed all four phases of the Cumberland County Adult Treatment Court, including participants who have relapsed and were returned to the previous phase with modified treatment plans before progressing to the next phase and were recognized and recorded as graduates from the program (Gill, 2016). Failure to complete was identified as individual participants who failed to

complete the four phases of the Cumberland County Adult Treatment Court and were removed or unsuccessful in completing the program (Gill, 2016). Conclusions of the study were based on archival data collected by the Cumberland County Adult Treatment Court. This quantitative, causal comparative study utilized secondary data to conduct a Chi-square test that identified retrospective differences between opioid-addicted participants who successfully completed and those who failed to complete the Cumberland County Adult Treatment Court based on age, gender, education, and type of treatment services utilized.

### **Significance of the Study**

Substance abuse has placed a significant financial burden on the criminal justice system. Drug courts were established to provide effective substance abuse treatment to ease this burden and have been effective in reducing substance use and recidivism, thus allowing participants to live drug-free and crime-free lives (Gill, 2016). Gill (2016) found that predictors of successful completion of drug court included number of days in the program, having a high school diploma or GED, fewer jail sentence sanctions, and fewer rearrests. Additionally, Gill found a significant lack of literature and research on predictors of successful completion of opioid use drug court participants available, which reinforces the need for future research. Identification of factors that encourage and support successful completion of opioid use participants allowed for the determination of strategies for improving successful outcomes for opioid-addicted drug court participants.

Drug courts have provided the means to address reform regarding mass incarceration and the costs associated with incapacitation through mass incarceration. First, drug courts have advocated for sentencing reform for non-violent drug offenders, as

well as the provision of treatment-oriented diversion programs to decrease incarceration for those involved (Eaglin, 2016). Second, drug courts have provided a platform to discuss policy changes for the reduction of incarceration for non-violent drug offenses. Third, drug courts have provided a successful alternative to incarceration for non-violent drug offenders and provide cost savings to courts through reduced caseloads and prisons with reduced prison overcrowding. Finally, drug courts have provided evidence-based success measures that allow states to make criminal justice policy changes focused on being “smart on crime” and provide a new direction for criminal justice policy (Eaglin, 2016, p. 638).

### **Research Questions**

This study sought to address the following research questions:

**RQ1:** Is there a difference in the demographic makeup (age, gender, and education level) between opioid-addicted participants who complete versus those opioid addicts who do not successfully complete the Cumberland County Adult Treatment Court?

**H1:** There is a difference in the demographic makeup between opioid-addicted participants who complete versus those opioid addicts who do not successfully complete the Cumberland County Adult Treatment Court.

**H<sub>0</sub>1:** There is no difference in the demographic makeup between opioid-addicted participants who complete versus those opioid addicts who do not successfully complete the Cumberland County Adult Treatment Court.



**RQ2:** What differences exist in the level of treatment services utilized between opioid-addicted participants who complete versus those who do not complete the Cumberland County Adult Treatment Court?

**H2:** There are differences that exist in the level of treatment services utilized between opioid-addicted participants who complete versus those who do not complete the Cumberland County Adult Treatment Court.

**H<sub>0</sub>2:** There are no differences that exist in the level of treatment services utilized between opioid-addicted participants who complete versus those who do not complete the Cumberland County Adult Treatment Court.

**Dependent Variable:** The study utilized one dependent variable to answer the research questions identifying the differences between opioid-addicted participants who completed versus those who did not complete the Cumberland County Adult Treatment Court. The dependent variable was defined as successful completion of, or failure to complete, the Cumberland County Adult Treatment Court. Completion was conceptualized as successful completion when an individual participant successfully completed all phases of the Cumberland County Adult Treatment Court and was recorded as graduated from the program. Failure to complete was conceptualized as an individual participant who failed to complete all phases of the Cumberland County Adult Treatment Court or was removed from the program for any reason and was recorded as a failure to complete the program.

Completion was operationalized as an individual participant's successful completion of the requirements of the program, including treatment activities, weekly court appearances, probation appointments, drug screening, and other identified

interventions. Failure to complete was operationalized as an individual participant's failure to complete the requirements of the program including, treatment activities, weekly court appearances, probation appointments, drug screening, and other identified interventions, resulting in removal from participation in the program. Archival nominal data was obtained from data collected by the Cumberland County Adult Treatment Court to identify the completion status of the individual participants in the program.

**Independent Variables:** The study utilized four independent variables to answer the research questions identifying the differences between opioid-addicted participants who completed versus those who did not complete the Cumberland County Adult Treatment Court. The four independent variables included the demographics of age, gender, and education level as well as treatment services utilized by individual participants during participation in the Cumberland County Adult Treatment Court.

**Independent Variable One:** Age was defined as the age of the individual participant. Age was conceptualized as the age of the individual participant at the time of entrance into the Cumberland County Adult Treatment Court. Age was operationalized as the recorded age of the individual participant by the Cumberland County Adult Treatment Court at the time of entrance into the program.

**Independent Variable Two:** Gender was defined as the sex of the individual participant. Gender was conceptualized as the reported sex of the individual participant in the Cumberland County Adult Treatment Court. Gender was operationalized as the recorded sex of the individual participant by the Cumberland County Adult Treatment Court at the time of entrance into the program.

**Independent Variable Three:** Education level was defined as the level of education attained. Education level was conceptualized as the level of education attained by the individual participant at the time of entrance into the Cumberland County Adult Treatment Court. Education level was operationalized as the recorded education level attained by the individual participant at the time of entrance into Cumberland County Adult Treatment Court.

**Independent Variable Four:** Treatment services utilized was defined as the treatment services utilized by the individual participant. Treatment services were conceptualized as the services individual participants utilized during participation in the Cumberland County Adult Treatment Court, including Narcotics Anonymous meetings, Alcoholics Anonymous meetings, group and individual therapy, weekly court appearances, probation appointments, urine testing, and medication-assisted treatment. Treatment services utilized were operationalized by the individual participant's treatment services recorded by the Cumberland County Adult Treatment Court during participation in the program. Demographic information and treatment services utilized were collected from archival, nominal data provided by the Cumberland County Adult Treatment Court.

### **Definitions**

1. *Cumberland County Adult Treatment Court* - Cumberland County Adult

Treatment Court is a four-phase drug court designed to be completed in 18 months and comprised of individuals charged with drug-related crimes.

Cumberland County Adult Treatment Court diverts individuals from traditional prosecution while providing participants an opportunity for treatment-oriented activities and to become substance free and maintain sobriety (Cumberland

County PA, n.d.).

2. *Drug Treatment Courts* - These are special criminal courts that provide judicially supervised programs of drug abuse treatment, case management services, and drug testing to offenders who are nonviolent and abuse drugs. The courts are in lieu of criminal prosecution or incarceration (Marlowe et al., 2016).
3. *Drug Court Judge's Role* - The judge understands addiction, and is fair, encouraging, compassionate, accountable, and treats participants with respect (Kuehn & Ridener, 2016).
4. *Drug Offense* - This is an arrest for the possession, use, sale, or furnishing of any drug or drug paraphernalia that is prohibited by law (Spohn et al., 2016).
5. *Medication-Assisted Treatment* - Medication-assisted treatment is the combination of medication and counseling to treat opioid use disorders (Gallagher et al., 2021).
6. *Opioid* - Opioids are drugs that are derived from a natural plant, such as opium, morphine, and heroin, or are manufactured in a laboratory, such as Oxycodone, Methadone, and Fentanyl (O'Connor, 2019).
7. *Opioid Drug Overdose Death* - This is death caused by using high doses of both natural and synthetic opioids (Seth et al., 2018).
8. *Predictors of Program Failure* - Predictors of program failure include unemployment, poor family relations, history of needle use, and failure to attend drug court (Jewell et al., 2016).

9. *Dynamic Risk Factors* - Dynamic risk factors are those that can change during treatment, such as life events, legal problems, therapeutic interventions, and treatment readiness (Ruiz et al., 2018).
10. *Static Risks Factors* - Static risk factors are fixed traits that include age, gender, and prior criminal history (Ruiz et al., 2018).
11. *Substance Abuse* - Substance abuse is the excessive use of a substance such as alcohol or drugs that leads to significant impairment (Henry, 2018).
12. *Successful Completion of Drug Court* - A participant successfully completes drug court when they complete all elements of drug court, including treatment, appearances, abstinence from drug use, and compliance of all requirements (Gill, 2016).
13. *Unsuccessful Completion of Drug Court* - A participant fails to complete drug court when they fail to complete all elements of drug court, including treatment, appearances, abstinence from drug use, and compliance of all requirements (Gill, 2016).

### **Assumptions, Limitations, and Delimitations**

Assumptions, limitations, and delimitations are crucial to the design of any study.

The assumptions, limitations, and delimitations included the following:

**Assumptions:** Assumptions are aspects of the study that are assumed to be true (Theofanidis & Fountouki, 2019). The following assumptions have been identified in this study:

**Assumption One:** The secondary data collected and utilized in the study were accurate and allowed for the unbiased analysis of the data, prohibiting manipulation of

the data. Comparison of the secondary data of the two groups explained the differences between the two groups and the identification of causality among variables (Khaldi, 2017).

**Assumption Two:** It was assumed that opioid-dependent participants in the Cumberland County Adult Treatment Court provided accurate demographic information (age and education) in this study.

**Assumption Three:** It was assumed that the individuals included in this study met the criteria for having opioid dependency, and the opioid-based drugs were reported as their main drug choice.

**Limitations:** Limitations are weaknesses of the study which are out of the control of the researcher (Theofanidis & Fountouki, 2019). The following limitations were identified in this study:

**Limitation One:** The causal comparative design could not determine the cause and effect between the relationships between variables. Causal comparative design only seeks to discover the differences between two or more groups based on ex post facto events that have already occurred.

**Limitation Two:** The variables of the study could not be manipulated. In this study, manipulation of the dependent variable could not occur because the outcome of the individual participants' completion has already been determined and cannot be changed.

**Limitation Three:** Participation in this study was limited to opioid-dependent participants, excluding all other drug treatment court participants from participation in this study. The study was specific to opioid-dependent participants and only opioid-dependent participants were included in the sample for this study. Studies are limited in

their ability to compare all drug treatment courts based on the type of drug court and participants included in the study (Devall et al., 2017).

**Delimitations:** Delimitations are boundaries of the study established by the researcher and in the researcher's control (Theofanidis & Fountouki, 2019). The following delimitations have been identified in this study:

**Delimitation One:** The sample of this study included only opioid-dependent participants from the Cumberland County Adult Treatment Court. No other opioid-dependent individuals were included in this study unless they were involved in the Cumberland County Adult Treatment Court.

**Delimitation Two:** Race of participants of the Cumberland County Adult Treatment Court was not included as an independent variable. The racial breakdown of the population of Cumberland County, Pennsylvania, is 84.6% Caucasian, 4.8% Asian, 4.7% African American, 4.3% Hispanic, and 1.6 Other, limiting the ability to accurately compare the differences in completion based on race (Cumberland County PA, 2021). As such race was excluded from the study.

**Delimitation Three:** The sample of this study included only opioid-dependent participants and their treatment services from the Cumberland County Adult Treatment Court. No treatment services utilized by non-opioid dependent participants were included in this study unless they were opioid-dependent participants in the Cumberland County Adult Treatment Court.

### **Summary**

Chapter One included a discussion on how drug courts were introduced to break the continuous cycle of drug use and court involvement. Additionally, opioid use and its

impact on the individual and the criminal justice system were examined. The effectiveness of drug courts has been well researched; however, there is a lack of research on the impact of drug courts on opioid-addicted participants. The comparison of opioid-addicted drug court participants allowed for the identification of the needs of opioid-addicted participants in drug courts. The research answered the following questions: Is there a difference in the demographic makeup (age, gender, and education level) between opioid-addicted participants who complete versus those opioid addicts who do not successfully complete the Cumberland County Adult Treatment Court? What differences exist in the level of treatment services utilized between opioid-addicted participants who complete versus those who do not complete the Cumberland County Adult Treatment Court?

Drug courts have shared common goals using different means to reach their goals. They have attempted to decrease substance abuse and criminal behavior by offering the participant treatment as an alternative to incarceration. Substance abuse has placed a significant financial burden on the criminal justice system, but drug courts have been effective in allowing participants to live drug free and crime-free lives. Sentencing reform for non-violent drug offenders is largely a result of the advocacy of drug courts (Eaglin, 2016). The operational definitions for this study assisted in a clearer understanding of the research.

The study addressed the differences between opioid-addicted participants who successfully completed and opioid-addicted participants who failed to complete the Cumberland County Adult Treatment Court. The assumptions, limitations, and delimitations of the study were crucial to the design. Chapter Two provides a literature



review focused on opioid use, drug courts and their effectiveness, the impact of substance abuse on families, indicators of successful drug court graduation, and the utilization of medication-assisted treatment in drug courts. The literature provides an overview of opioid use, drug courts, and indicators of completion, including demographic characteristics and treatment services utilized.

## CHAPTER TWO: LITERATURE REVIEW

### Overview

Substance abuse within the United States has been an ongoing problem, with Pennsylvania experiencing opioid overdoses in epidemic proportions (Kawasaki et al., 2018). According to the Centers for Disease Control and Prevention (2017), opioid use has increased 109% for adults aged 18 to 25, and there has been a 58% increase in opioid use in adults aged 26 and older in the last decade. As a result, patients seeking treatment for opioid use disorder nearly doubled from 2005 to 2015, increasing from 18% in 2005 to 34% in 2015 (Kopak et al., 2018). The opioid epidemic has cost the United States an estimated 504 billion dollars (Gallagher et al., 2019b).

A literature review addressed topics relating to substance use, opioid use, drug treatment courts, indicators of success, and medication-assisted treatment. However, little research was available regarding the impact of variables such as age, gender, education, and treatment services utilized by opioid-addicted participants on successful completion of drug treatment court. The Cumberland County Adult Treatment Court provided participants with treatment-oriented activities while diverting individuals from traditional prosecution. The Cumberland County Adult Treatment Court has utilized treatment services including inpatient treatment, individual counseling, group therapy, AA meetings, NA meetings, and medication-assisted treatment for drug court participants (Cumberland County PA, 2021). Identification of the individual drug court participants' treatment needs was crucial to their successful completion. Identification of a participant's age, gender, and educational level during the development of the participant's individual plan during the various phases of the program have provided the

opportunity for the drug court team to meet the individual participant's needs and improve their outcomes. It is unknown whether differences existed between opioid-addicted participants who successfully completed versus those who failed to complete the Cumberland County Adult Treatment Court. The research study added to existing research that provides crucial information regarding the impact of drug treatment courts on opioid-addicted participants' successful completion.

To begin the research for the development of this chapter, a general word search was conducted within the Liberty University Library search engine utilizing SAGE journals, Pro quest, Taylor & Francis, Science Direct, and EBSCO Host. The terms searched included "*substance use*," "*substance use and families*," "*opioid use*," "*opioid epidemic*," "*opioids and crime*," "*drug treatment court*," "*opioid use and drug court*," "*opioid use participant success in drug court*," "*predictors of success in drug court*," and "*opioid medical-assisted treatment and drug treatment court*." Based on the search of these key words, the following journals provided multiple relevant articles utilized in the literature review, including "*Crime and Delinquency*," "*Drug and Alcohol Dependence*," "*International Journal of Offender Therapy and Comparative Criminology*," "*Journal of Social Work Practice in the Addictions*," "*Journal of Offender Rehabilitation*," "*Journal of Substance Abuse Treatment*," "*Journal of Drug Issues*," and "*The International Journal of Drug Policy*." All journal articles utilized were published within the past five years due to the need to examine the recent state of the opioid epidemic and its impact on opioid use, families, crime, and drug courts.

The literature provided an effective representation of research regarding risk factors of opioid use and fatal overdoses (Hacker et al., 2018; Montiel Ishino et al., 2020;

Testa et al., 2018; Thompson et al., 2020). Multiple studies provided an effective representation of research regarding predictors of successful completion of drug treatment court (Gallagher et al., 2017; Gill, 2016; Goldkamp et al., 2016; Kuehn & Ridener, 2016). An adequate representation of research regarding predictors of successful completion from drug courts was available (Gallagher et al., 2019b; Shannon et al., 2020; Shannon et al., 2021; Wilson et al., 2018). In contrast, a limited representation of research on opioid-use drug treatment court participants and the utilization of medication-assisted treatment confirmed the need for further research in this area (Gallagher et al., 2021; Joudrey et al., 2021; Shannon et al., 2020). Prior literature has suggested a need for the study (Gallagher et al., 2021; Hayburst et al., 2016; Joudrey et al., 2021; Shannon et al., 2020).

### **Theoretical Framework**

Therapeutic jurisprudence and structural ritualization theory have often been applied in drug treatment courts (Belenko, 2019; Lanier & DeVall, 2017; Mei et al., 2019). Therapeutic jurisprudence has provided an opportunity to improve the wellbeing of an individual by utilizing a team of interdisciplinary professionals to develop a solution to therapeutically address the cause of an individual's involvement in the criminal justice system (Arstein-Kerslake & Black, 2020). Therapeutic jurisprudence was developed by Wexler and Winick in the 1990s and became one of the most important theoretical approaches to law (Arstein-Kerslake & Black, 2020). Therapeutic jurisprudence has provided the theoretical foundation for drug treatment court with a morally oriented philosophical approach and the belief that established rules have provided therapeutic effects utilizing a non-adversarial and hands-on judicial

involvement, intermediate interventions, and a team approach with clear rules for drug treatment court participants (Arstein-Kerslake & Black, 2020; Mei et al., 2019).

Therapeutic jurisprudence has promoted the psychological and physical wellbeing of drug court participants through the incorporation of mandatory treatment, supportive measures from the drug court team, accountability through court monitoring, scheduled appearances before the judge, and rehabilitative progressive treatment that empowers participants to obtain sobriety (Mei et al., 2019). Additionally, drug treatment court has provided a natural application of therapeutic jurisprudence with its collaborative approach between the judge and participants, its voluntary nature, and the delivery of treatment services (Traguetto & Guimaraes, 2019). Therapeutic jurisprudence transitioned the role of the judge to that of educator, communicator, collaborator, and leader. Finally, the application of therapeutic jurisprudence to drug treatment courts has provided the means to rehabilitate drug court participants, allowing participants to live drug- and crime-free lives (Arstein-Kerslake & Black, 2020).

Structural ritualization theory was developed by Knottnerus in 1997 and focuses on the role of ritualized symbolic practices involving the regular and repetitious actions of individuals that form their social behaviors (Liang et al., 2016). In relation to drug treatment courts, structural ritualization theory has disrupted old rituals of substance use through the threat of imprisonment, sanctions and rewards, detoxification, and disassociation of habits and friends (Belenko, 2019; Lanier & DeVall, 2017).

Additionally, structural ritualization theory has provided a foundation for drug treatment court participants to establish new rituals through treatment and drug court monitoring to establish and maintain sobriety (Mei et al., 2019). Salience, repetitiveness,

homologousness, and resources are utilized to influence the importance of rituals and their impact on drug treatment court participants (Lanier & DeVall, 2017). Structural ritualization theory has focused on eliminating participant addiction and encouraged new positive ritualized behaviors of participants (Liang et al., 2016).

### **Phenomena Being Explored**

Pennsylvania experienced the third highest rate of drug overdose deaths in the United States in 2017, primarily due to opioid drug overdoses (Kawasaki et al., 2018). The opioid epidemic has resulted in a 300% increase in opioid-addicted drug treatment court participants, creating the need to address the individual needs of opioid-addicted participants (Robertson & Swartz, 2018). Opioid-use drug treatment court participants have been less likely to successfully complete drug treatment court (Gallagher et al., 2018; Shannon et al., 2021).

Sociodemographic factors including age, sex, race, and education have been related to opioid use and criminal activity, influencing the probability of whether a participant will successfully complete drug treatment court (Montiel Ishino et al., 2020). Drug of choice has determined the likelihood of drug court successful completion, with opioid use decreasing the likelihood of successful completion of the program (Shannon et al., 2018). The older an individual was at the time of their first use of illegal drugs and at the time of entrance into drug treatment court impacted the likelihood of successful completion. Older drug treatment court participants were more likely to graduate than younger participants (Shannon et al., 2018). Additionally, the level of education attained influenced the likelihood of successful completion of drug treatment court, with high

school graduates having a greater likelihood of successfully completing drug treatment court (Shannon et al., 2018).

Treatment services were crucial to the successful completion of drug treatment court. Opioid-addicted participants have been identified as having unique needs that require individualized treatment options to increase the likelihood of successful completion (Shannon et al., 2021). The adoption of medication-assisted treatment for opioid-addicted participants in combination with traditional treatment services increased the likelihood of successful completion (Witkins & Hays, 2017). The research study showed the differences between the opioid-addicted participants who successfully completed or failed to complete the Cumberland County Adult Treatment Court based on the demographic makeup as well as treatment services utilized, which will assist program administrators in pinpointing the level of services that an opioid-addicted participant might utilize to successfully complete and provide the opportunity for the implementation of program practices to improve participant outcomes.

### **Substance Use**

Substance abuse is a growing problem with significant consequences; more than 22,000,000 Americans have engaged in some form of substance abuse over the course of their lives (Jewell et al., 2017). In the United States, approximately 50% of federal inmates were incarcerated for drug-related offenses, and approximately 50% of both state and federal inmates met the criteria for substance abuse disorder (Jun & Fairbairn, 2018). Similarly, 72% of incarcerated females and 62% of incarcerated males in jails met the criteria for substance abuse disorder, resulting in the criminal justice system becoming the largest treatment provider of substance abusers in the United States (Bello et al.,

2020). Additionally, substance abuse within the United States resulted in 632,331 known drug overdose deaths from 1999-2016, including 351,630 known opioid overdose deaths (Seth et al., 2018). The number of fatal opioid drug overdoses has increased to epidemic proportions, with opioid overdose deaths having increased 345% from 2001 to 2016 (Montiel Ishino et al., 2020).

### **Opioid Use Risk Factors**

Prescribed opioid misuse and opioid abuse have been associated with criminal activity, mental health disorders, and other substance abuse (Montiel Ishino et al., 2020; Pierce et al., 2017). Pierce et al. (2017) found opioid-use individuals experienced higher rates of prior offending and increased levels of offending. Finally, females experienced higher offense rates with less serious offenses (Pierce et al., 2017).

Opioid-use risk factors have provided insight into the factors which have influenced the opioid epidemic. Thompson et al. (2020) found social interactions, coping strategies, lack of community resources, and structural disadvantages provided insight into the drivers of the opioid epidemic. Additionally, environmental, economic, and social factors have all contributed to the opioid epidemic (Hacker et al., 2018; Montiel Ishino et al., 2020; Shefner et al., 2020; Thompson et al., 2020; Vekaria et al., 2021).

Individuals diagnosed with opioid use disorder utilized healthcare services more frequently, required medication-assisted treatment, and experienced more severe withdrawal symptoms than other illegal substances. Additionally, access to prescription opioids created additional risk factors to individuals diagnosed with opioid use disorder. Opioid users who experienced relapse were significantly more likely to fatally overdose than other substance-addicted individuals.



In 2017, 68% of fatal drug overdoses resulted from opioids, causing 47,600 deaths (Shannon et al., 2021). The opioid epidemic significantly impacted the United States financially, resulting in increased opioid-related costs such as emergency room visits, outpatient treatment, and inpatient hospitalization, from 919 million dollars in 1999 to 696 billion dollars in 2018. Approximately 25% of individuals incarcerated in the United States in 2018 had an opioid use disorder, creating a significant burden on the criminal justice system. Drug treatment courts have provided a means to reduce the financial burden on the criminal justice system, provided crucial treatment, and improved the positive outcomes of individuals with opioid use disorder.

In 2017, Pennsylvania experienced the third highest rate of drug overdose deaths in the United States, due primarily to opioid drug overdoses (Kawasaki et al., 2018). Testa et al. (2018) conducted the first study to examine risk factors for post-release mortality across racial and ethnic groups among Pennsylvania state prisoners. Results found males, Caucasians, non-married individuals, individuals with prior arrests, and violent crime arrests had a higher post-release mortality rate (Testa et al., 2018).

Behaviors within one year of release and timing of the last substance abuse treatment received were crucial in determining future risk factors for fatal drug overdoses (Hacker et al., 2018). Hacker et al. (2018) found Allegheny County, Pennsylvania, experienced 1,399 opioid drug overdose deaths from 2008 to 2016, of which 89.3% were Caucasian, 68.0% were male, 57.5% were age 35-39, and 55.5% had been incarcerated. Additionally, 211 individuals were incarcerated within the previous year of their fatal drug overdose, of which 25.6% died within 30 days from their release from jail (Hacker et al., 2018). Of the 350 individuals utilizing substance abuse services, 38.3% died within

30 days of their last substance abuse service (Hacker et al., 2018).

### **Coexisting Disorders**

Coexisting disorders have involved the co-occurrence of more than one disorder, including the combination of a mental health disorder and a substance use disorder (Ujhelyi Gomez et al., 2019). Over 64 million people have been diagnosed with coexisting substance abuse and mental health disorders (McCance-Katz, 2018). In 2016, 2.1 million individuals experienced a co-occurring mental health and opioid use disorder (Minnerly et al., 2019). In 2018, over 500,000 individuals diagnosed with an opioid use disorder also experienced a major depressive episode (Vekaria et al., 2021). Vekaria et al. (2021) found that individuals who experienced co-occurring opioid use disorder and mental depressive disorder and used heroin were 19 times more likely to experience criminal justice involvement than other substance abuse disorders. Additionally, 72% of opioid users with co-occurring mental depressive disorder utilized inpatient integrated services.

The 21<sup>st</sup> Century Cures Act created a position to solidify the collaboration of substance abuse and mental health agencies to ensure both mental health and substance abuse disorders were addressed using evidence-based practices (McCance-Katz, 2018). The Substance Abuse and Mental Health Services Administration shifted its efforts to provide evidence-based psychiatric treatment and collaborative efforts with organizations providing recovery support through the development of new models of service (McCance-Katz, 2018). Finding the appropriate treatment for dually diagnosed clients has been critical to their success in daily living (McCance-Katz, 2018).

Ujhelyi Gomez et al. (2019) conducted qualitative research that investigated the

potential of positive psychosocial intervention in the treatment of dual diagnosis clients. The results found readiness levels need to be addressed when recruiting clients to provide the appropriate treatment (Ujhelyi Gomez et al., 2019). Additionally, the study indicated that the use of treatment that provides a positive strength-based approach was an effective supplement to current treatment. These results reaffirmed the need for a balance between education and practice in the treatment of dually diagnosed clients (Ujhelyi Gomez et al., 2019). Future studies are needed to adequately address the most effective treatment for the dually diagnosed, allowing them to live fully engaged with family members.

### **Drug Treatment Court**

Drug treatment court has been a restorative justice model which has provided a problem-solving environment to address the root cause of a participant's drug-related crime and diverts individuals into treatment instead of prison (Henry, 2018). Drug treatment courts began in 1989 in Dade County in Miami, Florida, under Judge Goldstein (Thielo et al., 2019). The implementation of drug courts has grown dramatically over the years, with more than 4,100 drug courts operating today (Shannon et al., 2020). Drug treatment courts have provided participants with regular judicial interaction, frequent monitoring, substance abuse treatment, regular drug testing, status hearings, and coordinated efforts from drug court team members. These team members include judges, prosecution counsel, defense counsel, supervising probation officers, and treatment providers (Henry, 2018).

### **Drug Treatment Court Key Components**

The National Association of Drug Court Professionals developed 10 key components of drug courts in 1997, providing guidance in the administration of drug

courts (Henry, 2018). The 10 key components included: the integration of substance abuse treatment in case processing, a non-adversarial approach between counsels, early identification and participation, access to substance abuse treatment, testing to prove no drug use, coordinated response to compliance, continuous court interaction, effective monitoring, ongoing staff education, and established working relationships between the court and community.

The 10 key components of drug courts have been the focus of both qualitative and quantitative research. Gallagher et al. (2019b) identified the need for research from the participants' perspective after only identifying one other study regarding the participants' perspective. Gallagher et al. (2019b) surveyed participants from drug treatment court regarding their experiences in drug court and found drug treatment court staff to be supportive, caring, and a valuable resource for participants. The survey consisted of five questions relating to six of the key components, including substance abuse treatment as a key component of case processing, non-adversarial communication between prosecution and defense, participants having access to continuous substance abuse treatment, abstinence through periodic drug testing, coordinated court response to participant compliance, and scheduled judicial interaction (Henry, 2018).

Gallagher et al. (2019b) found the Monroe County Drug Court to be supportive and caring, providing a valuable resource for participants. Participants expressed the desire for more individual counseling but felt counseling was overall punitive in nature, with judgmental counselors rather than rehabilitative. Additionally, respondents felt the judge's praise and encouragement was one of the most helpful incentives of drug court (Gallagher et al., 2019). In fact, continuous praise and encouragement was key to a

participant's abstinence and maintenance of positive changes in behavior. A strength of the qualitative study was the minimization of social desirability bias, which involves respondents reporting answers that are perceived as more socially acceptable than their true response (Gallagher et al., 2019b). Utilizing established key components of drug court has proven to be effective in encouraging successful completion of drug treatment court.

### **Purpose of Drug Treatment Court**

Drug treatment court has provided a problem-solving environment which addresses the root cause of a participant's drug-related crime and diverts individuals into treatment instead of prison (Lanier & DeVall, 2017). Drug treatment courts have required abstinence from drug and alcohol use and participation in substance abuse treatment, with the incentive of the dismissal or reduction of sentences upon successful completion (Thielo et al., 2019). Drug courts have been managed by a team comprised of non-adversarial and multidisciplinary members, including judges, prosecutors, defense attorneys, treatment staff, probation officers, and social workers (Lanier & DeVall, 2017). Additionally, drug treatment courts have provided regular judicial interaction, frequent monitoring, substance abuse treatment, regular drug testing, status hearings, and coordinated efforts from drug court team members. Finally, they have provided accountability, avoidance of harsh sentences, cost savings, and enhanced public safety (Thielo et al., 2019).

### **Motivation of Participants**

Drug courts have attempted to stop substance abuse and criminal behavior by offering the participant treatment as an alternative to incarceration. Incentives for

successful completion have included dismissal of the original charge, reduction of a sentence, or a combination of incentives (Thielo et al., 2019). Failure to comply or complete drug court has resulted in additional sanctions. Hepburn and Harvey (2016) reviewed evaluations of eight different drug courts and Shannon et al. (2018) found completion rates ranged from 8% to 95%, with high dropout rates significantly impacting their completion rates. Drug treatment courts must increase successful outcomes for participants by developing alternative strategies to improve participant retention and completion rates by utilizing established key components (Hepburn & Harvey, 2016).

### **Drug Treatment Court Goals and Objectives**

Drug court key components have been applied progressively throughout the stages of drug court, which generally last from 12 to 18 months. Participants may have been required to attend inpatient substance abuse treatment prior to entry into drug court. Initially, stabilization of the participant is obtained through assessment, treatment, curfews, frequent court status hearings, case plan development, drug testing, and supervision (Jewell et al., 2017). Compliance is also further encouraged through rewards and sanctions. Step down provisions included decreased treatment sessions, decreased court appearances, continued drug testing, program compliance, employment, abstinence from substance use, and transition planning for aftercare. Finally, completion of the program occurs with implementation of aftercare services such as additional outpatient treatment, telephone continuing care, recovery management checkups, and peer mentors to assist drug court graduates in maintaining abstinence from substance use (Shannon et al., 2018).

## **Drug Testing**

Routine drug testing has been a critical element to the success of drug courts. In drug courts, participant abstinence leads to rewards and failure to abstain results in sanctions (Moeller et al., 2017). Drug tests have been the means by which rewards, and sanctions were identified in drug court (Moeller et al., 2017). Accurate interpretation of urine drug tests has been critical to the effectiveness of drug court and the success of individual participants. Gallagher et al. (2019) found 66% of opioid-use participants identified drug testing as a critical component to drug court that provided accountability and helped them to maintain abstinence and sobriety.

## **Treatment Issues**

In 2017, an estimated 19.7 million individuals suffered from substance abuse disorders in the United States (Gallagher et al., 2019b). Treatment has been imperative to recovery as well as the success of a participant in drug court. In 2013, 2.5 million individuals reported seeking substance abuse treatment (Gallagher et al., 2019b). The number seeking substance abuse treatment compared to the number reporting substance abuse is alarming. Existing research regarding predictors of treatment engagement varied in results. Additionally, education and employment have not been found to impact engagement in treatment; however, marital status and homelessness were identified predictors of treatment engagement (Gallagher et al., 2019b; Sloas et al., 2018).

Dynamic predictors such as social supports, mental health problems, and medical illness have been found to increase the probability of treatment engagement. Motivation for treatment engagement has been influenced by demographics, social supports, and severity of the substance abuse (Sloas et al., 2018). Additionally, multiple studies found

support for treatment readiness was a predictor of treatment engagement (Gallagher et al., 2019b; Robertson & Swartz, 2018; Sloas et al., 2018). However, there has been a lack of consensus of conceptual and operational definitions of treatment readiness, which has created an ambiguity in findings regarding the research of the predictive validity of treatment readiness (Sloas et al., 2018).

Sloas et al. (2018) attempted to identify treatment readiness as a predictor of treatment engagement through binary logistic regression research. The study sample included 5,443 intake records of adult substance abuse treatment clients in which client characteristics, treatment outcomes, and treatment participation indicators were measured (Sloas et al., 2018). Results found treatment readiness was a predictor of treatment engagement or participation in treatment sessions and suggested the need for future research regarding the relevance of treatment readiness (Sloas et al., 2018). Treatment readiness is the first step towards engagement in substance abuse treatment.

With the increasing opioid crisis in the United States and the increasing number of drug overdoses, the need to address opioid addiction has become critical to drug courts. Individuals with an opioid addiction have been more likely to be incarcerated than receive treatment (Robertson & Swartz, 2018), and drug courts have been faced with an increasing number of participants addicted to opioids. Additionally, drug courts have provided the means to direct individuals with substance abuse disorders away from incarceration, providing a benefit to both the community and criminal justice agencies.

The opioid epidemic has created a 300% increase in opioid-dependent drug court participants over the past 10 years (Robertson & Swartz, 2018). Drug courts have shifted to a combination of treatment and medication-assisted treatment using extended-release



naltrexone, a synthetic drug used in the treatment of heroin addiction. However, it has been identified that more research is needed for a detailed cost-effective analysis of the use of medication-assisted treatment to achieve standard implementation of the use of medication-assisted treatment in drug courts within the United States (Robertson & Swartz, 2018). Research findings have had significant implications for drug court policies regarding the effectiveness of the use of medication-assisted treatment in reducing relapse and improving outcomes for drug court participants (Robertson & Swartz, 2018).

### **The Judge's Role**

The judge was found to have a significant impact on the day-to-day operations of drug courts. Logan and Link (2019) found the judge's judicial knowledge of drug courts and substance abuse treatment to be critical to the success of the court. Furthermore, the judge's demeanor and treatment of individual participants was critical to the legitimacy of the process (Logan & Link, 2019). Additionally, the participant's perception of the judge's fairness and respectfulness was found to increase the effectiveness of the court and the motivation of the individual participants, which resulted in improved outcomes overall. However, since the judge's demeanor and treatment of drug court participants could positively or negatively impact the outcomes for participants, it can be detrimental to the court if a judge is degrading or less than sympathetic during court proceedings. The judge has been the most powerful moderator of drug court outcomes and as a result has a significant responsibility to provide an encouraging and respectful environment (Logan & Link, 2019).

Research has further found that judicial status hearings play a critical element of drug court, with the judge having the responsibility to evaluate the participant's

performance (Marlowe et al., 2016). The drug court judge could communicate to participants that someone of authority cares about them and has been closely monitoring them because the judge wants them to succeed. Judges have the potential to have the greatest impact on clients throughout the process of drug court. Marlowe et al. (2016) hypothesized that judicial status hearings would have the greatest impact on participants who were younger, higher risk, experienced an early onset of criminal behavior, had significant substance abuse problems, were diagnosed with antisocial personality disorder, and/or previously failed drug treatment. A replication study found more than 80% of participants who had status hearings bi-weekly successfully graduated from drug court in comparison to less than 20% of those participants who had status hearings on an as-needed basis with no set status hearing scheduled (Marlowe et al., 2016).

Marlowe et al. (2016) found high-risk participants scheduled to meet with the judge bi-weekly in status hearings performed substantially better in drug court as the result of increased interaction with the judge. Additionally, Marlowe et al.'s study confirmed the predictive elements of the hypothesis—antisocial personality disorder and drug treatment history are reliable risk factors in misdemeanor drug courts. Four experimental studies in five adult drug courts found drug court participants who were identified as higher risk performed significantly better when meeting with the judge in status hearings on a bi-weekly basis (Marlowe et al., 2016). Low-risk participants were successful regardless of whether they met with the judge bi-weekly or on an as-needed basis (Marlowe et al., 2016). This study confirmed the significance of the judge's role in drug court and the potential positive impact judges can have on participants (Marlowe et al., 2016).

## **Rewards and Sanctions to Encourage Participant Compliance**

Drug courts have rewards and graduated sanctions based on deterrence theory and used as a means of encouragement and accountability regarding compliance of participants. Judges have been provided a wide range of available options for sanctions and rewards. Sanctions imposed by the judge may include increased frequency of status hearings, additional treatment sessions, drug tests, demotion to an earlier level of drug court, short term incarceration, and termination of drug court (Liang et al., 2016). Rewards awarded by the judge may be comprised of verbal praise or encouragement, promotion to the next level of drug court, gift cards, token gifts, the removal of sanctions, recognition certificates, and graduation from drug court. Rewards and sanctions are meant to motivate participants to comply with program obligation, completion of treatment, and abstinence from drug use (Liang et al., 2016; Lindquist et al., 2016). Lindquist et al. (2016) explored the sanctions and rewards utilized by five drug courts, including the level of standardization, decision-making behind the process of administration of the rewards and sanctions, and the participants' understanding of the process. Lindquist found certainty and predictability were identified as useful dimensions of rewards to measure the drug courts' success (Lindquist et al., 2016). The implementation of rewards and sanctions has been researched; however, participant perceptions of rewards and sanctions have not been extensively researched. The decision-making process of determining the imposition of sanctions and their impact on participant completion must be further researched for the implementation of such deterrents to be successful (Lindquist et al., 2016).

Drug court judges hold routine status hearings with participants. Each participant

appears before the judge to review their drug test results and provides an update of their progress in treatment, at which time the judge will impose sanctions for infractions as well as rewards for achievements (Festinger et al., 2018; Sloas et al., 2019). Festinger et al. (2018) questioned whether participants understood these status hearings and the reasoning behind the judges' responses and believed that providing visual performance feedback such as pictures or graphs would improve participants' perceptions of procedural justice and the probability of success. Festinger et al. further questioned whether participants were able to make the correlation between their behaviors and the resulting consequences. The results of the study found that visual performance feedback was feasible and effectively provided information to the participants during their status hearings.

Rewards have been found to motivate drug court participants to comply with treatment and abstain from drug use (Sloas et al., 2019). Utilization of rewards is as beneficial as imposing sanctions; additionally, contingency management provides consistency (Sloas et al., 2019). Sloas et al. (2019) found that rewards coupled with substance abuse treatment strengthen the participant's success and completion in drug treatment court and identified them as key elements impacting the effectiveness of drug courts.

### **Effectiveness of Drug Courts**

For over 30 years, drug courts have proven to positively impact individuals with substance abuse disorders. Drug courts are comprised of three phases, including stabilization, intensive treatment, and transition (Logan & Link, 2019). First, the stabilization phase involves detoxification, an initial assessment for substance abuse

disorder, and a risk assessment of criminal behavior. Second, the intensive treatment phase provides drug and alcohol treatment in addition to supportive services to meet participants' individual needs. Individual therapy sessions and group sessions are the most common means of treatment in drug courts. For participants who need more intensive services, inpatient residential treatment is provided. Third, the longer patients remain in treatment the better the outcomes for the participants. Finally, the transition phase occurs near the end of the process and prepares the drug court participant for independence. Drug courts may assist participants in finding employment, housing, and furthering their education (Logan & Link, 2019).

Comprehensive meta-analytical reviews have provided the greatest support to drug courts in determining their effectiveness. The quality of research has been evaluated using the Downs and Black scale criteria, which utilizes five domains: reporting, external validity, confounding, risk of bias, and statistical power (Werb et al., 2016). Additionally, quantitative research has provided valuable information to drug courts that has allowed them to increase the effectiveness of their programs (Logan & Link, 2019). Finally, in-depth interviews have been used to evaluate perceptions of drug court components and aid participants in the process of recovery (Kuehn & Ridener, 2016).

Participant perceptions could impact the effectiveness of drug courts. Kuehn and Ridener (2016) performed in-depth interviews and found that participant perceptions of drug courts focused on program success, the role of social supports in recovery, motivation for program completion, and program weaknesses. Participants reported that drug courts provided structure and accountability that assisted in their sobriety. Additionally, it was reported that the success of the drug court was driven by the

probation officer, case manager, and judge (Kuehn & Ridener, 2016). Finally, the results showed the totality of the program determined effectiveness rather than the individual elements of the program (Kuehn & Ridener, 2016). Participants reported personal relationships formed with drug court team staff were crucial to their success (Kuehn & Ridener, 2016).

Kuehn and Ridener (2016) found that drug court structure, assistance, team staff, accountability, participant's motivation, and social supports mattered the most in determining the effectiveness of drug treatment courts. The implication of drug courts has been that participants needed both a dedicated and supportive team and high-quality treatment to maneuver them successfully through the process. Additionally, by giving participants a voice, this study provided valuable insight into the identification of the variables that contribute to their success in drug courts. Drug courts have provided a coordinated collection of methods, functions, and activities that serve as a deterrent to further abuse and a rehabilitative model to participants (Goldkamp et al., 2016). Research has proven the effectiveness of drug courts.

### **Indicators of Successful Completion of Drug Treatment Court**

Gallagher et al. (2017) surveyed a Midwestern drug treatment court and found that participants' incentives, verbal praise from the judge, and the accountability of drug tests supported recovery and encouraged successful completion. However, participants viewed treatment as punitive, not rehabilitative, and viewed low-quality treatment as a barrier to successful completion (Gallagher et al., 2017). Next, Kuehn and Ridener (2016) conducted in-depth interviews in a Pennsylvania drug treatment court to investigate program components and the challenges experienced by participants. Results indicated

that participants perceived structure, accountability, dedicated staff, incentives, a changed level of motivation, and social support all encouraged their successful completion of the program (Kuehn & Ridener, 2016). Perceived weaknesses of the program included sanctions, lack of quality treatment, extensive reporting requirements, interference with work, and social support within the program.

Goldkamp et al. (2016) researched whether drug courts work and how they work to deliver positive impacts. Goldkamp et al.'s study found court appearances, sanctions, treatment, participant attributes, and the effective operation of the program supported graduation from drug treatment court. Gill (2016) also found education level, employment, sex, and number of days spent in the program as additional predictors of successful completion. Lastly, the treatment court judge played a critical role in supporting and motivating successful completion (Gallagher et al., 2019b; Gill, 2016; Goldkamp et al., 2016; Kuehn & Ridener, 2016; Marlowe et al., 2016; Roman et al., 2020).

### **Opioid-Addicted Drug Court Participation**

With the increasing number of drug overdoses, the need to address opioid addiction has become critical to drug treatment courts. The opioid epidemic has created a 300% increase in opioid-dependent drug court participants over the past 10 years (Robertson & Swartz, 2018). As a result, drug treatment courts have shifted to a combination of traditional treatment and medication-assisted treatment that utilizes extended-release naltrexone in the treatment of heroin addiction (Robertson & Swartz, 2018).

Hayburst et al. (2016) found the onset of opiate use was 19.6 years, with females having lower offense rates prior to opiate use but a greater escalation of criminal behavior post opiate use (Hayburst et al., 2016). Additionally, Joudrey et al. (2021) found 40% of the studies evaluated were determined to be low quality and pointed to a need for the evaluation of overdose and mortality rates within drug treatment courts. Finally, Shannon et al. (2020) found opioid use participants have unique needs which require individualized treatment options to increase program completion of participants and improve outcomes.

### **Opioid Use Participants' Indicators of Success**

Opioid use has been associated with the unsuccessful completion of drug treatment court. Gallagher et al. (2018) found opioid use drug treatment court participants were 80% less likely to successfully complete the program compared to participants with a non-opioid drug of choice. Additionally, Shannon et al. (2021) found 33% of opioid-use participants successfully completed drug treatment court, which showed the need for opioid need-specific interventions to improve outcomes. Finally, Gallagher et al. (2019) found opioid-use participants had a graduation rate of 30% compared to non-opioid participants, who had a graduation rate of 70%. Studies have confirmed the need for research to identify improved drug treatment court outcomes for opioid-use participants.

### **Gender: The Difference Between Male and Female Opioid-Use Participants**

From 1999 to 2021, the United States experienced a 265% increase in male overdose deaths, while females experienced a 400% increase in overdose deaths (Parlier-Ahmad et al., 2021). Parlier-Ahmad et al. (2021) explored the difference between men and women with opioid-use disorder receiving outpatient buprenorphine treatment by



utilizing a retrospective secondary analysis from a cross sectional survey study. Parlier-Ahmad et al. (2021) found that women reported more opioid prescription use, were younger, unemployed, experienced psychiatric comorbidities, and lived alone with children. In contrast, males had a more extensive substance use history and heroin opioid use, alcohol comorbidity, and legal issues. Such findings reinforced the need for gender-specific services for individuals with opioid-use disorder. Additionally, results showed females needed treatment support services such as childcare and transportation during sessions to improve treatment outcomes. Both males and females with opioid-use disorder experienced attitudinal barriers including stigma that deterred them from obtaining healthcare services (Parlier-Ahmad et al., 2021).

Shannon et al. (2020) compared rural and urban opioid-use drug court participants and found that gender is an important consideration for successful completion of drug court. Results showed that male rural opioid-use drug court participants were more likely to successfully complete, while female urban opioid-use drug court participants were more likely to successfully graduate drug treatment court (Shannon et al., 2020). Additionally, Marlowe et al. (2016) found that females had a lower successful completion rate, with 39% of females successfully graduating compared to an overall 58% graduation rate for all drug court participants. The literature confirmed the need for further research to improve the positive outcomes for both males and females in drug treatment court.

### **Age of Drug Court Participants and Its Impact on Successful Completion**

Age is crucial to the successful completion of drug court participants. Gallagher et al. (2017) found that older participants were more likely to graduate than younger

participants. The older participants were at intake, the greater their chances of successful completion of drug court (Gallagher et al., 2017; Mikolajewski et al., 2021; Shannon et al., 2020). Additionally, an increase in age increased the likelihood of graduation by 8% and living with a partner and having children increased the likelihood of successful completion by 132% (Shannon et al., 2021). Unfortunately, most opioid-use participants were younger (28.4 years) compared to non-opioid-use participants (30.52 years), which decreases the likelihood of opioid-use participants' successful completion of a drug court program (Shannon et al., 2020).

### **Education Attainment of Drug Court Participants and Its Impact on Successful Completion**

Opioid use disorder has been prevalent among young adults and has impacted education attainment. Limited literature and research were available regarding the impact of opioid-use disorder and education. However, Ellis et al. (2020) compared the differences in education attainment between opioid-use disorder in individuals aged 25 and older from the Survey of Key Informants Patients (SKIP) and non-opioid-use individuals from the Annual Social and Economic (ASEC) Supplement of the Current Population Survey (CPS). Ellis et al.'s study found 32% of the overall U.S. population attained a bachelor's degree or higher compared to 7.8% of the SKIP population. Additionally, 39% of the SKIP opioid-use disorder population attained a high school diploma or GED, while 34.5% attended college but failed to graduate. Of the SKIP population, 65.9% of opioid-use disorder respondents reported opioid use negatively impacted their education through lack of motivation, interruption, or stoppage of school (Ellis et al., 2020).

Studies have found opioid-use disorder results occur in individuals with lower levels of education compared to the general population and non-opioid users (Ellis et al., 2020; Kopak et al., 2018; Shannon et al., 2021). Shannon et al. (2021) found opioid-preferring participants had a 33% graduation rate, with 66.1% of opioid preferring participants having attained a high school education or above, which increased their likelihood of completion of a drug court program 18.2 times compared to participants without a high school education. Additionally, for every year of education completed, the participants' probability of successfully completing drug court was 1.4 times more likely (Shannon et al., 2021). The attainment of a high school education improves the likelihood of successful drug court completion. These findings were consistent with previous research that reinforced the importance of education in drug court completion (Ellis et al., 2020; Kopak et al., 2018).

Kopak et al. (2018) found younger, unmarried, and lower-educated individuals who experienced their first drug use at a young age were more likely to return to substance use after treatment, which confirms the need for educational and vocational programming to promote future employment options to improve positive outcomes for participants. Additionally, connecting participants to the proper educational resources not only improved successful drug court completion but also improved participant outcomes post drug court completion (Kopak et al., 2018). As education increased, so did the probability of graduation from drug court (Gallagher et al., 2017; Mikolajewski et al., 2021).

### **Treatment Services**

Treatment services have provided drug court participants the opportunity for the

identification of the contributing factors and motivators for their substance use, which ultimately facilitated the development of appropriate individualized treatment plans (Lanier & DeVall, 2017). Providing appropriate treatment services to drug court participants was critical to the successful completion of drug treatment court (Witkin & Hays, 2017). Limitations in the availability of treatment services to drug court participants limited the probability of a participant's successful completion. Witkin and Hays (2017) found rural counties often experience a lack of available treatment services, with some counties only having one treatment provider. Additionally, surveyed respondents reported treatment provided a positive experience in their participation, while approximately 50% reported limited availability of needed treatment services provided a barrier to successful completion (Witkin & Hays, 2017).

Mandatory treatment services provided in drug treatment court enable participants to improve their likelihood of positive outcomes. Rodriguez-Monguio et al. (2021) found that 69.8% of probationer drug court participants utilized treatment services compared to 30.2% of probationers in the traditional court system. The Massachusetts Bureau of Substance Addiction Services reported an average of \$1447.83 more was spent on treatment services for drug court participants compared to probationers in the traditional criminal justice system (Rodriguez-Monguio et al., 2021). Gallagher et al. (2018) found opioid-use drug court participants were 80% less likely to successfully complete drug treatment court; however, the utilization of medication-assisted treatment provided an opportunity to improve successful completion of drug treatment court for opioid-use disorder participants. The adoption of medication-assisted treatment in combination with traditional treatment services has been critical to the success of opioid-use participants.

## **Medication-Assisted Treatment**

Medication-assisted treatment included the utilization of counseling and Federal Drug Administration-approved medications including methadone, buprenorphine, and naltrexone to treat opioid use disorders (Gallagher et al., 2021). Research has shown that the combination of counseling and medication significantly reduces opioid use, overdoses, death, and diseases associated with injection drug use (Gallagher et al., 2018; Gallagher et al., 2021). Medication-assisted treatment (MAT) has provided a means to reduce the negative consequences of regular opioid use. The lack of utilization of medication-assisted treatment by drug courts may have contributed to lower graduation and higher relapse rates. Gallagher et al. (2018) found opioid-use participants were 80% less likely to graduate compared to non-opioid participants.

Gallagher et al. (2019) found St. Joseph County opioid-use drug treatment court participants experienced a lower graduation rate of 30% compared to a 70% graduation rate for non-opioid participants. At the time of the study, medication-assisted treatment (MAT) was not provided, which may have contributed to the significantly lower graduation rate (Gallagher et al., 2019b). Fendrich and LeBel (2019) found graduation rates for opioid-addicted participants who received MAT and participants who did not receive MAT both had a 33.7% graduation rate. Participants who utilized a sequential combination of MAT had a 44.4% graduation rate (Fendrich & LeBel, 2019).

Gallagher et al. (2019) found drug treatment court participants felt MAT in conjunction with counseling was beneficial and improved outcomes. Additionally, focus group results showed participants felt psychosocial treatment was the most useful

element of drug court (Gallagher et al., 2019). These approaches aligned with the guidelines of the American Society of Addiction Medicine for treating opioid disorders.

Krawczyk et al. (2017) found 24.3 % of their sample were referred to treatment by the criminal justice system, of which 4.6% were referred for agonist treatment by criminal justice agencies and 40.9% by other sources. Additionally, Baughman et al. (2019) found MAT reduced risky behaviors and increased successful completion of drug treatment court. Evans et al. (2019) confirmed Baughman et al.'s findings that individuals with an opioid use disorder who utilized buprenorphine or methadone were less likely to reoffend than individuals who received traditional treatment.

Gallagher et al. (2021) conducted focus groups of drug court team members. Presented themes included MAT provided a path to recovery, participants experiencing positive outcomes including a reduction in cravings for opioids, increased engagement in treatment, retention in treatment and better outcomes such as fewer positive drug test results, and increased graduation rates (Gallagher et al., 2021). Gallagher et al. stressed the importance of comprehensive treatment plans to address multiple areas of need for participants. Drug court teams were challenged in providing MAT due to participants' inaccurate information. Misinformation included costs, services, belief that individuals are not in recovery if using MAT, and the fallacy that it is substituting one addiction for another (Gallagher et al., 2021). Drug courts had the responsibility of educating participants on the benefits and possible side effects of MAT so participants could make informed decisions about their utilization of MAT. Drug court team members identified stigma as a barrier to utilizing MAT, and participants experienced judgment and stigma from family, friends, and recovery support groups. Drug court team members identified

MAT as a best practice for treating opioid-use participants if provided in a non-judgmental, compassionate manner. Historical trends have provided compelling evidence that MAT has provided significant positive outcomes and improved graduation rates for opioid use participants, with graduation rates having increased from 3% to 56% from 2016 to 2018 (Gallagher et al., 2021).

### **Summary**

The literature review provided a common theme that individual participant characteristics such as age, education, and gender influence successful completion of drug treatment court (Fendrich & LeBel, 2019; Shannon et al., 2021; Wilson et al., 2018). Additionally, drug treatment court participants perceived regular contact with the judge and regular drug testing as valuable resources (Gallagher et al., 2017; Goldkamp et al., 2016; Kuehn & Ridener, 2016). Finally, the utilization of MAT for opioid-use participants benefited drug treatment court and improved outcomes for court participants (Evans et al., 2019; Gallagher et al., 2021; Jun & Faribairn, 2018).

Research has indicated that individual participant characteristics such as education and age influence successful completion of drug treatment court (Fendrich & LeBel, 2019; Shannon et al., 2021; Wilson et al., 2018). Participants perceived that the value of drug treatment court and the importance of adherence to the key components created credibility and improved future practices while improving outcomes (Gallagher et al., 2017; Gallagher et al., 2019b). Additionally, education level, employment, sex, and number of days spent in the program were predictors of success, which provided crucial information to treatment court staff (Gill, 2016). Considering indicators of success as variables in the research assisted with the comparison.

Future research on the relationship between opioid use and crime, considering the influences of crime, the quality of treatment, and the evaluation of data regarding substance use disorders and drug overdose deaths is needed to improve drug treatment court's response to the opioid epidemic (Gallagher et al., 2021; Hayburst et al., 2016; Joudrey et al., 2021). Additionally, the limited evaluation of the quality of treatment within drug treatment court needs to be addressed to improve participant outcomes (Joudrey et al., 2021; Soares et al., 2019). The available research highlighted the need to address barriers to service delivery, stigmas, and inaccuracies evident regarding medication-assisted treatment (MAT) in the criminal justice setting (Gallagher et al., 2019b; Gallagher et al., 2021).

Adequately addressing the treatment needs of opioid-use participants and developing strategies for the implementation of MAT has been crucial to improving the effectiveness of drug treatment courts (Fendrich & LeBel, 2019). MAT has been proven effective in improving outcomes for drug treatment court participants as well as decreasing recidivism (Baughman et al., 2019; Evans et al., 2019; Krawczyk et al., 2017). Additionally, the need for standard MAT procedures for drug treatment has been critical to improving outcomes for opioid-use participants (Baughman et al., 2019). Considering identified indicators of success for opioid-use participants as variables in the research has added to existing research comparing opioid-use participants' successful completion to unsuccessful completion.

The literature review focused on a variety of topics relating to substance use, opioid use, drug treatment courts, and MAT. Little research was available on opioid use by drug treatment court participants; the utilization of MAT confirmed the need for



further research (Gallagher et al., 2021; Hayburst et al., 2016; Joudrey et al., 2021; Shannon et al., 2020). The research compared the differences that existed between opioid-addicted participants who completed versus those who failed to complete the Cumberland County Adult Treatment Court and provided crucial information regarding future application of drug treatment court to improve opioid participant outcomes.

Chapter Two provided a literature review of how the study was developed. Chapter Three will provide the methodology for the implementation of the study.

## **CHAPTER THREE: RESEARCH METHODS**

### **Overview**

The purpose of this quantitative, retrospective, causal comparative study was to determine if differences in demographics (age, gender, and education) and treatment services utilized existed between opioid-addicted participants' successful completion or failure to complete the Cumberland County Adult Treatment Court. The expectation was that age, gender, education, and type of treatment services utilized would explain the retrospective differences between successful completion and failure to complete the program. The sample was drawn from former opioid-use drug treatment court participants of the Cumberland County Adult Treatment Court who successfully completed all phases of the program or were discharged from the program for failing to successfully complete the program from 2006 to 2021.

The study utilized archival data collection derived from a secondary data source, the Cumberland County Adult Treatment Court. As a result, no instruments were utilized, and data gathered for the secondary data source was presumed to be both reliable and valid. The study utilized descriptive statistics and inferential statistics to analyze the differences between opioid-addicted participants who completed versus those who did not complete the Cumberland County Adult Treatment Court. Established principles provided by the Belmont Report and Liberty University's Institutional Review Board were utilized to evaluate ethical considerations and resolve potential ethical conflicts in the study.

## Research Design

Quantitative research has collected numerical data by utilizing statistical analysis to test hypotheses and examine relationships among variables, which has included experimental or non-experimental studies such as experimental, quasi experimental, descriptive, correlational, causal-comparative, and ex post facto research/quasi experimental (Khaldi, 2017). Quantitative retrospective causal comparative research is a non-experimental method that seeks to identify the differences between two or more groups in retrospect or ex post facto by examining the relationship between variables to answer research questions and hypotheses (Creswell & Creswell, 2020; Khaldi, 2017). Additionally, the causal comparative research design prohibits manipulation of the independent variables by the researcher as the dependent variable has already occurred (Khaldi, 2017). Quantitative research was appropriate as it provided the ability to determine the differences between age, gender, education, and treatment services utilized by previous opioid-addicted participants.

The quantitative causal comparative study identified the differences between two population groups, opioid-addicted participants who successfully completed and those who failed to complete the Cumberland County Adult Treatment Court. Specifically, the research questions of the study utilized the dependent variable, completion, to identify whether there was a difference between Cumberland County Adult Treatment Court opioid-addicted participants' successful completion or failure to complete the program. The independent variables age, gender, education, and type of treatment services utilized explained the differences between the dependent variable completion (successful completion and failure to complete the program).

The causal comparative design was appropriate as the goal of the research was to identify the differences between the two groups. Secondary ex post facto data sought to identify the retrospective differences between opioid-addicted participants who successfully completed compared to participants who failed to complete the Cumberland County Adult Treatment Court. Correlational research was not appropriate for this study as it addresses potential relationships within a single group through observation of variables within the group (Khaldi, 2017). In this study, a retrospective analysis of two groups was conducted utilizing ex post facto secondary data. Additionally, experimental research was not appropriate as it utilized participants who have been randomly assigned to an experimental group and a control group to demonstrate relationships; in this study, the utilization of an experimental and control group was not possible as the data utilized was secondary data of participants who have completed the program (Khaldi, 2017). Finally, causal comparative research was appropriate as it compared two groups to explain differences between the two groups and identified the causality among variables (Khaldi, 2017).

The study built on existing research that has shown sociodemographic factors including age, education, and employment have impacted successful completion of opioid-addicted drug court participants by addressing the impact of medication-assisted treatment (Gill, 2016; Shannon et al., 2021). Additionally, the study addressed the identified gap in the research regarding the influence of treatment on successful completion of opioid-use drug court participants (Gill, 2016). Existing research showed opioid-use participants had unique treatment needs compared to other drug-addicted persons that required individualized treatment options to increase program completion

(Shannon et al., 2020). Additionally, research showed medication-assisted treatment improved treatment engagement in opioid-use drug court participants (Gallagher et al., 2021). The study addressed the gap in the research regarding the impact of the utilization of medication-assisted treatment on successful completion of opioid-use drug court participants (Gallagher et al., 2021).

### **Research Questions**

This study sought to address the following research questions:

**RQ1:** Is there a difference in the demographic makeup (age, gender, and education level) between opioid-addicted participants who complete versus those opioid addicts who do not successfully complete the Cumberland County Adult Treatment Court?

**H1:** There is a difference in the demographic makeup between opioid-addicted participants who complete versus those opioid addicts who do not successfully complete the Cumberland County Adult Treatment Court.

**H<sub>0</sub>1:** There is no difference in the demographic makeup between opioid-addicted participants who complete versus those opioid addicts who do not successfully complete the Cumberland County Adult Treatment Court.

**RQ2:** What differences exist in the level of treatment services utilized between opioid-addicted participants who complete versus those who do not complete the Cumberland County Adult Treatment Court?

**H2:** There are differences that exist in the level of treatment services utilized between opioid-addicted participants who complete versus those who do not complete the Cumberland County Adult Treatment Court.

**H<sub>0</sub>2:** There are no differences that exist in the level of treatment services utilized between opioid-addicted participants who complete versus those who do not complete the Cumberland County Adult Treatment Court.

### **Identification of Variables**

The study utilized one dependent variable (completion) and four independent variables (age, gender, education, and treatment services utilized) to answer the research questions to identify the differences between opioid-addicted participants who completed versus those who did not complete the Cumberland County Adult Treatment Court. The dependent variable was completion (successful completion or failure to complete) of the Cumberland County Adult Treatment Court.

### **Dependent Variable**

The dependent variable completion (successful completion or failure to complete), was a nominal variable and, was conceptualized as either an individual participant's successful completion of all phases of the Cumberland County Adult Treatment Court or their failure to complete the requirements of the program, resulting in removal from participation in the Cumberland County Adult Treatment Court. Completion was operationalized in two ways: successful completion and failure to complete. Successful completion was operationalized as an individual participant who successfully completed all phases of the Cumberland County Adult Treatment Court and was recorded as graduated from the program. Failure to complete was operationalized as an individual participant who failed to complete all phases of the Cumberland County Adult Treatment Court on removal from the program for any reason and was recorded as a failure to complete the program.

The nominal data, completion (successful completion, failure to complete), was recorded in the Pennsylvania's Problem Solving Adult and Juvenile Court Information System (PAJCIS) at the end of the individual's participation in the program by the Cumberland County Adult Treatment Court. Research has shown opioid use has been associated with the unsuccessful completion of drug treatment court (Gallagher et al., 2018; Shannon et al., 2021). Gallagher et al. (2018) found opioid-addicted drug treatment court participants were 80% less likely to successfully complete the program than non-opioid participants, and Shannon et al. (2021) found that 33% of opioid-use participants successfully completed drug treatment court. The research built upon Gallagher et al.'s and Shannon et al.'s research, which found opioid-use participants had lower completion rates than non-opioid participants.

### **Independent Variables**

Independent variable one: age, an ordinal variable, was conceptualized as the age of the individual participant at the time of entrance into the Cumberland County Adult Treatment Court. Age was operationalized as the recorded age of the individual participant by the Cumberland County Adult Treatment Court at the time of entrance into the program. The ordinal data, recorded age of the individual at the time of entry into the program, was collected and recorded in the PAJCIS at the time of entrance into the program by the Cumberland County Adult Treatment Court. The study built upon research by Montiel Ishino et al. (2020) that found the older an individual was at the time of entrance into drug treatment court impacted the likelihood of successful completion by addressing the impact of treatment service utilized in combination with the age of the participant.

Independent variable two: gender, a nominal variable, was conceptualized as the sex of the individual participant at the time of entrance into the Cumberland County Adult Treatment Court. Gender was operationalized as the recorded sex of the individual participant by the Cumberland County Adult Treatment Court at the time of entrance into the program. The nominal data, gender (male or female), was collected and recorded in the PAJCIS at the time of entrance into the program by the Cumberland County Adult Treatment Court. Marlowe et al. (2016) found female drug court participants had a lower successful completion rate than male drug court participants.

Independent variable three: education level, an ordinal variable, was conceptualized as the level of education attained by the individual participant at the time of entrance into the Cumberland County Adult Treatment Court. Education level was operationalized as the recorded education level attained by the individual participant at the time of entrance into Cumberland County Adult Treatment Court. The ordinal data, education level (< or = 11<sup>th</sup> grade, GED, high school graduate, some trade school, some college, trade school graduate, college graduate two-year program, college graduate four-year program, advanced degree), was collected and recorded in the PAJCIS at the time of entrance into the program by the Cumberland County Adult Treatment Court. The level of education attained influenced the likelihood of successful completion of drug treatment court, with high school graduates having a greater likelihood of successfully completing drug treatment court (Montiel Ishino et al., 2020).

Independent variable four: treatment services utilized, a nominal variable, was conceptualized as the services individual participants utilized during participation in the Cumberland County Adult Treatment Court, including inpatient treatment, outpatient



treatment, Narcotics Anonymous meetings, Alcoholics Anonymous meetings, group and individual therapy, weekly court appearances, probation appointments, urine testing, and medication-assisted treatment. Treatment services utilized were operationalized by the individual participant's treatment services recorded by the Cumberland County Adult Treatment Court during participation in the program. Treatment services were crucial to the successful completion of drug treatment court. Opioid-addicted participants have been identified as having unique needs that require individualized treatment options to increase the likelihood of successful completion (Shannon et al., 2021). Witkins and Hays (2017) found that the adoption of medication-assisted treatment for opioid-addicted participants in combination with traditional treatment services increased the likelihood of successful completion (Witkins & Hays, 2017).

The research study added to existing research that showed the differences between the opioid-addicted participants who successfully completed or failed to complete the Cumberland County Adult Treatment Court based on the demographic makeup as well as treatment services utilized. Identification of factors that encouraged and supported successful completion of opioid-use participants allowed for the identification of strategies to improve successful completion of opioid-addicted drug court participants within the Cumberland County Adult Treatment Court.

### **Population and Sample Selection**

The Cumberland County Adult Treatment Court Drug Court is a four-phase program designed to be completed within 18 months and comprised of individuals who have been charged with drug-related crimes. Its general population included individuals who were charged with a drug-related crime and participated in the Cumberland County

Adult Treatment Court. The specific population in the study was comprised of opioid-addicted participants in the Cumberland County Adult Treatment Court. Convenience sampling in the study provided the selection of a sample of available opioid-addicted participants from the population of past participants in the Cumberland County Adult Treatment Court.

The study utilized a non-probability convenience sampling method. The sampling included the identified population of interest for this study as individuals who were charged with a drug-related crime and participated in the Cumberland County Adult Treatment Court. The target population of this study included opioid-use participants of the Cumberland County Adult Treatment Court. The sample frame included former opioid-use drug treatment court participants of the Cumberland County Adult Treatment Court. The specific population in this study was a convenience sampling of available opioid-addicted past participants of the Cumberland County Adult Treatment Court who successfully completed all phases of the program or were discharged from the program for failing to successfully complete from 2006 to 2021.

Power analysis provided the researcher the ability to estimate a target sample size and identified the minimum number of research participants necessary to detect whether there was a statistical significance from the effect of age, gender, education level, and treatment services utilized on opioid-addicted participants who completed versus those who did not complete the Cumberland County Adult Treatment Court (Creswell & Creswell, 2020). Power analysis provided the ability to detect an effect of the hypotheses of this study. G\*Power statistical power calculations minimized the likelihood of Type I errors (suggesting differences exist between groups that do not) and Type II errors

(suggesting no differences exist between groups that do) (Creswell & Creswell, 2020). The study utilized a G\*Power analysis which was performed utilizing a two-tailed independent samples t-test utilizing an alpha error of 0.5, a medium effect size, and a statistical power of 0.80 to calculate and identify the sample size necessary for the study (Faul et al., 2007). The results of the power analysis identified a minimum sample size of 128, or 64 participants for each opioid-addicted participant group (successfully completed all phases of the program or were discharged from the program for failing to successfully complete) (see Appendix B). The data utilized were secondary data of opioid-addicted participants who participated in the Cumberland County Adult Treatment Court from 2006 to 2021; as the data were previously collected, the possibility of attrition was eliminated.

The study utilized secondary archival data collected by the Cumberland County Adult Treatment Court. Permission was requested from the Cumberland County Adult Treatment Court Team to utilize opioid-addicted past participant data in the study. Once permission was granted, the pool of opioid-use drug court participants was taken from a convenience sample for the total population of former participants from the Cumberland County Adult Treatment Court for the years 2006 to 2021 that was provided by the Cumberland County Adult Treatment Court. Individual consent from opioid-addicted past participants was not needed because the data was obtained from archival data collected and recorded by the Cumberland County Adult Treatment Court, of which individual participants were unidentifiable.

### **Instrumentation Sources of Data**

The Cumberland County Adult Treatment Court received accreditation from the Supreme Court of Pennsylvania on June 10, 2016, recognizing the utilization of the court's adherence to the 10 Key Components of Drug Courts and providing a framework for nationally recognized standards in evidence-based practices for the operation of its program (Cumberland County, 2021). The National Association of Drug Court Professionals 10 Key Components of Drug Courts include: the integration of substance abuse treatment in case processing, a non-adversarial approach between counsels, early identification and participation, access to substance abuse treatment, testing to prove no drug use, coordinated response to compliance, continuous court interaction, effective monitoring, ongoing staff education, and established working relationships between the court and community (Henry, 2018). Close adherence to these 10 key components, including the evaluation of the program, has had a direct correlation with improved program outcomes of drug treatment courts (Gallagher et al., 2018).

The Cumberland County Adult Treatment Court utilized Pennsylvania's Problem Solving Adult and Juvenile Court Information System (PAJCIS), which provides a unified, automated case management system (Supreme Court of Pennsylvania, 2015). The PAJCIS has been utilized to enter participant data and analyze data in compliance with Drug Courts Key Component 8 (effective monitoring) and has been required to maintain program accreditation. The Cumberland County Adult Treatment Court maintained participant data, including ethnicity, age, gender, marital status, employment, education, drug choice, charge, community service, terminations, successful completion, violations, withdrawals, urinalysis results, officer contacts and field work, risk and needs

evaluations, incarceration days saved, days in program phases, treatment services, and medically-assisted treatment utilization (Cumberland County, 2021).

The quantitative study utilized archival data derived from a secondary data source, the Cumberland County Adult Treatment Court. The data were entered by the Cumberland County Adult Treatment team throughout the participant's participation in the program and reviewed quarterly for accuracy. As a result, no instruments were utilized. The data collected included both successful completion and failure to complete opioid-addicted drug treatment court participants for the years 2006 to 2021. The data included both demographic information and program criteria (whether the opioid-addicted drug treatment court participants successfully completed all phases or failed to complete the Cumberland County Adult Treatment Court).

Opioid-addicted drug treatment court participants who successfully completed the program demonstrated completion of all phases of the Cumberland County Adult Treatment Court, including treatment activities, weekly court appearances, probation appointments, drug screening compliance, and other identified interventions and were recorded as graduated from the program. Opioid-addicted drug treatment court participants who failed to complete the program demonstrated failure to complete all phases of the Cumberland County Adult Treatment Court or removal from the program for any reason were recorded as a failure to complete the program.

Only archival nominal and ordinal data was utilized in the study. Demographic data, treatment services data, and program completion data was utilized in the study. Permission to use the archival data was approved by the Cumberland County Adult Treatment Court Team. Data sets were provided in Excel spreadsheets. Data sets were

saved on the researcher's personal computer and were password protected. Data sets were imported into IBM SPSS. Once the statistical analysis of the data sets was administered and the study was conducted, all data were deleted.

### **Reliability and Validity of Data**

A causal comparative design utilized archived drug treatment court participant data provided by the Cumberland County Adult Treatment Court. The data utilized for this study included a review of archival data from the Cumberland County Adult Treatment Court records. The archival data previously collected ensured the demographic data were both accurate and precise. Reliability was defined as the extent to which scores were consistent and stable in test administration, and dependable (Creswell & Creswell, 2020). This study utilized data generated from Cumberland County Court of Common Pleas - Adult Treatment Court. This agency has provided a cost-effective alternative to incarceration for non-violent substance-dependent offenders (Cumberland County PA, 2021). Information related to drug court participants was recorded by the Cumberland County Adult Treatment Court Coordinator and drug court team members.

Data collected were under the guidance of the Supreme Court of Pennsylvania as part of the accreditation process to ensure the drug treatment court was following and complying with the 10 key components of drug treatment courts (Supreme Court of Pennsylvania, 2015). Data that included demographic and program data were collected and entered by Cumberland County Adult Treatment court staff into Pennsylvania's Problem Solving Adult and Juvenile Court Information System (PAJCIS) in a uniform format. Data were entered at the beginning of a participant's entrance into the program and progress was entered weekly. Data included ethnicity, gender, marital status,

employment, education, community service, terminations, successful offenders, violations and withdrawals, admissions, urinalysis, officer contacts and field work, risk and needs evaluations, days in program phases, treatment, and medically assisted treatment. Additionally, data were collected and maintained in a uniform format in Pennsylvania's Problem Solving Adult and Juvenile Court Information System (PAJCIS) and were monitored and evaluated quarterly and annually by the treatment court team coordinator (Cumberland County PA, 2021).

Since the Cumberland County Adult Treatment Court was entrusted by the Supreme Court of Pennsylvania to enter participant data and data are utilized to modify and improve participant outcomes, data were carefully evaluated and analyzed by the drug court team coordinator. Analysis of the drug court data were based on a combination of the drug court team's experience, court accreditation, and utilization of evidence-based tools and techniques. As such, the data was deemed reliable. Additionally, participant data is reviewed by the drug court team and reviewed and approved by the Cumberland County Adult Treatment Court Coordinator before data are released. The reliability of the data was therefore enhanced and was based on a thorough review and analysis of data through different drug court experts. The data reported were considered reliable as the data were entered into an automated system, in a uniform format, and could not be manipulated by the researcher as the information entered had been confirmed and the events have already occurred.

Validity denotes whether meaningful and useful inferences could be drawn from the scores on specific instruments and the specific concept that the researcher was attempting to measure (Creswell & Creswell, 2020). The validity of the data utilized in

this research accurately reflected the specific concept that the researcher was attempting to measure. The study utilized data from the Cumberland County Adult Treatment Court. The Cumberland County Adult Treatment Court is an organization within the Cumberland County Court of Common Pleas which has been tasked with integrating alcohol and other drug-treatment services within the criminal justice system including the identification of those who need treatment and recovery services, providing counseling, fostering the development of coping skills and knowledge, and to returning said individuals to the community as sober and productive members of society (Cumberland County PA, 2021). The goal of the program has been to change lives, thereby successfully breaking the cycle of addiction, substance abuse, and criminal behavior (Cumberland County PA, 2021). Additionally, the program has returned clean and sober individuals to the community after having equipped them with competencies to maintain their sobriety and improve the quality of their lives (Cumberland County PA, 2021).

Data recorded by the Cumberland County Adult Treatment Court provided details of an individual participant's information at the time of entrance into the program, progress during the program, and completion of the program. Data gathered by the drug treatment team consisted of data entered into the PAJCIS, which was the main format for participant data entry (Supreme Court of Pennsylvania, 2015). The Cumberland County Adult Treatment Court has been responsible for providing accurate participant data to the Pennsylvania Supreme Court to maintain program accreditation. As a result, participant data have been reviewed and analyzed quarterly and annually. The researcher reviewed all data provided to ensure the data addressed the study variables. Only opioid-addicted participant data were reviewed and analyzed.



Identification of the minimum number of participants was critical to ensuring the validity of the differences identified in this study. Identification of the relationships between the variables age, gender, education level, and treatment services utilized established the differences between opioid-addicted participants' completion in the program and reinforced the internal validity of the study. Extraneous variables such as the time incarcerated, the number of sanctions received, and the number of days in each phase of the program may have impacted an individual's successful completion. Time incarcerated may have impacted participation in treatment. Considering these extraneous variables and their influence on the context of the independent variables reinforced the internal validity of this study. Performing a risk profile assessment by utilizing a risk index of the time incarcerated, the number of sanctions received, and the number of days in each phase of the program provided context of internal validity within the population. This study built upon previous studies, which reinforced the external validity of the differences of age, gender, education level, and treatment services utilized on the completion of opioid-addicted participants within the Cumberland County Adult Treatment Court.

### **Data Collection and Management**

The Cumberland County Adult Treatment Court Coordinator has historically been responsible for the review of all data requests regarding drug treatment court participants and participant data. The Cumberland County Adult Treatment Court Coordinator has forwarded data requests to the Cumberland County Adult Treatment Court Team for review and approval of the data request and to conduct research using drug treatment court participants. Upon approval by the Cumberland County Adult Treatment Court

Team, the Cumberland County Adult Treatment Court Coordinator has forwarded the team's decision regarding the data request. The next step was to request and receive approval from the Liberty University Institutional Review Board (IRB) during the 2022 spring semester.

1. The researcher did not recruit participants for the study; the data already existed as the participant data was collected and recorded at the time of the individual's participation by the Cumberland County Adult Treatment Court.
2. The researcher submitted a proposal to the Cumberland County Adult Treatment Court Team requesting permission to conduct research on opioid-use drug court past participants.
3. The Cumberland County Adult Treatment Court Team reviewed the research proposal and data request for approval from the team.
4. The Cumberland County Adult Treatment Court Team approved the research request, and the researcher met with the Cumberland County Adult Treatment Court Coordinator to discuss the detailed data request and plan for the research (see Appendix A).
5. The researcher submitted the research proposal to the Liberty University Institutional Review Board (IRB) for approval.
6. Data collected from the Cumberland County Adult Treatment Court included drug court participation, drug court completion, charges, drug of choice, gender, race, education, entry age, treatment services utilized, medication-assisted treatment, time incarcerated, time in phase one, time

in phase two, time in phase three, time in phase four, treatment services utilized, discharge type, discharge date, and total time in program of opioid-use participants of the Cumberland County Adult Treatment Court from 2006 to 2021.

7. All data provided by the Cumberland County Adult Treatment Court was coded, making individual participant identification unidentifiable.
8. Unidentifiable data was provided in an Excel spreadsheet by the Cumberland County Adult Treatment Coordinator.
9. Data analysis was performed on unidentifiable data provided by the Cumberland County Adult Treatment Court.
10. Data and data analysis was stored on a secure computer with password protection.
11. A backup file was stored on a flash drive in a locked cabinet.
12. Data and data analysis was stored until the research was completed, at which time all data were deleted and removed from the computer and flash drive. Additionally, all data analysis and related documents was deleted and removed from the computer and the flash drive.

### **Data Analysis Procedures**

This study utilized a quantitative causal comparative analysis to address the identified research problem and to determine whether significant differences existed between opioid-addicted participants who completed versus those who did not complete the Cumberland County Adult Treatment Court based on the types of treatment services received as well as the demographic makeup of the clients by utilizing the previously-

identified research questions and hypotheses to address the identified research problem. Secondary data was obtained from the Cumberland County Treatment Court on an Excel spreadsheet. The data was imported to SPSS.

The study utilized descriptive statistics and inferential statistics to analyze the differences between opioid-addicted participants who completed versus those who did not complete the Cumberland County Adult Treatment Court. Descriptive statistics provided a summary analysis of a data set through means, standard deviation, and range of scores (Creswell & Creswell, 2020). Descriptive statistics described the opioid-addicted drug treatment court participants' demographic and service utilization characteristics (i.e., age, gender, education level, and treatment services utilized) related to completion or failure to complete the Cumberland County Adult Treatment Court. Descriptive statistics were utilized to measure the minimum, maximum, mean, median, standard deviation, and standard error of the independent variables of age, gender, education level, and treatment services utilized. Descriptive statistics were appropriate to summarize the sample data.

Inferential statistics enable predictions and generalizations related to the sample of a population for a study (Creswell & Creswell, 2020). In this study, inferential statistics included a Chi-square analysis to analyze whether the odds of completion of the Cumberland County Adult Treatment Court varied by age, gender, education level, or treatment services utilized. A *p*-value lower than .05 was used to determine whether the null hypothesis for each independent variable was rejected (Sil et al., 2019). The smaller the *p*-value, the more significant the results and the corresponding ability to reject the null hypothesis for an analysis.

The Chi-square test of independence, a non-parametric inferential statistical test, was utilized to answer Research Question 1 and determined if completion of the Cumberland County Adult Treatment Court (dependent variable) varied based on age, gender, or education level (independent variables). Additionally, a Chi-square test was utilized to answer Research Question 2 to determine if completion of the Cumberland County Adult Treatment Court (dependent variable) varied based on the treatment services an individual utilized (Laerd Statistics, 2019). Chi-square analysis includes four assumptions that must be met:

1. The study had two variables measured at ordinal or nominal (categorical) level. In the study, the independent variables of age and education level were ordinal, and the independent variables of gender and treatment services utilized were nominal. The dependent variable of completion was nominal (Laerd Statistics, 2019).
2. There must be independence of observations (Laerd Statistics, 2019). In the study, there was no relationship between each categorical group, and a participant could not be in more than one categorical group.
3. The null hypothesis being tested using the Chi-square test of independence cannot be used with all types of study design (Laerd Statistics, 2019). In the study, the Chi-square test of independence was appropriate for H<sub>01</sub>: There is no difference in the demographic makeup of opioid-addicted participants who complete and those opioid addicts who do not successfully complete the Cumberland County Adult Treatment Court. Additionally, H<sub>02</sub>: There are no differences that exist in the level of treatment services utilized by opioid-

addicted participants who complete and those who do not complete the Cumberland County Adult Treatment Court.

4. All cells should have expected counts greater than or equal to five in at least 80% of the cells (Laerd Statistics, 2019). In the study, the categorical groups had a value equal or greater to five in at least 80% of the cells.

### **Ethics**

Ethical consideration of participants was critical to the research and followed the established guidance of the Belmont Report and Liberty University's Institutional Review Board (Corbie-Smith et al., 2018; Liberty University Institutional Review Board, 2021). The established principles provided researchers with the means to evaluate ethical considerations and resolve potential ethical conflicts prior to the beginning of the study (Ross et al., 2018). Careful consideration of the research design and its implications to participants was critical to minimizing the potential threat of ethical issues and the integrity and success of the study.

Protections were provided to vulnerable participants such as the opioid-addicted drug treatment court participants of the Cumberland County Drug Treatment Court in this study (Anderson & McNair, 2018). The study utilized unidentifiable secondary data that provided safeguards and protections to the opioid-addicted past participants of the Cumberland County Adult Treatment Court. Informed consent was not necessary as the research utilized secondary data collected by the Cumberland County Adult Treatment Court of opioid-addicted past participants who provided a general consent during participation in the program. Permission and consent to utilize the secondary data was granted to the study by the Cumberland County Adult Treatment Court.

The research examined unidentifiable past opioid-addicted drug treatment court participants of the Cumberland County Adult Treatment Court to improve completion rates of future opioid-addicted participants. The utilization of unidentifiable archival secondary data ensured the privacy and anonymity of the opioid-addicted participants of the study from the Cumberland County Adult Treatment Court. The fact that the data were previously collected by the Cumberland County Adult Treatment Court and were unidentifiable eliminated the chance of coercion of the research participants to participate in the study. The researcher, as Director of the Cumberland County Youth Aid Panel, has engaged clients aged 10 to 18 in developing and utilizing prosocial skills, making retribution, and ultimately has expunged their records. A probability existed that previous clients could have potentially been participants of the Cumberland County Adult Treatment Court; however, the identity of the individual participant would not be recognized because the data were provided in an unidentifiable format and there was no notification to the Youth Aid Panel of their participation in the program. Confidentiality of the research participants was protected as there was no way to identify the individual identities of the research participants in the data provided by the Cumberland County Adult Treatment Court. In this study, secondary data was requested from data previously collected by the Cumberland County Adult Treatment Court. The Cumberland County Adult Treatment Court has collected data and maintained a database of drug treatment court participants during participation in the program. Once permission was granted from the Cumberland County Adult Treatment Court Team, unidentifiable data was provided in an Excel spreadsheet by the Cumberland County Adult Treatment Coordinator. Data was stored on a secure computer with password protection. Additionally, a backup file

was stored on a flash drive in a locked cabinet. Data was stored until the research was completed, at which time all data were deleted and removed from the computer and flash drive. The data management plan ensured the confidentiality and privacy of the research participants were protected.

### **Summary**

Chapter Three provided the methodology for the study and outlined the purpose of the quantitative retrospective causal comparative study to determine if differences existed between opioid-addicted participants' successful completion or failure to complete the Cumberland County Adult Treatment Court, with the expectation that age, gender, education, and type of treatment services utilized would explain the retrospective differences between successful completion and failure to complete the program. The sample was identified as former opioid-use drug treatment court participants of the Cumberland County Adult Treatment Court who successfully completed all phases of the program or were discharged from the program for failing to successfully complete from 2006 to 2021.

Data utilized included archival data collected from a secondary data source, the Cumberland County Adult Treatment Court. The secondary data previously collected required no instruments and was presumed to be both reliable and valid. Descriptive statistics and inferential statistics were utilized to analyze the differences between opioid-addicted participants who completed versus those who did not complete the Cumberland County Adult Treatment Court. The Chi-square test was utilized to determine if there was an interaction effect between age, gender, education level, and treatment utilized on



completion (successful completion or failure to complete) of the Cumberland County Adult Treatment Court by opioid-addicted participants.

Ethical considerations and the resolution of potential ethical conflicts were addressed under the guidance of the established principles provided by the Belmont Report and Liberty University's Institutional Review Board. The Belmont Report's principles, respect for individuals, justice, and beneficence, were applied to the study to ensure privacy and protect the opioid-addicted participants of the study. Additionally, the utilization of secondary data collected by the Cumberland County Adult Treatment Court made informed consent of past participants unnecessary, as participants provided a general consent during their participation in the program. Finally, the procedures for data storage and the disposal of data upon completion of the study were provided to ensure privacy of the participants.

Chapter Four will provide the data analysis and the results of the study. The research methods outlined in Chapter Three were utilized to perform accurate analysis of the secondary data and presentation of the results. Finally, the results of the analysis addressed the research questions and the hypotheses, identifying the differences that existed between opioid-addicted participants' successful completion or failure to complete the Cumberland County Adult Treatment Court.

## CHAPTER FOUR: FINDINGS

The purpose of this quantitative causal comparative study was to determine if and to what extent there was a significant difference between opioid-addicted participants who successfully completed and those who failed to complete the Cumberland County Adult Treatment Court. The study sought to identify if there was a difference in age, gender, educational level, and treatment services utilized between the two groups.

The research questions and hypotheses for the study were as follows:

**RQ1:** Is there a difference in the demographic makeup (age, gender, and education level) between opioid-addicted participants who complete versus those opioid addicts who do not successfully complete the Cumberland County Adult Treatment Court?

**H1:** There is a difference in the demographic makeup between opioid-addicted participants who complete versus those opioid addicts who do not successfully complete the Cumberland County Adult Treatment Court.

**H<sub>0</sub>1:** There is no difference in the demographic makeup between opioid-addicted participants who complete versus those opioid addicts who do not successfully complete the Cumberland County Adult Treatment Court.

**RQ2:** What differences exist in the level of treatment services utilized between opioid-addicted participants who complete versus those who do not complete the Cumberland County Adult Treatment Court?

**H2:** There are differences that exist in the level of treatment services utilized between opioid-addicted participants who complete versus those who do not complete the Cumberland County Adult Treatment Court.

**H<sub>02</sub>:** There are no differences that exist in the level of treatment services utilized between opioid-addicted participants who complete versus those who do not complete the Cumberland County Adult Treatment Court.

A causal comparative study was conducted utilizing secondary archival data on opioid-addicted participants of the Cumberland County Adult Treatment Court to address the research questions. The secondary archival data included opioid-addicted participant data from 2006-2021. The remainder of this chapter addresses the results of the study. The Chi-square test of independence was used to determine differences between the independent variables and the dependent variable. Descriptive statistics were provided for variables age, gender, education, and type of treatment services utilized. Chapter Four concludes with a summary of the results of the study.

### **Sampling**

A non-probability convenience sampling was utilized for the study. The sampling included available opioid-addicted past participants of the Cumberland County Adult Treatment Court who successfully completed all phases of the program or were discharged from the program for failing to successfully complete from 2006 to 2021. A G\*Power analysis was performed utilizing a two-tailed independent samples t-test utilizing an alpha error of 0.5, a medium effect size, and a statistical power of 0.80 (Faul et al., 2007). The results of the power analysis identified a minimum sample size of 128, or 64 participants for each opioid-addicted participant group (successfully completed all phases of the program or were discharged from the program for failing to successfully complete) (see Appendix B). The sample of 105 opioid-addicted past participants were identified from the Cumberland County Adult Treatment Court. The inability to identify

128 opioid-addicted past participants from the secondary archival data of the Cumberland County Adult Treatment Court as identified by the G\*Power analysis placed limitations on determining statistical differences between the two groups of the dependent variable completion (successful completion and failure to complete the program), diminished the sensitivity of testing the null hypotheses for this study, and imposed a need for caution in generalizing the results.

### **Descriptive Findings**

A total of 105 opioid-addicted participants were included. Of the 105 opioid-addicted participants, 55 (52.4%) successfully completed the Cumberland County Adult Treatment Court, while 50 (47.6%) did not complete (absconded = 12, new offense = 11, non-compliant = 27) the Cumberland County Adult Treatment Court. Table 1 shows the frequency distribution summary.

**Table 1**

*Cumberland County Adult Treatment Court Opioid-Addicted Participants' Successful/Unsuccessful Completion Frequency Distribution (n = 105)*

Opioid-Addicted Participants	Frequency	Percent
Successful completion	55	52.4
Unsuccessful completion	50	47.6
Total	105	100.0

Table 2 shows the results of the descriptive analysis of demographic variables. The sample included more males (64.8%) than females (35.2%). The most common education level among the sample was high school graduation (26.7%), followed by a GED (22.9%), less than or equal to grade 11 (21.0%), some college (18.1%), college graduate four-year-program (5.7%), college graduate two-year-program (3.8%), some trade school (0.9%), and an advanced degree (0.9%). The sample included ages that

ranged from 20 to 29 (34.3%), 30 to 34 (32.4%), and 35 to 63 (33.3%). Most participants were under the age of 35 (66.7%).

**Table 2**

*Demographics of the Sample (n = 105)*

Variable	Frequency	Percent
Gender		
Male	68	64.8
Female	37	35.2
Education Level		
< or = 11th Grade	22	21.0
GED	24	22.9
High School Graduate	28	26.7
Some College	19	18.1
Some Trade School	1	0.9
College Graduate 2-Year Program	4	3.8
College Graduate 4-Year Program	6	5.7
Advanced Degree	1	0.9
Age		
20-29	36	34.29
30-34	34	32.38
35-63	35	33.33
Treatment Services Utilized		
Recovery Group	2	1.9
Partial Hospitalization Program	7	6.7
Detoxification	9	8.6
Moderate-Term Inpatient (to 90 days)	10	9.5
Halfway House (3-6 months)	10	9.5
Medication-Assisted Treatment (MAT)	16	15.2
Long-Term Inpatient (90 + days)	21	20.0
Cognitive Behavioral Therapy (CBT)	44	41.9
Short-Term Inpatient (14-30 days)	47	44.9
Intensive Outpatient (3-6 months)	62	59.0
Outpatient (3-6 months)	78	74.3

Most of the sample received outpatient treatment (74.3%), while 59.0% received intensive outpatient treatment, 44.9% received short-term inpatient treatment, 41.9% received cognitive behavioral therapy, and 20.0% participated in long-term inpatient

treatment. Other treatment services included medication-assisted treatment (15.2%), moderate-term inpatient (9.5%), halfway house (9.5%), detoxification (8.6%), partial hospitalization program (6.7%), and recovery group participation (1.9%). The Cumberland County Adult Treatment Court began utilizing medication-assisted treatment in 2016. Table 3 shows the results of the sample. Of the total sample ( $N = 105$ ), 60 participants (57.1%) were eligible to utilize medication-assisted treatment, including 16 participants (15.2%) who chose to utilize medication-assisted treatment and 44 participants (41.9%) who chose not to utilize medication-assisted treatment.

**Table 3**

*Medication-Assisted Treatment*

Medication-Assisted Treatment	Frequency	Percent
Buprenorphine	10	9.5
Methadone	1	0.9
Naltrexone	5	4.8
Chose Not to Utilize	44	41.9
Ineligible to Utilize	45	42.9
Total	105	100.0

Because the Cumberland County Adult Treatment Court allowed the use of medication-assisted treatment since 2016, 16 opioid-addicted participants had utilized medication-assisted treatment. Table 3 shows the characteristics of the sample. Of the 16 in the sample who chose to utilize medication-assisted treatment, most used buprenorphine (62.5%), followed by naltrexone (31.3%) and methadone (6.2%).

**Table 4***Medication-Assisted Treatment Utilized Sample (n = 16)*

Medication-Assisted Treatment	Frequency	Percent
Buprenorphine	10	62.5
Methadone	1	6.2
Naltrexone	5	31.3
Total	16	100.0

The descriptive analysis was conducted for the dependent variable completion (successful and unsuccessful) and the four independent variables of age, gender, education level, and treatment service utilized. Table 5 shows the descriptive statistics for independent variables (gender and education level) compared to the dependent variable of completion (successful and unsuccessful). Table 6 shows the descriptive statistics for the independent variables (age and treatment service utilized) compared to the dependent variable of completion (successful and unsuccessful). Table 6 also includes the mean, standard deviation, and standard error of each.

**Table 5***Descriptive Statistics for Variables Gender and Education Level and by Groups*

Variable	Values	Completion Status	
		Successful	Unsuccessful
Gender	Male	35 (51.5%)	33 (48.5%)
	Female	20 (54.1%)	17 (45.9%)
Education Level	Some High School	12 (54.5%)	10 (45.5%)
	GED	8 (33.3%)	16 (66.7%)
	High School Graduate	17 (60.7%)	11 (39.3%)
	Some Trade School	0 (0.0%)	1 (100.0%)
	Some College	11 (57.9%)	8 (42.1%)
	College Graduate – 2-Year Program	4 (80.0%)	1 (20.0%)
	College graduate – 4-Year Program	2 (40.0%)	3 (60.0%)
	Advanced Degree	1 (100.0%)	0 (0.0%)

**Table 6***Descriptive Statistics for Variables Age and Number of Treatment Services Utilized and by Groups*

	<i>n</i>	Mean	Std. Dev.	Std. Err.
Age	105	34.01	8.660	.845
Successful	55	36.09	9.683	1.306
Unsuccessful	50	31.72	6.755	.955
Number of Treatment Services Utilized	105	2.91	1.394	.136
Successful	55	3.09	1.251	.169
Unsuccessful	50	2.72	1.526	.216

## Results

To test whether differences existed in program completion based on participants' demographics as a function of age, gender, and education level, a Chi-square test of independence was performed using each individual independent variable (age group,



gender, and education level) paired with the dependent variable (completion status) to answer Research Question 1. To answer Research Question 2, each treatment method was paired individually with participants' program completion status (dependent variable) in a Chi-square analysis.

### **Research Question 1**

Research Question 1 asked, "Is there a difference in the demographic makeup (age, gender, and education level) between opioid-addicted participants who complete versus those opioid addicts who do not successfully complete the Cumberland County Adult Treatment Court?" Each participant was assigned to a group based on their age before conducting analysis on the secondary data collected. Participants aged 20 to 29 at the time of entering the program were assigned to Age Group 1 ( $n = 36$ ). Participants aged 30 to 34 at the time of entering the program were assigned to Age Group 2 ( $n = 34$ ). Participants aged 35 and older at the time of entering the program were assigned to Age Group 3 ( $n = 35$ ). Table 6 shows the frequency results in percentages from the age groups created regarding program completion status of the Cumberland County Adult Treatment Court. Table 8 shows the Chi-square analysis on age group compared to program completion. The results showed  $\chi^2 = 5.518$  and  $p = .063$ . The  $p$ -value calculated showed a higher value than the assumed alpha value ( $\alpha = .05$ ), indicating no significant differences in completion status as a function of age.

**Table 7***Crosstab of Entry Age Groups*

			Completion		Total
			Successful	Unsuccessful	
Entry Age Group	1	Count	16	20	36
		Expected Count	18.9	17.1	36.0
		% within Entry Age Group	44.4%	55.6%	100.0%
		% within Completion	29.1%	40.0%	34.3%
		% of Total	15.2%	19.0%	34.3%
	2	Count	15	19	34
		Expected Count	17.8	16.2	34.0
		% within Entry Age Group	44.1%	55.9%	100.0%
		% within Completion	27.3%	38.0%	32.4%
		% of Total	14.3%	18.1%	32.4%
	3	Count	24	11	35
		Expected Count	18.3	16.7	35.0
		% within Entry Age Group	68.6%	31.4%	100.0%
		% within Completion	43.6%	22.0%	33.3%
		% of Total	22.9%	10.5%	33.3%
Total	Count	55	50	105	
	Expected Count	55.0	50.0	105.0	
	% within Entry Age Group	52.4%	47.6%	100.0%	
	% within Completion	100.0%	100.0%	100.0%	
	% of Total	52.4%	47.6%	100.0%	

**Table 8***Chi-Square Tests Entry Age and Completion*

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	5.518 <sup>a</sup>	2	.063
Likelihood Ratio	5.625	2	.060
Linear-by-Linear Association	4.064	1	.044
N of Valid Cases	105		

<sup>a</sup>. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 16.19.

An additional Chi-square analysis was conducted with gender as the independent variable and program completion of the Cumberland County Adult Treatment Court (dependent variable). Table 9 shows Chi-square analysis regarding gender and completion relationship  $\chi^2 (1, N = 105) = .064; p = .800$ ). Because the resulting  $p$ -value was greater than the assumed alpha ( $\alpha = .05$ ), the conclusion was made that there was no significant difference in program completion as a function of gender.

**Table 9***Chi-Square Tests Gender and Completion*

	Value	df	Asymptotic sig. (2-sided)	Exact sig. (2-sided)	Exact sig. (1-sided)
Pearson Chi-Square	.064 <sup>a</sup>	1	.800		
Continuity Correction <sup>b</sup>	.002	1	.961		
Likelihood Ratio	.064	1	.800		
Fisher's Exact Test				.840	.481
Linear-by-Linear Association	.064	1	.801		
N of Valid Cases	105				

<sup>a</sup>. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 17.62.

<sup>b</sup>. Computed only for a 2x2 table.

A final Chi-square analysis was conducted to determine whether program completion of the Cumberland County Adult Treatment Court differed as a function of education level  $\chi^2 (7, N = 105) = 8.389, p = .300$ . The  $p$ -value ( $p = .300$ ) was greater than the assumed alpha value ( $\alpha = .05$ ); thus, the test results showed that there were no significant differences in program completion as a function of education level.

**Table 10***Chi-Square Tests Education and Completion*

	Value	df	Asymptotic sig. (2-sided)
Pearson Chi-Square	8.389 <sup>a</sup>	7	.300
Likelihood Ratio	9.335	7	.229
Linear-by-Linear Association	.820	1	.365
N of Valid Cases	105		

<sup>a</sup>. 8 cells (50.0%) have expected count less than 5. The minimum expected count is .48.

The three demographic variables used as a function to determine whether differences existed in participants completing the Cumberland County Adult Treatment Court were age, gender, and education level. Each variable used a Chi-square test of independence to address whether differences existed. The Chi-square test for Age Group \* Completion showed a  $p$ -value of .063. The Chi-square test for Gender \* Completion showed a  $p$ -value of .800. The Chi-square test for Education Level \* Completion showed

a  $p$ -value of .300. Each resulting test had a  $p$ -value greater than the assumed alpha level ( $\alpha = .05$ ); thus, the null hypothesis was accepted: There is no difference in the demographic makeup between opioid-addicted participants who complete versus those opioid addicts who do not successfully complete the Cumberland County Adult Treatment Court.

### **Research Question 2**

Research Question 2 asked, “What differences exist in the level of treatment services utilized between opioid-addicted participants who complete versus those who do not complete the Cumberland County Adult Treatment Court?” The treatments available to participants were used as a function of determining if there were differences between those who experienced treatment and their completion statuses; thus, a Chi-square test was conducted on each treatment method.

Detoxification was used as a treatment method within the program. Table 11 shows the Chi-square results when comparing program completion as a function of when participants experience detoxification as a modality  $\chi^2 (1, N = 105) = .249, p = .618$ . Because the  $p$ -value ( $p = .618$ ) was greater than the assumed alpha value ( $\alpha = .05$ ), the conclusion was made that there were no significant differences in program completion based on participants experiencing detoxification as a treatment modality.

**Table 11***Chi-Square Tests Detox*

	Value	df	Asymptotic sig. (2-sided)	Exact sig. (2-sided)	Exact sig. (1-sided)
Pearson Chi-Square	.249 <sup>a</sup>	1	.618		
Continuity Correction <sup>b</sup>	.022	1	.881		
Likelihood Ratio	.248	1	.618		
Fisher's Exact Test				.733	.439
Linear-by-Linear Association	.246	1	.620		
N of Valid Cases	105				

<sup>a</sup>. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 4.29.

<sup>b</sup>. Computed only for a 2x2 table.

Short-term inpatient stays (14 to 30 days) were a treatment modality used by the Cumberland County Adult Treatment Court. A Chi-square analysis was used to find the differences in program completion based on whether participants experienced short-term inpatient modality. Table 12 shows Chi-square results  $\chi^2 (3, N = 105) = 9.336, p = .025$ . The  $p$ -value ( $p = .025$ ) was less than the assumed alpha value ( $\alpha = .05$ ); thus, there were significant differences in program completion based on whether participants experienced short-term inpatient as a treatment modality.

**Table 12***Chi-Square Tests Short-Term*

	Value	df	Asymptotic sig. (2-sided)
Pearson Chi-Square	9.336 <sup>a</sup>	3	.025
Likelihood Ratio	10.923	3	.012
Linear-by-Linear Association	8.860	1	.003
N of Valid Cases	105		

<sup>a</sup>. 4 cells (50.0%) have expected count less than 5. The minimum expected count is .48.

Moderate-term inpatient (up to 90 days) was a treatment modality used by the Cumberland County Adult Treatment Court. A Chi-square analysis was used to find the differences in program completion based on whether participants experienced moderate-term inpatient modality. Table 13 shows Chi-square results  $\chi^2 (1, N = 105) = .679, p = .410$ . The  $p$ -value ( $p = .410$ ) was greater than the assumed alpha value ( $\alpha = .05$ ); thus,

there were no significant differences in program completion based on whether participants experienced moderate-term inpatient as a treatment modality.

**Table 13**

*Chi-Square Tests Moderate-Term*

	Value	<i>df</i>	Asymptotic sig. (2-sided)	Exact sig. (2-sided)	Exact sig. (1-sided)
Pearson Chi-Square	.679 <sup>a</sup>	1	.410		
Continuity Correction <sup>b</sup>	.241	1	.623		
Likelihood Ratio	.681	1	.409		
Fisher's Exact Test				.513	.311
Linear-by-Linear Association	.673	1	.412		
<i>N</i> of Valid Cases	105				

<sup>a</sup>. 1 cell (25.0%) has expected count less than 5. The minimum expected count is 4.76.

<sup>b</sup>. Computed only for a 2x2 table.

Long-term inpatient (14 to 30 days) was a treatment modality used by the Cumberland County Adult Treatment Court. A Chi-square analysis was used to find the differences in program completion based on whether participants experienced long-term inpatient modality. Table 14 shows Chi-square results  $\chi^2 (2, N = 105) = 2.401, p = .301$ . The *p*-value ( $p = .301$ ) was greater than the assumed alpha value ( $\alpha = .05$ ); thus, there were no significant differences in program completion based on whether participants experienced long-term inpatient as a treatment modality.

**Table 14**

*Chi-Square Tests Long-Term*

	Value	<i>df</i>	Asymptotic sig. (2-sided)
Pearson Chi-Square	2.401 <sup>a</sup>	2	.301
Likelihood Ratio	2.420	2	.298
Linear-by-Linear Association	1.718	1	.190
<i>N</i> of Valid Cases	105		

<sup>a</sup>. 2 cells (33.3%) have expected count less than 5. The minimum expected count is .95.

A half-way house (three to six months) was a treatment modality used by the Cumberland County Adult Treatment Court. A Chi-square analysis was used to find the

differences in program completion based on whether participants experienced the half-way house modality. Table 15 shows Chi-square results  $\chi^2 (1, N = 105) = 4.646, p = .031$ . The  $p$ -value ( $p = .031$ ) was less than the assumed alpha value ( $\alpha = .05$ ); thus, there were significant differences in program completion based on whether participants experienced a half-way house as a treatment modality.

**Table 15**

*Chi-Square Tests Halfway House*

	Value	<i>df</i>	Asymptotic sig. (2-sided)	Exact sig. (2-sided)	Exact sig. (1-sided)
Pearson Chi-Square	4.646 <sup>a</sup>	1	.031		
Continuity Correction <sup>b</sup>	3.322	1	.068		
Likelihood Ratio	4.893	1	.027		
Fisher's Exact Test				.045	.033
Linear-by-Linear Association	4.602	1	.032		
<i>N</i> of Valid Cases	105				

<sup>a</sup>. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 4.76.

<sup>b</sup>. Computed only for a 2x2 table.

Partial hospitalization was a treatment modality used by the Cumberland County Adult Treatment Court. A Chi-square analysis was used to find the differences in program completion based on whether participants experienced the partial hospitalization modality. Table 16 shows Chi-square results  $\chi^2 (1, N = 105) = .273, p = .602$ . The  $p$ -value ( $p = .602$ ) was greater than the assumed alpha value ( $\alpha = .05$ ); thus, there were no significant differences in program completion based on whether participants experienced partial hospitalization as a treatment modality.

**Table 16***Chi-Square Tests Partial Hospitalization*

	Value	df	Asymptotic sig. (2-sided)	Exact sig. (2-sided)	Exact sig. (1-sided)
Pearson Chi-Square	.273 <sup>a</sup>	1	.602		
Continuity Correction <sup>b</sup>	.017	1	.896		
Likelihood Ratio	.273	1	.602		
Fisher's Exact Test				.706	.446
Linear-by-Linear Association	.270	1	.603		
N of Valid Cases	105				

<sup>a</sup>. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 3.33.

<sup>b</sup>. Computed only for a 2x2 table.

Intensive outpatient (three to six months) was a treatment modality used by the Cumberland County Adult Treatment Court. Chi-square was used to find the differences in program completion based on whether participants experienced short-term inpatient modality. Table 17 shows Chi-square results  $\chi^2 (2, N = 105) = 4.754, p = .093$ . The  $p$ -value ( $p = .093$ ) was greater than the assumed alpha value ( $\alpha = .05$ ); thus, there were no significant differences in program completion based on whether participants experienced intensive outpatient as a treatment modality.

**Table 17***Chi-Square Tests Intensive Outpatient*

	Value	df	Asymptotic sig. (2-sided)
Pearson Chi-Square	4.754 <sup>a</sup>	2	.093
Likelihood Ratio	5.533	2	.063
Linear-by-Linear Association	.840	1	.359
N of Valid Cases	105		

<sup>a</sup>. 2 cells (33.3%) have expected count less than 5. The minimum expected count is .95.

Outpatient (three to six months) was a treatment modality used by the Cumberland County Adult Treatment Court. Chi-square was used to find the differences in program completion based on whether participants experienced the outpatient modality. Table 18 shows Chi-square results  $\chi^2 (3, N = 105) = 31.769, p < .001$ . The  $p$ -



value ( $p < .001$ ) was less than the assumed alpha value ( $\alpha = .05$ ); thus, there were significant differences in program completion based on whether participants experienced outpatient as a treatment modality.

**Table 18**

*Chi-Square Tests Outpatient*

	Value	df	Asymptotic sig. (2-sided)
Pearson Chi-Square	31.769 <sup>a</sup>	3	<.001
Likelihood Ratio	35.982	3	<.001
Linear-by-Linear Association	17.568	1	<.001
N of Valid Cases	105		

<sup>a</sup>. 4 cells (50.0%) have expected count less than 5. The minimum expected count is .48.

A recovery group was used as a treatment modality by the Cumberland County Adult Treatment Court. Chi-square was used to find the differences in program completion based on whether participants experienced the recovery group modality. Table 19 shows Chi-square results  $\chi^2(1, N = 105) = .005, p = .946$ . The  $p$ -value ( $p = .946$ ) was greater than the assumed alpha value ( $\alpha = .05$ ); thus, there were no significant differences in program completion based on whether participants experienced recovery group as a treatment modality.

**Table 19**

*Chi-Square Tests Recovery Group*

	Value	df	Asymptotic sig. (2-sided)	Exact sig. (2-sided)	Exact sig. (1-sided)
Pearson Chi-Square	.005 <sup>a</sup>	1	.946		
Continuity Correction <sup>b</sup>	.000	1	1.000		
Likelihood Ratio	.005	1	.946		
Fisher's Exact Test				1.000	.728
Linear-by-Linear Association	.005	1	.946		
N of Valid Cases	105				

<sup>a</sup>. 2 cells (50.0%) have expected count less than 5. The minimum expected count is .95.

<sup>b</sup>. Computed only for a 2x2 table.

Medication-assisted treatment (MAT) was a treatment modality used by the Cumberland County Adult Treatment Court. Chi-square was used to find the differences in program completion based on whether participants experienced the MAT modality. Table 20 shows Chi-square results  $\chi^2(3, N = 105) = 4.584, p = .205$ . The  $p$ -value ( $p = .205$ ) was greater than the assumed alpha value ( $\alpha = .05$ ); thus, there were no significant differences in program completion based on whether participants experienced MAT as a treatment modality.

**Table 20**

*Chi-Square Tests Medication-Assisted Treatment*

	Value	<i>df</i>	Asymptotic sig. (2-sided)
Pearson Chi-Square	4.584 <sup>a</sup>	3	.205
Likelihood Ratio	5.216	3	.157
<i>N</i> of Valid Cases	105		

<sup>a</sup>. 5 cells (62.5%) have expected count less than 5. The minimum expected count is .48.

Cognitive behavioral therapy (CBT) was a treatment modality used by the Cumberland County Adult Treatment Court. Chi-square was used to find the differences in program completion based on whether participants experienced the CBT modality. Table 21 shows Chi-square results  $\chi^2(1, N = 105) = 26.312, p < .001$ . The  $p$ -value ( $p < .001$ ) was less than the assumed alpha value ( $\alpha = .05$ ); thus, there were significant differences in program completion based on whether participants experienced CBT as a treatment modality.

**Table 21***Chi-Square Tests Cognitive Behavioral Therapy*

	Value	df	Asymptotic sig. (2-sided)	Exact sig. (2-sided)	Exact sig. (1-sided)
Pearson Chi-Square	26.312 <sup>a</sup>	1	<.001		
Continuity Correction <sup>b</sup>	24.320	1	<.001		
Likelihood Ratio	27.925	1	<.001		
Fisher's Exact Test				<.001	<.001
Linear-by-Linear Association	26.061	1	<.001		
N of Valid Cases	105				

<sup>a</sup>. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 20.95.

<sup>b</sup>. Computed only for a 2x2 table.

There were 11 different treatment methods offered to participants of the Cumberland County Adult Treatment Court. The results of Chi-square showed detoxification  $\chi^2 (1, N = 105) = .249, p = .618$ ), short-term inpatient  $\chi^2 (3, N = 105) = 9.336, p = .025$ ), moderate-term inpatient  $\chi^2 (1, N = 105) = .679, p = .410$ ), long-term inpatient  $\chi^2 (2, N = 105) = 2.401, p = .301$ ), halfway house  $\chi^2 (1, N = 105) = 4.646, p = .031$ ), partial hospitalization program  $\chi^2 (1, N = 105) = .273, p = .602$ ), intensive outpatient  $\chi^2 (2, N = 105) = 4.754, p = .093$ ), outpatient  $\chi^2 (3, N = 105) = 31.769, p < .001$ ), recovery group  $\chi^2 (1, N = 105) = .005, p = .946$ ), MAT  $\chi^2 (3, N = 105) = 4.584, p = .205$ ) and CBT  $\chi^2 (1, N = 105) = 26.312, p < .001$ ). Out of the 11 treatment methods, four methods showed significant differences in program completion when participants experienced the modality. The other seven treatments were shown to have no significant differences in completion when participants experienced the modality. Most treatments offered showed no differences in program completion when participants experienced the treatment modalities; thus, the null hypothesis for Research Question 2 was accepted: There are no differences that exist in the level of treatment services utilized between opioid-addicted participants who complete versus those who do not complete the Cumberland County Adult Treatment Court.

### Summary

To address the two research questions, Chi-square analysis was performed on demographics (age, gender, and education level) and treatment methods (detoxification, short-term inpatient, moderate-term inpatient, long-term inpatient, halfway house, partial hospitalization program, intensive outpatient, outpatient, and recovery group) to discover if there were differences in completion when the independent variables acted as a function. The results showed that for all three demographics, no significant differences existed in program completion as a function of demographics; thus, the null hypothesis was accepted for Research Question 1.

The treatment modality short-term inpatient ( $p = .025$ ), half-way house ( $p = .031$ ), outpatient ( $p < .001$ ), and CBT ( $p < .001$ ) showed significant differences in program completion when participants experienced those four treatment modalities. However, the analysis showed that seven of the 11 remaining treatment methods offered showed no significant differences in program completion when participants experienced the different modalities; thus, the null hypothesis was accepted for Research Question 2.

## CHAPTER FIVE: CONCLUSIONS

### Overview

Substance abuse within the United States has been an ongoing problem (Kawasaki et al., 2018). Pennsylvania and specifically Cumberland County has experienced opioid use and opioid overdoses in epidemic proportions, overwhelming the criminal justice system and drug treatment court (Kawasaki et al., 2018). The opioid epidemic has created a 300% increase in opioid-dependent drug court participants over the past 10 years (Robertson & Swartz, 2018). With the increasing number of opioid-addicted participants and the association of opioid use with unsuccessful completion of drug treatment court, the need to address opioid addiction has become critical to drug treatment courts (Gallagher et al., 2018). These findings on opioid addiction highlighted the importance of examining the differences between opioid-addicted participants who successfully completed drug court and those who did not complete in order to improve the lives and outcomes of future opioid-addicted drug court participants.

This quantitative study utilized a causal-comparative design to assess the differences between opioid-addicted participants who successfully completed or failed to complete the Cumberland County Adult Treatment Court. The study focused on the differences in age, gender, education level, and type of treatment services utilized between opioid-addicted participants who successfully completed and participants who failed to complete the program. This chapter will provide a discussion of the findings of the study in relation to the theories of therapeutic jurisprudence and structural ritualization as well as the existing research discussed in Chapter Two. Additionally, the implications of the findings and limitations of the study will be discussed. Next,

recommendations for future research will be discussed. Finally, the chapter will conclude with a summary.

### **Discussion**

The purpose of this quantitative causal-comparative study was to determine if differences exist between opioid-addicted participants' successful completion or failure to complete the Cumberland County Adult Treatment Court with the expectation that age, gender, education, and type of treatment services utilized will explain the differences between successful completion and failure to complete the program. This study utilized secondary ex post facto data to conduct Chi-square tests of independence to identify the retrospective differences between opioid-addicted participants who successfully completed and those who failed to complete the Cumberland County Adult Treatment Court.

The study utilized the theoretical foundations of Wexler and Winick's (1990) therapeutic jurisprudence and Knottnerus' (1997) structural ritualization theory. Therapeutic jurisprudence and structural ritualization theory are often applied in drug treatment courts (Belenko, 2019; Lanier & DeVall, 2017; Mei et al., 2019). Therapeutic jurisprudence has provided an opportunity to improve the well-being of an individual by utilizing a team of interdisciplinary professionals to develop a solution to therapeutically address the cause of an individual's involvement in the criminal justice system (Arstein-Kerslake & Black, 2020). Drug treatment court has provided a natural application of therapeutic jurisprudence with its collaborative approach between the judge and participants, its voluntary nature, and the delivery of treatment services (Traguetto & Guimaraes, 2019).

Structural ritualization theory has focused on the role of ritualized symbolic practices involving the regular and repetitious actions of individuals that form their social behaviors (Liang et al., 2016). In relation to drug treatment courts, structural ritualization theory has disrupted old rituals of substance use through the threat of imprisonment, sanctions and rewards, detoxification, and disassociation of habits and friends (Belenko, 2019; Lanier & DeVall, 2017). Additionally, structural ritualization theory has provided a foundation for drug treatment court participants to establish new rituals through treatment and drug court monitoring to establish and maintain sobriety (Mei et al., 2019). Structural ritualization theory has focused on eliminating participant addiction and encouraged new, positive, ritualized behaviors of participants (Liang et al., 2016).

Even though therapeutic jurisprudence and structural ritualization theory are often applied in drug treatment courts (Belenko, 2019; Lanier & DeVall, 2017; Mei et al., 2019), the findings could not be explained by these theories. Therapeutic jurisprudence has suggested that established rules have provided therapeutic effects (Arstein-Kerslake & Black, 2020; Mei et al., 2019). Structural ritualization theory has focused on the role of ritualized symbolic practices involving the regular and repetitious actions of individuals that have formed their social behaviors (Liang et al., 2016). Based on these theoretical frameworks, the expectation has been that different programming, such as inpatient and outpatient programs, would consistently work. This expectation has not aligned with the findings where short-term inpatient stays showed significant differences in program completion, while neither moderate-term inpatient nor long-term inpatient stays showed a significant difference. Similarly, outpatient treatment showed significant differences in program completion, while intensive outpatient treatment showed no significant

difference. Although seven of the treatment services utilized showed no significant difference, four of the treatment services utilized, including short-term inpatient, outpatient, halfway house, and cognitive therapy showed a significant difference in completion of the program, which supports the theory of therapeutic jurisprudence. While structural ritualization theory informed the study, the study data did not support structural ritualization theory due to the demographic data not being a ritualized behavior. The treatment services utilized data that showed four treatment services, including short-term inpatient, outpatient, halfway house, and cognitive behavior therapy, supported structural ritualization theory through consistent participation that demonstrated a significant difference in program completion.

Data for this study were collected from former opioid-use drug treatment court participants of the Cumberland County Adult Treatment Court. This study also utilized archival data collected from the Cumberland County Adult Treatment Court. Descriptive statistics and inferential statistics were used to analyze the differences between opioid-addicted participants who complete versus those who do not complete the Cumberland County Adult Treatment Court.

This study was guided by the following research questions and associated hypotheses:

**RQ1:** Is there a difference in the demographic makeup (age, gender, and education level) between opioid-addicted participants who complete versus those opioid addicts who do not successfully complete the Cumberland County Adult Treatment Court?



**H1:** There is a difference in the demographic makeup between opioid-addicted participants who complete versus those opioid addicts who do not successfully complete the Cumberland County Adult Treatment Court.

**H01:** There is no difference in the demographic makeup between opioid-addicted participants who complete versus those opioid addicts who do not successfully complete the Cumberland County Adult Treatment Court.

**RQ2:** What differences exist in the level of treatment services utilized between opioid-addicted participants who complete versus those who do not complete the Cumberland County Adult Treatment Court?

**H2:** There are differences that exist in the level of treatment services utilized between opioid-addicted participants who complete versus those who do not complete the Cumberland County Adult Treatment Court.

**H02:** There are no differences that exist in the level of treatment services utilized between opioid-addicted participants who complete versus those who do not complete the Cumberland County Adult Treatment Court.

The effectiveness of drug courts has been well researched; however, there has been a lack of research on the impact of drug courts on opioid-addicted participants. Drug courts have attempted to decrease substance abuse and criminal behavior by offering the participant treatment as an alternative to incarceration. Substance abuse has placed a significant financial burden on the criminal justice system, but drug courts have been effective in allowing participants to live drug-free and crime-free lives (Shannon et al., 2021). The findings from this study have provided insight into the differences between opioid-addicted participants who successfully completed the treatment program and

opioid-addicted participants who failed to complete the treatment program of the Cumberland County Adult Treatment Court.

### **Summary of Findings**

A Chi-square test was utilized to evaluate the differences in the age, gender, education level, and treatment services between opioid-addicted participants who successfully completed or failed to complete the Cumberland County Adult Treatment Court. The study utilized one dependent variable (completion) and four independent variables (age, gender, education, and treatment services utilized) to answer the research questions. The first research question tested the differences in the demographics (age, gender, education level) of opioid-addicted participants who successfully completed or failed to complete the Cumberland County Adult Treatment Court. The second research question examined the impact of different treatment modalities on the likelihood of a participant completing the program successfully.

#### **Research Question 1**

The three demographic variables used as a function to determine whether differences existed in participants completing the Cumberland County Adult Treatment Court were age, gender, and education level. Each variable used the Chi-square test of independence to address whether differences existed. Each resulting test had a  $p$ -value greater than the assumed alpha level ( $\alpha = .05$ ); thus, the null hypothesis was accepted: There is no difference in the demographic makeup between opioid-addicted participants who complete versus those opioid addicts who do not successfully complete the Cumberland County Adult Treatment Court.

The findings from this study related to the demographics of the participants were contradicted by prior literature. Based on the result of the analysis of this study, there was no significant relationship between the age of the participant and the likelihood of the participant completing the treatment court program successfully. Contradictory to this, previous literature suggested that age has played a significant role in the likelihood of successfully completing drug treatment court and participants who were older at intake had a greater chance of successfully completing drug court (Gallagher et al., 2017; Mikolajewski et al., 2021; Montiel Ishino et al., 2020; Shannon et al., 2020). Kopak et al. (2018) also found that individuals who experienced their first drug use at a young age were more likely to return to substance use after treatment.

The analysis from this study also found no significant relationship between the gender of the participant and the likelihood of the participant completing treatment court successfully. Previous literature suggests that gender does play a role in opioid use and influences the probability of whether a participant will successfully complete drug treatment court (Montiel Ishino et al., 2020; Shannon et al., 2020). Results from a previous study showed that male rural opioid-use drug court participants were more likely to successfully graduate, while female urban opioid-use drug court participants were more likely to successfully graduate from drug treatment court (Shannon et al., 2020).

The findings from this study also found no significant relationship between the education level of the participant and the likelihood of the participant completing treatment court successfully. Prior literature was found to frequently contradict this finding and suggests that as education increases, so does the probability of graduation

from drug court (Gallagher et al., 2017; Gill, 2016; Mikolajewski et al., 2021; Montiel Ishino et al., 2020). Shannon et al. (2021) found that the attainment of a high school education improved the likelihood of successful completion of drug court and that for every year of education completed, the participant's probability of success was 1.4 times more likely. Other previous research also reinforced the importance of education in drug court completion (Ellis et al., 2020; Kopak et al., 2018).

### **Research Question 2**

The treatments available to participants were used as a function of determining if there were differences between those who experienced treatment and their completion statuses. There were 11 different treatment methods offered to participants of the Cumberland County Adult Treatment Court (detoxification, short-term inpatient, moderate-term inpatient, long-term inpatient, halfway house, partial hospitalization program, intensive outpatient, outpatient, recovery group, medication-assisted treatment, and cognitive behavioral therapy). A Chi-square test was conducted on each treatment method.

Out of the 11 treatment methods, four methods showed significant differences in program completion when participants experienced the modality. The four treatment methods that showed significant differences in participant completion were short-term inpatient stays (14 to 30 days), half-way house (three to six months), outpatient (three to six months), and cognitive behavioral therapy (CBT). The other seven treatments were shown to have no significant differences in completion when participants experienced the modality. The treatment methods that showed no significant differences in participant completion were detoxification, moderate-term inpatient (up to 90 days), long-term

inpatient (90 + days), partial hospitalization, intensive outpatient (three to six months), recovery group, and medication-assisted treatment (MAT).

This study had mixed findings related to the duration of the program and how it influenced the likelihood of successful completion by the participants. Short-term inpatient stays showed greater differences in successful participation completion, while moderate-term inpatient and long-term inpatient programs showed no significant differences in participation completion. This was contradicted by Gill (2016), who found the number of days spent in a program to be a predictor of successful completion of the program.

The findings from this study also suggested that the use of medication-assisted treatment (MAT) had no significant impact on the likelihood of successful completion of the program by participants. Supporting this finding, Fendrich and LeBel (2019) found that both opioid-addicted participants who received MAT and participants who did not receive MAT had a 33.7% graduation rate. However, some prior studies contradicted this finding, suggesting that MAT had a positive impact on the likelihood of participants successfully completing treatment court. Baughman et al. (2019) found that MAT reduced risky behaviors and increased successful completion of drug treatment court. Evans et al. (2019) confirmed Baughman et al.'s findings that individuals with an opioid use disorder who utilized buprenorphine or methadone were less likely to reoffend than individuals who received traditional treatment. Historical trends provide compelling evidence that MAT provides significant positive outcomes and improves graduation rates for opioid-use participants (Gallagher et al., 2021).

### **Practical Implications**

The first research question explored whether the demographic makeup (age, gender, and education level) of the opioid-addicted participants influenced the likelihood of successfully completing the Cumberland County Adult Treatment Court. The findings suggested that neither age, gender, nor education level had a significant impact on the likelihood of a participant completing treatment court. Even though this study suggested that gender did not influence the likelihood of successfully completing treatment court, prior literature has suggested that female patients require additional support services such as childcare and transportation during sessions to improve treatment outcomes (Parlier-Ahmad et al., 2021). Treatment courts need to be sensitive to the different needs of different genders.

Identification of appropriate treatment has been crucial to the success of opioid-addicted drug treatment court participants (Lanier & DeVall, 2017; Shannon et al., 2020). Results of the study showed an increase in successful completion for opioid-addicted participants who participated in outpatient or cognitive behavior therapy, confirming previous studies which found opioid-addicted participants require individualized treatment services to increase successful program completion (Lanier & DeVall, 2017; Shannon et al., 2020). Focusing on the identification of the individual needs of opioid-addicted drug treatment court participants has provided the opportunity to improve the effectiveness of individual treatment services and improved successful completion of the program.

### **Study Limitations**

This study utilized a quantitative research design to examine the differences between opioid-addicted participants who successfully complete and those who fail to complete the Cumberland County Adult Treatment Court. Quantitative research was appropriate for this study as it provided the ability to determine the differences between age, gender, education, and treatment services utilized by opioid-addicted participants. The outcome of this quantitative research study was limited due to the limitations in the data. Previous literature suggested that there are many other factors that influence the successful completion of drug treatment courts. Studies have shown that the readiness levels of the participants influence the likelihood of the completion of the drug treatment program (Sloas et al., 2018; Ujhelyi Gomez et al., 2019). The treatment court judge also plays a critical role in supporting and motivating individuals to successfully complete drug treatment court (Gallagher et al., 2019b; Gill, 2016; Goldkamp et al., 2016; Kuehn & Ridener, 2016; Marlowe et al., 2016; Roman et al., 2020). Using a quantitative methodology has not enabled robust examination of factors such as the readiness of a participant or the characteristics of a treatment court judge. The use of a qualitative methodology is better suited to examine such factors because of its ability to yield deeper understandings of participants' experiences with a phenomenon (Festinger et al., 2018; Gallagher et al., 2017).

Another limitation relates to the source of the data for this study. This study examined the data from the Cumberland County Adult Treatment Court. By only examining data from one drug treatment court, the results of the study were only applicable to the drug treatment court in the study and could not be generalized in

application to other drug treatment courts (Gallagher et al., 2017). Previous research has shown that many factors that influence the success of a treatment program are specific to a provider, such as a court judge's demeanor and treatment of drug court participants (Gallagher et al., 2019b; Gill, 2016; Goldkamp et al., 2016; Kuehn & Ridener, 2016; Marlowe et al., 2016; Roman et al., 2020), treatment of participants by the probation officer and the case manager (Kuehn & Ridener, 2016), the use of rewards and sanctions (Liang et al., 2016; Lindquist et al., 2016), and the participants' perceptions of the drug court (Kuehn & Ridener, 2016). Data collected from only one treatment court was considered a limitation of the study.

Another limitation is that race was excluded from this study as an independent variable. The racial breakdown of the population of Cumberland County, Pennsylvania, was comprised of 84.6% Caucasian, 4.8% Asian, 4.7% African American, 4.3% Hispanic, and 1.6% other, limiting the ability to accurately compare the differences in completion based on race (Cumberland County PA, 2021). Based on the racial breakdown of the county, using race as an independent variable would have created racial groups with too few participants to get a statistically significant measure.

The sample of this study was also limited due to only including opioid-dependent participants. Gallagher et al. (2018) found opioid-use drug treatment court participants were 80% less likely to successfully complete the program compared to participants with a non-opioid drug of choice. Shannon et al. (2021) also found that only 33% of opioid-use participants successfully completed drug treatment court. Even though the purpose of this study was to specifically examine opioid-addicted participants, this did present as a limitation to this study. Including data from non-opioid-dependent participants or adding



addiction type as an independent variable would have provided deeper insight into the findings.

Another limitation results from a sample size smaller than was planned for the study, which reduced the statistical power of the analyses. A G\*Power analysis was performed to determine the minimum sample size of 128 participants. The Cumberland County Adult Treatment Court was established in 2006 and from 2006 to 2021, only 105 opioid-addicted past participants were identified from the Cumberland County Adult Treatment Court. Data from 2022 were not available as the calendar year had not yet been completed, making it impossible to identify 2022 archival data and obtain the minimum sample size of 128. The inability to identify 128 opioid-addicted past participants from the secondary archival data placed limitations on determining statistical differences between the two groups of the dependent variable completion (successful completion and failure to complete the program). Additionally, the inability to achieve a high level of statistical power diminished the sensitivity of testing the null hypotheses for the study and imposed a need for caution in generalizing the results.

### **Recommendations for Future Research**

To address the limitations of quantitative research design, future research should consider conducting similar research with a qualitative design. This would enable the research to identify other factors that may not have been included in the data that was recorded. Various prior studies have highlighted the important role the treatment court judge plays in the outcome of drug treatment (Gallagher et al., 2019b; Gill, 2016; Goldkamp et al., 2016; Kuehn & Ridener, 2016; Marlowe et al., 2016; Roman et al., 2020). Previous literature has also shown that rewards and sanctions are frequently used

to motivate participants to comply with program obligations, complete treatment, and abstain from drug use (Liang et al., 2016; Lindquist et al., 2016). Other factors that have been identified to influence the successful completion of drug treatment court programs include participants' perceived court structure, accountability, dedicated staff, incentives, a changed level of motivation, and social support (Kuehn & Ridener, 2016). A qualitative research design would have provided better insight into the perspectives of participants and enabled better identification of factors that contributed to the successful completion of drug treatment court programs. Previous research has also identified the need to garner the perspectives of participants in treatment court (Gallagher et al., 2019b).

The quantitative study utilized archival data derived from a secondary data source, the Cumberland County Adult Treatment Court. The study's findings could not be generalized because the data examined was from one specific court. Future research should include more data from a variety of treatment courts. By including more data from a wider population, the findings would reflect a more generalized outcome. Using a larger data set would also enable the study to meet statistical power.

This study also did not examine how combining treatments influenced the outcome. Prior literature has suggested that combining traditional treatment and medication-assisted treatment could increase the likelihood of successful completion of treatment (Robertson & Swartz, 2018; Witkins & Hays, 2017). Additionally, treatment services utilized by participants who failed to complete and the impact of the utilization of medication-assisted treatment had on their failure to complete should be considered. This presented an opportunity to further this research by examining combinations of treatments and how the combinations of treatments relate to each other or to individual

treatments.

Future research could conduct similar research that would include race. Previous research has shown that race does impact a participant's likelihood of successfully completing drug treatment court (Gallagher et al., 2018; Shannon et al., 2021). It is therefore important to have explored the impact race has on the probability of whether a participant will successfully complete drug treatment court.

The purpose of this study was to assess the differences between opioid-addicted participants who successfully completed or failed to complete the Cumberland County Adult Treatment Court. Therefore, the sample of this study only examined data related to opioid-dependent participants and did not utilize data from non-opioid-dependent participants. Drug of choice has been shown to impact the likelihood of the successful completion of drug court, with opioid use decreasing the likelihood that an individual will successfully complete drug treatment court (Shannon et al., 2018). Future research should conduct a similar study that includes data from opioid-addicted participants and non-opioid addicted participants.

Finally, future research should capture the reasons drug treatment court individual participants failed to complete the program. Drug of choice, prior offending, length of time in the program, and reason for discharge should be considered in relation to failure to complete the program. Pierce et al. (2017) found opioid-use individuals experienced higher rates of prior offending and increased levels of offending which have impacted successful completion. Additionally, Logan and Link (2019) found the longer patients remained in treatment the better the outcomes for the participants. Identification of the reasons an individual participant failed to complete the program is crucial to improving

the outcomes of future drug court participants.

### **Summary**

The purpose of this study was to assess the differences between opioid-addicted participants who successfully completed or failed to complete the Cumberland County Adult Treatment Court. The study focused on the differences in age, gender, education level, and type of treatment services utilized. The study utilized the theoretical foundations of Wexler and Winick's (1990) therapeutic jurisprudence and Knottnerus' (1997) structural ritualization theory. The data utilized for this study was provided by the Cumberland County Adult Treatment Court.

This study addressed two research questions. The first research question tested for the differences in the demographics (age, gender, education level) of opioid-addicted participants who successfully completed or failed to complete the Cumberland County Adult Treatment Court. The analysis of the data indicated that there was no difference in the demographic makeup between opioid-addicted participants who complete versus those opioid addicts who do not successfully complete the Cumberland County Adult Treatment Court. These findings were contradicted by various previous studies which suggested that age, gender, and level of education do have an impact on the likelihood of completing drug treatment court (Gallagher et al., 2017; Gill, 2016; Mikolajewski et al., 2021; Montiel Ishino et al., 2020; Shannon et al., 2020).

The second research question examined the impact of different treatment methods on the likelihood of a participant completing the program successfully. Out of the 11 treatment methods, four methods showed significant differences in program completion when participants experienced the modality. The four treatment methods that showed

significant differences in participant completion were short-term inpatient stays (14 to 30 days), half-way house (three to six months), outpatient (three to six months), and cognitive behavioral therapy (CBT). However, the analysis showed that seven of the 11 remaining treatment methods offered showed no significant differences in program completion when participants experienced the different modalities; thus, the null hypothesis was accepted for Research Question 2.

This chapter identified and discussed limitations and made several recommendations for future research. The limitations that were identified and discussed were the quantitative research design of the study, the single source of data, exclusion of race from the analysis, and the inclusion of only opioid-dependent participants. Future research should consider conducting similar research with a qualitative design. Although the quantitative design was appropriate for this study, qualitative research would provide additional insight into the perceptions of participants and enable better identification of factors that contribute to the successful completion of drug treatment court programs. Additional data sources should also be explored for future research. More data sources would provide more generalized findings that can be applied to a wider population. Future research should also include race as a factor and data from non-opioid addicted participants.

The findings from this study suggested that neither age, gender, level of education, nor treatment method had any significant impact on the likelihood of an opioid-addicted participant completing drug treatment court. This study contributed to the literature on the treatment of opioid-addicted individuals and provided insight regarding the implementation of program practices to improve opioid-addicted participant

outcomes. Previous literature has suggested that drug treatment courts can increase successful outcomes for participants by developing alternative strategies to improve participant retention and completion rates by utilizing established key components (Hepburn & Harvey, 2016). Since the findings of this study were insufficient to reject the null hypothesis of both research questions, it implied that there is a need to develop alternative strategies to improve the outcomes of opioid-addicted individuals partaking in drug treatment court.

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**APPENDIX****Appendix A**

Site Authorization from Cumberland County Adult Treatment Court

**From:** [REDACTED] Polensky, Paul <ppolensky@ccpa.net>  
**Sent:** Friday, May 20, 2022, 1:06 PM  
**To:** [REDACTED] Harrison, Lisa <lharrison@ccpa.net>  
**Subject:** RE: Adult Treatment Court data Inquiry

[REDACTED],

I've signed and attached the data approval letter. This is going to be a fairly involved data collection project for me and will take some time. However, I will start working on it directly and get the information to you as quickly as I can.

[REDACTED] | Director, Criminal Justice Services | County of Cumberland, PA

[REDACTED]

[REDACTED]

May 20, 2022

[REDACTED]

Adult Treatment Court Coordinator  
Cumberland County Adult Treatment Court

[REDACTED]

Dear [REDACTED]:

After careful review of your research proposal entitled Cumberland County Adult Treatment Court Comparing Opioid Participant Successful and Unsuccessful Completion, we have decided to grant you permission to receive and utilize Cumberland County Adult Treatment Court archival data for your research study.

Check the following boxes, as applicable:

The requested data WILL BE STRIPPED of all identifying information before it is provided to the researcher.

The requested data WILL NOT BE STRIPPED of identifying information before it is provided to the researcher.

I/We are requesting a copy of the results upon study completion and/or publication.

Sincerely,

[REDACTED]

[REDACTED]

Adult Treatment Court Coordinator  
Cumberland County Adult Treatment Court

**From:** [REDACTED]

**Sent:** Friday, May 20, 2022 12:41 PM

**To:** [REDACTED]

**Subject:** Data request

May 20, 2022

[REDACTED]  
Adult Treatment Court Coordinator  
Cumberland County Adult Treatment Court  
[REDACTED]

Dear [REDACTED]

As per our recent conversation, Liberty University Institutional Review Board has approved the discussed research proposal. As a graduate student in the Helms School of Government at Liberty University, I am conducting research as part of the requirements for a Doctor of Philosophy in Criminal Justice. The title of my research project is Cumberland County Adult Treatment Court Comparing Opioid Participant Successful and Unsuccessful Completion and the purpose of my research is to determine if differences exist between opioid addicted participant's successful completion or failure to complete the Cumberland County Adult Treatment Court with the expectation that age, gender, education, and type of treatment services utilized will explain the differences between successful completion and failure to complete the program.

I am writing to request your permission to access and utilize Cumberland County Adult Treatment Court participant data including drug court participation, drug court completion, charges, drug of choice, gender, race, education, entry age, treatment services utilized, medication-assisted treatment, time incarcerated, the number of sanctions received, time in phase 1, time in phase 2, time in phase 3, time in phase 4, discharge type, discharge date, and total time in program of opioid-use participants of the Cumberland County Adult Treatment Court from 2006 to 2021.

The data will be used to identify differences which exist between opioid addicted participants who successful completed or failed to complete the Cumberland County Adult Treatment Court with the expectation that age, gender, education, and type of treatment services utilized will explain the differences between successful completion and failure to complete the program.

The results of the research will highlight the current strengths of the program and provide guidance in developing future policy to increase successful outcomes for opioid addicted participants.

Thank you for considering my request. If you choose to grant permission, please respond by email to [REDACTED]. A permission letter document is attached for your use and convenience.

Sincerely,

[REDACTED]

**From:** Polensky, Paul <ppolensky@ccpa.net>  
**Sent:** Friday, November 12, 2021, 2:01 PM  
**To:** Harrison, Lisa <lharrison@ccpa.net>  
**Subject:** RE: Adult Treatment Court data Inquiry

Lisa,

The Treatment Court team has approved your request for data. I have a good idea of what you are looking for from your request, but please do send me specifics.

Paul

**From:** Harrison, Lisa <[REDACTED]>  
**Sent:** Tuesday, November 9, 2021 2:34 PM  
**To:** Polensky, Paul <[REDACTED]>  
**Subject:** Adult Treatment Court data Inquiry

[REDACTED],

I am reaching out to you to discuss the possibility of obtaining data from the Cumberland County Adult Treatment Court. As we have previously discussed, I am currently working on my Doctor of Philosophy degree in Criminal Justice, Helm's School of Government at Liberty University. I have worked with the Cumberland County Juvenile Probation's Youth Aid Panel for the past 16 ½ years. From working with youth in the Youth Aid Panel and my involvement

with the Cumberland Perry Substance Abuse Coalition, I have developed a strong commitment to addressing substance abuse issues. Given the current struggle with opioid addiction nationwide and locally, the opioid dependent drug court participants have interested me. Currently, I am working on my dissertation to complete the Ph.D. program. My intention is to complete my dissertation involving a program that would benefit my local community. I wanted to reach out to you and the Cumberland County Adult Treatment Court Team regarding your consideration of obtaining data from the Cumberland County Adult Treatment Court for my dissertation.

My proposed dissertation is a quantitative, causal comparative study to determine if differences exist between opioid addicted participant's successful completion or failure to complete the Cumberland County Adult Treatment Court with the expectation that age, gender, education, and type of treatment services utilized will explain the differences between successful completion and failure to complete the program. It is anticipated that data would include Cumberland County Adult Treatment Court opioid-dependent participants who completed (successful and failure to complete) during 2006 - 2021 to ensure an adequate sample of both groups (successful completion and failure to complete). The tentative proposed data requested would include drug of choice, gender, education, entry age, time in phases 1 -5, discharge date, discharge type, total time in program, treatment services utilized, and medication-assisted treatment.

Currently, I am in the process of writing Chapters One and Two of my dissertation. My next step includes the development of Chapter Three, the research design, and approval from the Institutional Review Board (IRB). Upon approval from the IRB, the next step would be obtaining the data and conducting the causal comparative analysis. It is anticipated the analysis would be



completed in late spring - early summer of 2022. I have provided the proposed problem statement, purpose statement, and research questions of my dissertation for your review.

### **Problem Statement**

It is not known whether or not differences exist between opioid-addicted participants who complete versus those who do not complete the Cumberland County Adult Treatment Court based on the number of treatment services received (Alcoholics Anonymous (AA) meetings, Narcotics Anonymous (NA) meetings, group and individual therapy, weekly court appearances, probation appointments, urine testing, and medication-assisted treatment), as well as the demographic make-up of the client (age, gender and education). The specific population for the current study will be opioid-dependent participants within the Cumberland County Adult Treatment Court.

### **Purpose Statement**

The purpose of this quantitative, causal comparative study is to determine if differences exist between opioid addicted participant's successful completion or failure to complete the Cumberland County Adult Treatment Court with the expectation that age, gender, education, and type of treatment services utilized will explain the differences between successful completion and failure to complete the program. The population of the current study will comprise past participants of the Cumberland County Adult Treatment Court. The sample will be drawn from former opioid-use drug treatment court participants of the Cumberland County Adult Treatment Court. The individuals included in this study will be past participants of the Cumberland County Adult Treatment Court who successfully completed all phases of the program or were discharged from the program for failing to successfully complete from 2006 to 2021. Successful completion is identified as individual participants who completed all four phases of the Cumberland County

Adult Treatment Court and were recognized and recorded as graduates from the program (Gill, 2016). Failure to complete is identified as individual participants who failed to complete the four phases of the Cumberland County Adult Treatment Court and were removed or unsuccessful in completing the program (Gill, 2016). Conclusions of the current study are based on archival data collected by the Cumberland County Adult Treatment Court. The quantitative, causal comparative study utilizing secondary data to conduct a Chi-square test will identify retrospective effect and cause of the differences between opioid-addicted participants who successfully complete and those who fail to complete the Cumberland County Adult Treatment Court based on age, gender, education, and type of treatment services utilized. Knowing if any differences exist between opioid addicts who complete versus those who do not complete the Cumberland County Adult Treatment Court can assist administrators in understanding the level of services that opioid addicts might need to produce the desired result. Furthermore, identifying what differences, if any, exist in terms of demographics might shed light on the development and application of program elements designed to meet the individual needs of opioid-addicted participants and improve successful outcomes.

### **Research Questions**

This study will seek to address the following research questions:

RQ1: Is there a difference in the demographic makeup (age, gender, and education level) between opioid addicted participants who complete versus those opioid addicts who do not successfully complete the Cumberland County Drug Treatment Court?

H1: There is a difference in the demographic makeup between opioid addicted participants who complete versus those opioid addicts who do not successfully complete the Cumberland County Drug Treatment Court.

H10: There is no difference in the demographic makeup between opioid addicted participants who complete versus those opioid addicts who do not successfully complete the Cumberland County Drug Treatment Court.

RQ2: What differences exist in the level of treatment services utilized between opioid addicted participants who complete versus those who do not complete the Cumberland County Drug Treatment Court?

H2: There are differences that exist in the level of treatment services utilized between opioid addicted participants who complete versus those who do not complete the Cumberland County Drug Treatment Court.

H20: There are no differences that exist in the level of treatment services utilized between opioid addicted participants who complete versus those who do not complete the Cumberland County Drug Treatment Court.

**Dependent Variable:** Completion (Successful completion of, or failure to complete) of the Cumberland County Adult Treatment Court. Successful completion is an individual participant's successful completion all four phases of the Cumberland County Adult Treatment Court and is recorded as graduated from the program.

**Independent Variables:** Independent variables include demographics age, gender, and education level as well as treatment services utilized (Narcotics Anonymous meetings, Alcoholics Anonymous meetings, group and individual therapy, weekly court appearances, probation appointments, urine testing, and medication-assisted treatment) by individual participants during their participation in the Cumberland County Adult Treatment Court.

Your consideration and the consideration of the Cumberland County Adult Treatment Court Team of my data request would be greatly appreciated. I realize this initial inquiry is well

in advance of the request for actual data, however, I wanted to confirm the availability of data to utilize in the causal comparative study. Your consideration and the consideration of the Cumberland County Adult Treatment Court Team is greatly appreciated. Please feel free to reach out to me if you have any questions or need further information.

Thank you,

[REDACTED]

Cumberland County Juvenile Probation

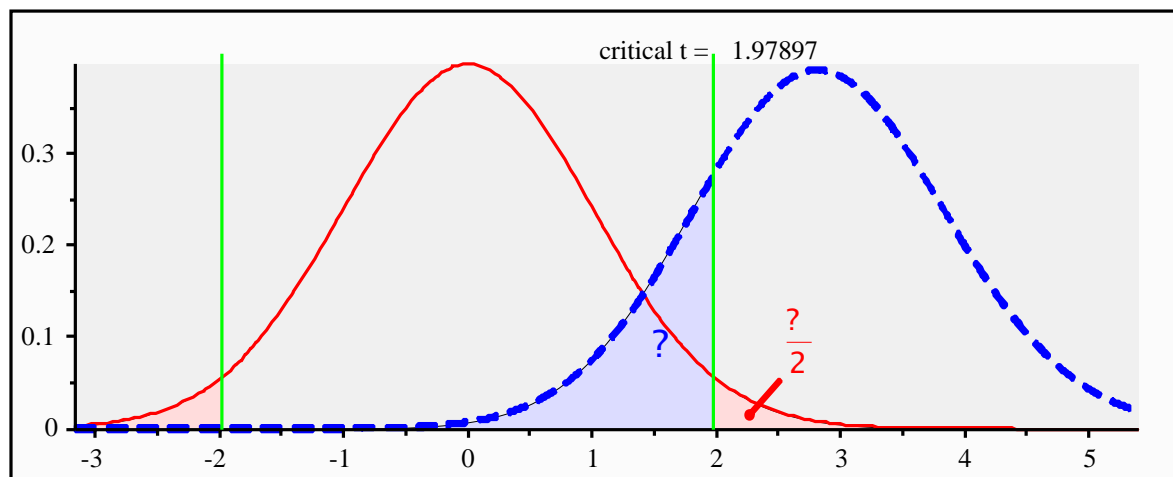
Youth Aid Panel

[REDACTED]

The information in this message may be privileged and confidential and protected from disclosure. If the reader of this message is neither the intended recipient, nor an employee or agent responsible for delivering this message to the intended recipient, then you are hereby notified that any dissemination, distribution, unauthorized use, or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by replying to this message and deleting it from your computer. Thank you,  
Cumberland County, PA.

## Appendix B

### G\*Power Analysis for Sample Size Calculation



[1] -- Friday, January 14, 2022 -- 13:11:30

**t tests - Means:** Difference between two independent means (two groups)

**Analysis:** A priori: Compute required sample size

**Input:**

Tail(s)	=	Two
Effect size d	=	0.5
$\alpha$ err prob	=	0.05
Power (1- $\beta$ err prob)	=	0.80
Allocation ratio N2/N1	=	1

**Output:**

Noncentrality parameter $\delta$	=	2.8284271
Critical t	=	1.9789706
Df	=	126
Sample size group 1	=	64
Sample size group 2	=	64
Total sample size	=	128
Actual power	=	0.8014596

G\*Power Version 3.1.9.6

## VITA

Lisa Matteson Harrison is a doctoral candidate with the Helms School of Government, pursuing a PH.D. in Criminal Justice. She received a bachelor's degree in criminal justice and public administration and a master's degree in public administration from Shippensburg University. After graduating from Shippensburg University, Lisa served as the information coordinator and SCAN Coordinator with the PA Department of Corrections for five years. Additionally, Lisa has served as the Director of the Youth Aid Panel with the Cumberland County Juvenile Probation Office for 18 years.