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# An Examination of Average Pretrial Risk Assessment Scores Between Drug and Violent Offenders

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AN EXAMINATION OF AVERAGE
PRETRIAL RISK ASSESSMENT
SCORES BETWEEN DRUG
AND VIOLENT
OFFENDERS

A Thesis Submitted in Partial Fulfillment of the
Requirements of the Degree of Master of Arts

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This Thesis by: Annaliese H. Engler

Entitled: *An Examination of Average Pretrial Risk Assessment Scores Between Drug and Violent Offenders*

has been approved as meeting the requirements for the Degree of Master of Arts in College of Humanities and Social Sciences, Program of Criminology & Criminal Justice.

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ABSTRACT

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With an overwhelming number of offenders in prison for a drug-related offense (Federal Bureau of Prisons, 2020), evidence-based practices are as important as ever to help properly determine incarceration. Prior literature has shown that pretrial release decisions impact the final outcome of the case and tools used for such a decision should be evaluated and scrutinized (Johnson et al., 2014; Oleson et al., 2014). It seems that although violent offenders pose more of a physical threat to the community than drug offenders, the pretrial risk assessment tools cater towards pushing drug offenders towards a higher risk score. Using data from the Colorado Pretrial Assessment Tool Revised (CPAT-R) the results concluded that with a sample size of 292 defendants, drug offenders have a higher average pretrial risk assessment score when compared to violent offenders.

*Keywords:* Pretrial, Risk Assessment Tool, Drug Offender, Violent Offender

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CHAPTER I

INTRODUCTION

With a new era of using evidence-based practices in the criminal justice system it is assumed that drug offenders are being over-assessed during the pretrial process. As of October 2020, the majority of prison inmates in the United States were incarcerated for either a drug offense (about 46%) or an offense that is violent in nature (about 38%) (Federal Bureau of Prisons, 2020). Considering an overwhelming number of inmates are incarcerated for a drug-related offense, assessing the beginning of the judicial process is an important step in reducing the prison population. Being detained during the pretrial process has shown to impact the final outcome of the case, including sentencing (Oleson et al., 2014). Evaluating drug and violent offenders' impacts from pretrial risk assessments is vital to the generalization and success of the widely used tools. Agencies of community supervision, including pretrial release, have previously been used to reduce drug use among offenders (Boyum et al., 2011). Though this may be the case, it is plausible that commonly examined factors of pretrial risk assessments over-assess drug offenders and may not consider other factors to help them succeed.

Based on prior literature of pretrial risk assessments, drug offenders may pose less of a physical threat to the community yet are more likely to be detained compared to violent offenders. This paper discusses the differences in pretrial risk assessment scores for drug and violent offenders in the criminal justice system.

By conducting an independent two-sample t-test and a multivariate regression analysis, the results yield that there is a significant difference in the means of risk scores between violent and drug offenders. Furthermore, the type of offense was positively associated with increased risk assessment score. The results suggest not that drug offenders are necessarily over-assessed, but that violent offenders are slightly neglected. The Colorado Pretrial Assessment Tool-Revised (CPAT-R) items are necessary to appropriately assess the risk of the average minor offender; however, the CPAT-R should attempt to incorporate the seriousness of the offense into the risk score.

The results imply that the risk score alone is not necessarily a good recommendation for judges to utilize when regarding violent offenders. Since the average pretrial risk score for violent offenders is lower than those of non-violent drug offenders, it is assumed that judges would use a higher amount of discretion for violent offenders given the nature of the offense being excluded from the actual risk score. The results conclude the importance of determining the appropriate risk as it possibly affects the final outcome of the case.

CHAPTER II

REVIEW OF LITERATURE

**Pretrial Process**

**What is Bail?**

To better understand how drug and violent offenses may differ, it is important to fully grasp what pretrial release is. First, pretrial release involves two important concepts which are bail and bond release. In many jurisdictions, bail is most commonly described as an offender's release from jail during the pretrial phase of the criminal justice process (Schmalleger, 2015). In other words, bail is the amount of money that must be paid to be released from jail by a court of law.

After arrest, a defendant attends an arraignment where there is a formal notification of the alleged charges presented by a judge or magistrate. During this time, the defendant has the opportunity to be released from jail before trial begins. According to the National Institute of Government Purchasing (n.d.), a bond agreement is the agreement, or contract, with the court a defendant must make upon pretrial release. A bond is similar to a contract, which guarantees the defendant's reappearance in court. The bond agreement is an obligation to the court, which when broken renders consequences such as a harsher sentence, possible fines, or having their bond revoked, which would require them to return to jail. When a bail amount is set, the judge will then decide what type of bond to release the defendant on. The most common bond agreements include release on recognizance (ROR), surety, and cash bonds. A ROR bond is when the

offender is released with no payment needed and could be a good option for those who might be unstable financially (Schmalleger, 2015). Surety bonds require the offender to pay a small portion of the bond while a bond agency vouches for the remaining amount (Schmalleger, 2015). Cash bonds require the full amount to be paid in cash (Schmalleger, 2015). The type of bond set affects a defendant's success throughout the judicial process (Demuth, 2003; Kennealy, 2018).

Unless deemed necessary by a judge, being detained before proven innocent by a court of law is a punishment within itself. If the defendant is not given a bond agreement during the first appearance, a bond hearing may be scheduled which will focus directly on a bail decision and any other necessary conditions. Frequently, bond agreements are given in accordance with pretrial release conditions. Pretrial release conditions are mandated by a judge and are requirements that attempt to prevent, or hold accountable, the defendant for subsequent deviance upon release (e.g. drug testing, electronic monitoring, or partial confinement). Given with much discretion, pretrial conditions are unique for each individual and monitor the defendant for any misconduct during release. For example, it is plausible that drug offenders with a chemical dependency have a higher likelihood of failing pretrial conditions (compared to offenders without dependency issues) which would endure legal and social consequences.

When a defendant is given bond, it is a common practice across jurisdictions to require conditions to ensure the return and non-reoffending of that defendant. Once the type of bond agreement is set, pretrial conditions can act as a tool to manage the defendant's reoffending behaviors. Such conditions include but are not limited to requirements such as drug testing, GPS monitoring, partial confinement, or protection orders. Pretrial release conditions are unique for each defendant, and so are the types of bonds. The most common types of bonds for pretrial release are surety bonds and release on recognizance (ROR) bonds. Although a defendant's

income is not typically recorded on a risk assessment, employment status can still be used to assist judges when deciding the type of bond for the defendant (Latessa & Lovins, 2010).

To guide judges on pretrial release decisions, including conditions, pretrial risk assessment tools are often employed. The pretrial risk assessment information is collected with intentions of being used at the first appearance and/or bond hearing depending on the case. Pretrial risk assessment tools assist judges in making decisions using a statistical analysis of the defendant's threat to the community and probability of failing to appear in court. Pretrial risk assessment tools can assess the defendant's likelihood of taking part in pretrial misconduct including new crimes, failing to appear to court (FTA), or revocations (Cohen et al., 2018).

**The Importance of Bail**

When a defendant is not released on bond before trial the outcome of the case is impacted, and often harmed, in many ways. A defendant who is detained during the pretrial process will have a lack of communication with the defense counsel compared to those released on bond. This lack of communication between the defendant and the defense counsel will harm the preparedness of the case and can result in accepting plea bargains for the sake of getting out of jail (Demuth, 2003; Kennealy, 2018). In other words, an attorney who is unable to meet with a detained defendant may not be able to receive all the facts of the case and might advise the client to settle for a plea agreement instead of undertaking the case in trial.

Pretrial detention also harms the defendant's ability to maintain employment and meet family obligations such as making payments on time or spending quality time with family (Demuth, 2003). Defendants who are employed at the time of arrest but unable to get out on bond face serious risk of job loss which can increase the opportunity for financial deficits, such as making home payments or financially providing for family, to occur. Furthermore, detainment

before trial and loss of income via employment complicates providing for the family's material and emotional means—potentially causing separation within the family (e.g. divorce or estranged relationships with children) (Freiburger et al., 2010). This separation can be caused through emotional detachment and frustration all while being detained before trial.

A defendant's pretrial detainment status is a strong predictor for negotiating a guilty plea. Incarceration before trial impacts the defendant's mental state to where the individual is more willing to accept a plea deal in exchange for being released (Kellough & Wortley, 2002). Though a defendant may be granted bail, various factors including not having the financial means to post bail keep an individual detained. It has been found that offenders being detained during the pretrial period was associated with receiving longer sentences—specifically, those who had completed pretrial services often resulted in being given shorter sentences (Oleson et al., 2014). Johnson et al. (2014) found similar results, confirming that defendants who do not make bail repeatedly receive higher sentences.

Given the effects of bail stated above, it is important to reserve pretrial incarceration for those who are dangerous to the public. Various factors, both lawful (components that are legally authorized) and nonlegal factors (characteristics not within the scope of the law), are considered when a judge is determining bail and bond decisions. Lawful factors will focus mainly on the legal aspects of the case such as criminal history of the defendant, the seriousness of the current offense, or failing to appear (FTA) to court.

FTAs are a legal offense—meaning that not appearing to a scheduled court date will lead to further punishment by the court via fines and/or misdemeanor charges, including possibly jail time. Nonlegal factors include components that are not directly involved with the case and should not greatly impact the cases outcome. However, nonlegal factors (e.g. race, gender, age,

SES, and employment) have previously been discovered in the decision-making process throughout the criminal justice process (Demuth, 2003; Katz & Spohn, 1995; Kellough & Wortley, 2002; Schaefer & Hughes, 2019). Despite this, the lawful components are more relevant and should be the main factors to consider when determining pretrial release and potential conditions.

The number of FTAs is considered a lawful component and has been studied a number of ways. FTAs can be examined as factors of why someone might not show up to court—for example, economic deficiencies or employment obligations may have prevented a defendant from attending court; however, dynamic or changeable factors such as employment have been shown to be less predictive for pretrial misconduct (Kennedy et al., 2013). Such obligations may be insightful as to why FTAs may occur. Another way FTAs are analyzed are as predicting factors for the criminal justice system—or determining how likely a defendant is to skip the court date (Kellough & Wortley, 2002). The current study is interested in both aspects, moreover identifying why FTAs occur gives insight to how and why pretrial risk decisions are made. The pretrial risk assessment will ultimately examine both and will guide judges in making bond decisions for defendants.

**Lawful Components**

Lawful components include factors that are relevant to the laws and interaction with the criminal justice system such as previous criminal history, current offense, chance of reoffending, and number of FTAs. The legal components of a case are scrutinized when deciding whether to allow a defendant to be released on bond. Such lawful aspects of the case allow a judge to consider the likeliness of reoffending when released as well as if the defendant is dangerous to the community. According to Schaefer and Hughes (2019) legal variables are the best to use

when determining detention for pretrial release. Kennedy et al. (2013) concur claiming the current charge and number of criminal arrests were highly correlated to FTAs and rearrests. Throughout a pretrial risk assessment, the lawful components (such as seriousness of the current charge, number of FTAs, and previous criminal history) are combined into a statistical calculation which produces a 'risk score.'

The 'risk score' for each defendant assists judges in the pretrial release decision and any conditions that are necessary. Such 'risk scores' are obtained via risk assessment tools and usually involve 'low risk' and 'high risk' categories. In Colorado, judges are not required to utilize pretrial risk assessments and typically view them as tools rather than demands (Koepke & Robinson, 2018). The effects of pretrial risk assessments can be difficult to decipher since judges have discretion when choosing to use recommendations of the risk assessments or act on their own accord.

Although risk assessments are not necessarily new, the long-term effects of such tools are unfamiliar and unknown. Hopkins and Doyle (2018) state that utilizing risk assessment tools have resulted in lower pretrial detention rates, reoffending rates while on bond release, and lower FTA rates. Caution should be taken when generalizing pretrial risk assessments to all types of offenders in all jurisdictions because each tool varies and may not be inclusive or intended for all participants (Childs et al., 2014; Hsu et al., 2009). Drug offenders in particular may be harmed by the risk assessment tools. Factors such as FTAs are an area of concern for drug offenders because personality disorders occurring from chemical dependencies may impair defendants to remember to go to court (Johnson et al., 2014). Risk assessment tools have a focus of predicting misconduct or the nonappearance in court while out on bond—they are not typically designed for possible addictions, social hardships, or intellectual deficiencies of defendants (factors that are

often applicable to drug offenders). For this reason, pretrial risk scores will be examined for drug offenders and violent offenders to explore if there is a need for independent risk assessment tools among drug offenders.

*Failure to Appear*

The failure to appear (FTA) to court is a violation within itself, meaning that if an offender does not appear to the scheduled court date, consequences will be given (e.g. additional charges, fines). When released on bond, a defendant is held accountable to appear for the next court date set by the judge to discuss the next legal proceeding.

The number of FTAs and previous criminal history are important factors among risk assessments, as they are the most often examined by judges when deciding bond release (Hopkins & Doyle, 2018). Environmental factors (i.e. location) and prior criminal records have shown to be accurate predictors for FTA rates (Kennedy et al., 2013; Schaefer & Hughes, 2019). Those who are unemployed, do not have stable living, have poor mental health, and abused substances are linked with a high likelihood of failing to appear to court (Gehring & van Voorhis, 2014; Johnson et al., 2014). Prior FTA rates were also found to be higher among those who were given higher cash bonds (Johnson et al., 2014). According to Demuth (2003) defendants were more likely to be detained during the pretrial process if multiple FTAs were present compared to no FTAs.

Few studies have shown that FTA rates are higher among drug offenders (Johnson et al., 2014; Gehring & van Voorhis, 2014). High FTA rates for drug offenders may be the result of the affect drugs have on the brain, which can result in chemical dependencies and a multitude of personality disorders (e.g. trouble socializing, depression, or anxiety) (Johnson et al., 2014; Olfson et al., 2017; Sievewright & Daly, 1997). It is possible that a defendant with an inhibiting

personality disorder and/or chemical dependencies are unable to fully understand pretrial requirements and are therefore not suitable to meet bond conditions. Hopkins and Doyle (2018) state many jurisdictions use pretrial risk assessment tools to allow the automatic release of individuals who are likely to reappear in court and least likely to offend. Defendants who complete pretrial services were more likely to be given shorter sentences— an unfair situation for drug offenders who may struggle with sobriety or relapse (Oleson et al., 2014).

### *Community Protection*

Protection of the community is another topic that usually plays an important role for a judge's decision to detain an accused offender (Koepke & Robinson, 2018). Community protection could be interpreted numerous ways, but for the current study it will involve the act of reoffending and the public's physical safety—this comes with the assumption that drug offenders are more likely to reoffend, but the crimes committed are victimless. Judges would face much scrutiny if a released defendant were to commit a serious offense during the pending of the current case (Koepke & Robinson, 2018). That being said, pretrial decisions reflect the choices of the judge/magistrate in power and risk assessment tools can aid in the release process.

When released on bond, a defendant has a higher chance to commit other offenses than if detained during pretrial. Although it seems more likely for defendants charged with drug usage to skip court and reoffend (most likely with another drug offense), it is plausible that such offenders do not necessarily pose a physical and harmful threat to the public. When reviewing previous literature on pretrial risk assessment tools, Kennealy (2018) found that those who committed a serious offense (felonies) were more likely to be detained compared to minor offenses. Drug and violent offenses can result in a felony or misdemeanor charge, yet the majority of offenders in prison are incarcerated for a drug-related offense (Federal Bureau of

Prisons, 2020). Along with the seriousness of the current offense, criminal history of the defendant can be a good predictor for determining the compliance of a defendant while on release. These various components influence the judge's decision-making process due to the anticipated and predicted victimization to the community.

*Criminal History*

The number of previous arrests have also shown to be significantly related to the pretrial release decision (Kellough & Wortley, 2002). Criminal history is an important factor for judges to consider because it can present a pattern and allows predictions to be made about whether an individual will reoffend while out on bond. More likely than not, those who have an extensive arrest record will be less likely to receive a bond agreement compared to those who do not have any previous arrests. Though the level of seriousness of the current offense at hand is analyzed when determining release, the seriousness of prior offenses will be an important factor as well.

Werth (2019) and Demuth (2003) state a defendant's criminal history is a better reflection of lawmakers and prosecutors than it is of the offender, meaning that harsher or lenient charges are discretely applied for each defendant. With unclear measures of discretion, it is possible that harsher or lenient charges may be due to both legal and nonlegal (or extralegal) factors of the case (Demuth, 2003). These aspects could span from the criminal history of the defendant (e.g. serious offenses in the past) all the way to political pressures (e.g. the public will not reelect the DA if the charges are lenient). Pretrial risk assessments would imply that a harsher (more serious) charge would result in being denied bond and remaining detained before trial. Furthermore, Freiburger et al. (2010) claim that the number of felony convictions and the seriousness of the offense were significant factor for judges when making pretrial decisions.

Drug offenders have been found to have a high likelihood of reoffending (Nally et al., 2014). This could be contributed to a possible drug addiction by the offender or even police focusing efforts on apprehending drug offenders over other types of offenders. Therefore, pretrial risk assessments that are created for specific offenses (e.g. domestic violence, drug offenses, or juveniles) are critical for assessing the proper needs to prevent reoffending while released on bond. Since prosecutors hold much discretion, it can be hard to decipher if a defendant is being charged for the lawful components or for personal characteristics. Pretrial risk assessment tools can help exemplify if disparities in decision making are due to the legal or nonlegal components (Werth, 2019).

**Disparities in Decision-Making**

By giving a 'risk score' to defendants for pretrial release, it becomes easier to monitor judge's decisions. Judges in Colorado are not required to use risk assessments, but by comparing the recommended risk score with the judge's decision, the public is able to take note of judges that deviate too far from the tool's recommended score. Lawful components have been shown as the best predictor for pretrial detention, but disparities among subgroups and offenses must not go unnoticed (Kennedy et al., 2013). What will be discussed in the latter portion of this paper is that some offenders (drug offenders) hold a harsher stigma than others (violent offenders). What is even more interesting are the personal characteristics of offenders who are often arrested for such offenses. The "War on Drugs" led to the over-policing of poor areas populated with minorities, meaning that those arrested and charged for drug-related offenses had a high likelihood of being Black or Hispanic (Abadie et al., 2018).

Commonly examined in criminal justice are the disparities that subgroups— including various race/ethnicities, genders, and ages— face (Demuth, 2003; Freiburger et al., 2010). Other

factors that impact the bond and pretrial release decision could also include employment and socioeconomic status. Examining race/ethnicity, gender, and age during bond release provides insight to if and why minority groups are discriminated against. Employment and socioeconomic status on the other hand, may actually be a helpful element when determining release, pretrial conditions, bond type, and bail amount. The immense amount of discretion prosecutors and judges hold make it hard to determine what factors are legitimately considered during decision-making processes (Bibas, 2009). Other studies have pointed out some of the discrimination against minorities (i.e. race/ethnicity, gender, and age) and the pretrial release process (Demuth, 2003; Kellough & Wortley, 2002; Schaefer & Hughes, 2019).

Kellough and Wortley (2002) claim that using a statistical evaluation of defendants via pretrial risk assessments will reduce discretion for decision makers within the criminal justice system. This is because pretrial risk assessments will focus on more of the lawful components (criminal history, FTAs, and current offense) compared to personal aspects of the defendants. However, Hopkins and Doyle (2018) briefly state that pretrial risk assessments would actually enhance nonlegal disparities by including such information in the tools itself. By including nonlegal factors such as race/ethnicity, gender, age, employment status, and social class, extra information is provided to the presiding judge that may unnecessarily influence the decision. It is important to understand the numerous ways that minority subgroups are discriminated against with pretrial risk assessments to improve the tools.

### *Race/Ethnicity*

The race/ethnicity of offenders is commonly examined for disparities in the criminal justice system. Though decisions should not and cannot be made by the race/ethnicity of a defendant, judges and prosecutors are given an immense amount of discretion, so it is unknown

to what extent these factors influence the outcome. An abundance of research has been collected on racial/ethnic biases for various segments of the criminal justice system, however, there is limited information regarding race/ethnicity decisions made during the pretrial risk assessment phase. With this being said, there have been varying conclusions made about if pretrial decisions are influenced by the race/ethnicity of the offender.

Racial minorities (often Black offenders) face discrimination, or unjust treatment, throughout the criminal justice process (Spohn, 2009). Countless studies support that disparities among White, Black, and Hispanic defendants are present throughout the judicial process (Demuth, 2003; Freiburger et al., 2010; Schaefer & Hughes, 2019; Spohn, 2009). The current study will not focus on the differences between races/ethnicities but will focus on drug offenders versus violent offenders—though those of minority status are arrested for drug offenses at a disproportionate rate compared to White offenders.

Alternatively, there is a lot to be said about how pretrial release is impacted by race/ethnicity. Schaefer and Hughes (2019) concluded that Black drug offenders were less likely to receive a release on recognizance bond and were more likely to remain detained before trial compared to any other race/ethnicity examined. Multiple studies claim that race did not impact the amount of bail but did impact the probability of pretrial release (Katz & Spohn, 1995; Schaefer & Hughes, 2019). Furthermore, Kellough and Wortley (2002) found that Black defendants were more likely to be detained during pretrial compared to those who are White. Though it is likely that risk assessments have influence over presiding judges (see Schaefer & Hughes, 2019), it is unclear how the tools impact the decisions made about release given the copious amounts of discretion within the courtroom.

Demuth (2003) claims that Hispanics often face harsher treatment during the pretrial release decision compared to White or Black defendants. This claim suggests that Hispanic defendants face similar hardships as Black defendants, such as poverty and unemployment to name a few, but have an additional disadvantage when including citizenship and language barriers (Demuth, 2003). Results from Demuth (2003) also show that Hispanics are more likely to have to pay to be released from jail compared to Black and White defendants who were more likely to be given a ROR bond. When charged with a drug offense, Hispanic defendants sometimes face suspicion of drug trafficking—furthermore, perceptions of increased flight risk due to their citizenship status or lack thereof is an additional discrepancy that Black or White individuals do not often face (Demuth, 2003).

***Monetary Aspects***

As has been heavily researched, socioeconomic status has shown to have a predominant impact on an offender's involvement and success through the various stages of the criminal justice system. Monetary aspects are concerned with any financial obligation that impacts the defendant's pretrial release which includes the socioeconomic status or employment of a defendant as well as the amount of bail set, bond conditions, or court costs. Both the socioeconomic status and employment can play a role in the bond type and the amount of bail given to a defendant (Freiburger et al., 2010). Employment is a common question on pretrial risk assessments, however, the tools do not necessarily disclose the income amount of the defendant (Werth, 2019). Furthermore, it can be argued that a defendant's home address is also a measure of socioeconomic status because the address may indicate subtle signs of home ownership, rental status, or homelessness.

A ROR bond releases the defendant with no payment needed and is often a good accommodation for lower class individuals (Schmalleger, 2015). However, a ROR bond is not mandatory for financially limited individuals (Schmalleger, 2015). This sheds light on the complexity of unlimited discretion that judges hold. When studying pretrial release outcomes of White, Black, and Hispanic offenders, Demuth (2003) found that those who were Black or White were more likely to receive an ROR bond compared to Hispanic individuals. Surety bonds require the offender to pay a small percentage of the bail payment before being released. Johnson et al. (2014) found that defendants who were not under surety bonds were about 60% more likely to fail to appear in court. However, numerous conflicting reports show that most pretrial defendants show up to court if given a ROR bond and that the type of bond does not necessarily impact FTA rates (Brooker, 2017; Jones, 2013; Ouss & Stevenson, 2020).

Socioeconomic status not only will impact the ability to pay bail, but if conditions are required during the pretrial phase, it is the defendant who will need to pay for such resources (Hopkins & Doyle, 2018). Pretrial release conditions such as GPS monitoring or drug testing can be a hardship for defendants who struggle financially—as they are typically required to pay the expenses themselves. Though socioeconomic status may not appear to directly impact risk assessment scores, many tools (including the one utilized for the current study) state the employment of the defendant. Employment has been shown to be an important factor for release because it can be a predictor for a defendant's flight risk and other pretrial misconduct (Freiburger et al., 2010; Johnson et al., 2014). Though a nominal level assessment of employment status is not enough information to determine the social class of an individual, offenders who are not employed will most likely be negatively impacted during the pretrial

release decision (Freiburger et al., 2010). In a study analyzing various bond types, Johnson et al. (2014) claim the majority of defendants likely to receive FTAs were unemployed and often abused drugs.

Accommodations can be made for defendants who may not be able to pay the given bail amount. ROR bonds release the defendant on bond with no payment needed—which can be a great accommodation for the lower class or for those who cannot afford to get themselves out of jail. However, even when financially restricted, the defendant may not be given a ROR bond, again alluding to the unlimited discretion of the court. Hispanic defendants have been found to be the least likely to receive ROR bonds (Demuth, 2003).

Another common bond agreement type are surety bonds. Surety bonds require the defendant to pay a small percentage of the bail payment before being released. Johnson et al. (2014) states that defendants were more likely to receive an FTA when not given a surety bond. The decision ultimately lies with the judges when deciding bond type and bail amount, yet pretrial risk assessments can be useful tools for judges to examine employment status and what type of bond is suitable for the defendant.

The "War on Drugs" has played a significant role for the number of incarcerated individuals beginning in the 1970's and continuing to the present day. The "War on Drugs" was intended to "get tough" on drug dealers and users. Unfortunately, the war led to some areas— poor, urban communities—being more over-policed than others (Rosino & Hughey, 2018). These areas were typically occupied by Black and Hispanic individuals (Rosino & Hughey, 2018). Although Black drug usage is, on average, about 15% higher compared to Whites, the lower-class communities are nonetheless at the center of the "War on Drugs" (Rosino & Hughey, 2018). Demuth (2003) furthered this argument claiming that during the pretrial release phase,

racial disparities, such as being denied bond or having higher bail for Black and Hispanic defendants, were most predominant among drug offenders. Abadie et al. (2018) and Rosino and Hughey (2018) claim that the "War on Drugs" increased the incarceration for those of low socioeconomic status—many of whom are non-violent offenders. The over policing resulted in an overwhelming group of minorities in prison. The "War on Drugs" is an example of how those who are of low socioeconomic status are in a position to be susceptible to unjust lawmaking decisions. Abadie et al. (2018) affirm the "War on Drugs" led to oppressive forms of treatment and did not prevent the distribution or usage of drugs among the participants in their study.

The type of drug one is charged with may impact the sentence which could be linked to social class and race/ethnicity of the offender. Walker and Mezuk (2018) have found that there are harsher sentences surrounding crack cocaine compared to powder cocaine. Bjerk (2017) claim that the majority of offenders charged/convicted for crack cocaine are African Americans compared to powdered cocaine, which is virtually the same drug. If the "War on Drugs" led to the over-policing of poor communities typically filled with those of a minority race, presumably poor offenders will have longer prison sentences. If the type of drug impacts the defendant's chances with bail or pretrial requirements, the justice system may be in question altogether.

### Gender and Age

Though limited information is available as to how gender impacts risk assessment tools, Schaefer and Hughes (2019) found that females were more favorably treated than men during the pretrial process. It has been suggested that females are presented as posing minimal risk to the community compared to men (Gehring & van Voorhis, 2014). Freiburger et al. (2010) also found that females were more likely to be given a lower bail amount due to the perceptions of female

defendants being low risk. Gehring and van Voorhis (2014) continue to state that mental health is a stronger correlate among females, which has also been shown to increase FTAs.

Regardless of what offense the accused is arrested for, it is known within the criminal justice system is that females are not arrested as often as males (Gould & Hulon, 2019; Prendergast et al., 2010; Visher, 1983). Holtfreter and Cupp (2007) discuss the rising rate of female offenders on probation and parole. This being the case, it seems that risk assessment tools are focused for the majority of the population (i.e. males) and need to accommodate to properly assess female defendants (Hsu et al., 2009). Male and female defendants often have different needs and accommodations during the pretrial phase—this is a subject that should be researched in the future.

Age of offender has been found to have a positive, yet weak relationship with pretrial detention (Kellough & Wortley, 2002). Findings of pretrial release and age should be examined clearly as they can be imprecise and misleading due to the numerous factors surrounding the decision to release before trial. For example, an offender who is older will have had the opportunity to commit more crime than a younger offender. Demuth (2003) claim defendants who are either young or old are less likely to be given a payment for bail compared to defendants who are middle aged or young adults. The age the defendant is first arrested is a key factor in predicting future offenses.

The Age Crime Curve has shown patterns of mid-teens to late 20s being average age for those to commit crime (Fabio et al., 2011). Little information has been examined with age and its impacts on pretrial risk assessment scores. Age will not be of particular focus in the current study but will nonetheless be controlled for due to the possible disparities younger offenders may have compared to older offenders and vice versa. Extralegal factors in tools can be interpreted as

inaccurate and biased and go as far as saying that all of these factors aggravate and replicate

disparities in our past (Hopkins & Doyle, 2018). Risk assessment tools help identify needs and

accommodations for each defendant and limit discretion from the court.

## Theoretical Framework

Drug offenders will have different needs compared to violent offenders and pretrial risk

assessment tools are better equipped to help identify exigencies and give better insight to the

necessary individualized care. With the Risk- Need-Responsivity (RNR) model, the importance

of pretrial risk assessment tools is better explained. The RNR model is a treatment model that

often utilizes risk assessment tools to determine the best treatment with an overall goal to reduce

recidivism or reoffending. Respectively, the RNR model is one of the earliest models to assist in

offender assessment and treatment (Andrews et al., 2011). The model is commonly used to

determine rehabilitation treatment but can be equally useful for pretrial release decisions and risk

assessment tools. Polaschek (2012) claimed that the model is empirically valid—meaning that

the theory has previously been researched and supported as effective for testing the appropriate

criteria of the theory; level of risk, appropriate treatment, and reaction to the given treatment.

For the current study, the model will focus explicitly on if the 'risk' aspect is applied

appropriately given the two different offenders. Since 'risk' is arguably the most important

aspect of the RNR model, a studied dedicated to this component alone was necessary. Moreover,

the Colorado Pretrial Assessment Tool- Revised (CPAT-R) primarily focuses on the risk of the

offender and does not give insight to the 'needs' or 'responsivity' aspects. However, future

research should consider applying the 'need' and 'responsivity' components. Examining the

CPAT-R may identify potential flaws in the assessment and allow for a reevaluation of the tool

itself. Though the study is not examining or validating the CPAT-R components, the tool must

be questioned in order to understand how drug and violent offenders are assessed in the criminal

justice system. Results that yield differing risk scores between the violent and drug offenders

may indicate that pretrial conditions should not be identically applied to the two groups. In

subsequent studies, a further evaluation on the other RNR model elements should also be

considered for a full understanding of the functionality of risk assessment tools.

**The Risk-Need-Responsivity**
**Model**

The 'Risk' portion of the RNR model plainly states that services and the intensity of

those services must be suitable to the high or low risk of the offender. Andrews et al. (1990)

claim that it is important to determine which offenders are high risk or low risk to be able to

provide them appropriate services. The 'risk' model refers to who should be treated. Drug

offenders may pose a higher risk of reoffending due to addiction, personality disorders, an/or

mental health disorders—these individuals would be considered for a "high risk" status. It is

possible that violent offenders do not reoffend as often and therefore would be classified as "low

risk." Andrews and Dowden (2006) claim that offenders who have a low-risk of reoffending will

have negative outcomes (e.g. increased likelihood of reoffending) when given treatment that is

meant for high risk offenders.

The application of the RNR model to the study expands on the importance of assessing

offenders in the most appropriate way. Over- or under-assessing defendants during the pretrial

phase may lead to inappropriate pretrial conditions and release decisions which can ultimately

lead to reoffending or worsening behavior. It appears that the RNR model heavily relies on

finding a suitable risk for the offender.

'Needs' in the RNR model refers to matching offenders with services provided. The third

principle of the RNR model, 'Responsivity', describes how the offender responses to the

program—in other words, the offender should actually benefit from the service/program they are placed in. The program not only should match the offender's needs but should be benefitting from the service. A fourth part to the RNR model is that discretion can be used if necessary—meaning that the judge's decision should be appropriate when risk, need, and responsivity were taken into consideration. The 'needs', 'responsivity', and discretion part of the RNR model relies solely on the 'risk' principle, which was why the current study focused exclusively on it.

If drug offenders are given pretrial conditions more often than violent offenders, it would be reasonable to assume that drug defendants will fail pretrial conditions more regularly than violent defendants. This is relevant because risk assessment scores need to accurately assess offenders for appropriate needs. Assuming that drug offense defendants are over-assessed, pretrial conditions may not be necessary and result in the defendant dealing with ramifications of technical violations (including fines, added charges, and possibly increased sentences). When compared to violent offenders, it is necessary to evaluate not only the risk assessment but the pretrial conditions that are given to both offense types. The study may reveal that utilizing the same tool for both offense types is not appropriate.

Pretrial risk assessment tools and the RNR model are closely associated. Pretrial risk assessment tools are designed to recommend a score for the level of intensity of services and possibly which services should be provided for the defendant in question. Risk assessments that produce a risk score is the 'Risk' principle of the RNR model. The tool gathers information about employment, FTAs, previous arrests, current charges, etc. and provides a score that signifies the chances of reoffending during pretrial release. 'High risk' is for defendants who have a higher chance of reoffending when released while "low risk" indicates a lower chance of

reoffending on release. Furthermore, the model is applicable because it elaborates on if the 'Risk' portion is being applied accurately for the appropriate population.

**Criticisms of the Risk-Need-Responsivity Model**

There are various criticisms of the RNR model. Many of these criticisms include the model not being inclusive of personal, biological, or other outside characteristics of the offender (Ward et al., 2006). Furthermore, these critiques claim that such risk tools place offenders into various categories and does not focus on the individual needs of each offender. Ward et al. (2006) confront these criticisms stating these issues reflect the practice of the model and not the model itself. Regarding pretrial risk assessments, judges are able to refrain from the tool's final score and make decisions based on the individual needs of each defendant. Polaschek (2012) states that the RNR model is weakest in the 'Responsivity' section, claiming that it is the least developed section of the model and may only rely on external needs rather than focus on internal motivation. In other words, the 'Responsivity' principle is lacking insight on internal or personal factors that may inhibit the defendant reacting to the treatment provided.

Another criticism of the RNR model claim that the model itself is not simple and more complex than necessary (Polaschek, 2012). Kennealy (2018) discusses if officers are capable of administering pretrial risk assessments. Improperly administrating the tools can cause incorrect data to be collected and lead to inaccurate risk scores to be obtained. Though Kennealy (2018) found that pretrial officers are capable of conducting pretrial risk assessments, this cannot be applied to every officer in every jurisdiction.

The RNR model is the best theory for the current study because pretrial risk assessments examine the risk of the offender and the needs of the offender. Furthermore, the risk assessments advise the judge what type of bond should be used and allows the judge to ultimately go against

the tool if necessary. For the current study, the pretrial risk assessment does not track how the

defendant responds to pretrial conditions or the type of bond given for the current offense.

However, the risk assessments themselves are responsive to the defendant's previous criminal

activity.

## Risk Assessments

Pretrial risk assessment tools predict the defendant's likelihood of taking part in pretrial

misconduct including new crimes, FTAs, or revocations (Cohen et al., 2018). Though risk

assessments are utilized exclusively as a helpful tool for judges, the tools have been shown to be

beneficial in a variety of ways. Cohen et al. (2018) found that risk assessments are accurate in

predicting pretrial violations. Furthermore, Hopkins and Doyle (2018) state that many places

using risk assessment tools have had lower pretrial detention rates and FTAs. Pretrial risk

assessments have been argued to reduce bias due to the statistical and scientific presentation of

the data (Werth, 2019).

However, Werth (2019) does state that offenders are susceptible to being labeled as high

risk due to risk assessment tools. Abadie et al. (2018) states the "War on Drugs" created a

stigmatization of drug offenders. Though the risk assessment tools may be helpful for judges, it

is not a requirement and the decisions ultimately fall independently on the judge's own accord.

The high stigmatization that drug offenders have may mislead judges to make decisions that are

harmful for the defendant. Though risk assessments can guide judges with decisions, the tools

can also be generalized types of offenses. Different types of offenses receive different

consequences, so it is understandable for the assessment tools to be different as well. Drug

offenders most likely have different needs and deficiencies than other types of offenders and

should not be evaluated on the same level. Similarly, violent offenders often have abnormal brain structures compared to healthy men and consideration for a separate evaluation should be encouraged (Leutgeb et al., 2015).

**Types of Risk Assessments**

Drug offenders should be assessed differently than violent offenders because each offense requires different needs. Risk assessment tools are common throughout other facets of the criminal justice system such as in a correctional setting to determine the threat level of the offender. There are also a number of risk assessment tools for specific types of offenders including domestic violence, juvenile, and drug offenders. In order to better understand the needs of specific defendants and how they compare to each other, it could be important to evaluate specific offenses separately instead of generalizing each offense together.

The Ontario Domestic Assault Risk Assessment (ODARA) tool is a risk assessment tailored for domestic violence offenders. Similar to pretrial risk assessments, ODARA is utilized to predict the chances of offending, but is used only for domestic violence offenders. It has been found that ODARA is an accurate tool for DV offenders with both little and extensive criminal history (Hilton & Harris, 2009). Hilton and Harris (2009) continue to state that ODARA's predictive accuracy was lessened when equivocal violence was included—in other words, if a domestic dispute was unclear ODARA was less predictive for that particular offense.

The Structured Assessment of Violence Risk in Youth (SAVRY) is another risk assessment tool used for adolescents. SAVRY helps the criminal justice system better understand the needs of juvenile offenders and what approaches should be taken. Similar to pretrial risk assessments, the tool also helps identify which juveniles may pose a threat to the public. A concern that criminal justice professionals must consider is if risk assessment tools are being

used as intended. Childs et al. (2014) claim that SAVRY was previously utilized for already incarcerated juvenile offenders, while intentions for the tool were for probation, treatment referrals, or determining case management. The SAVRY tool includes historical, individual, and social/contextual assessments of risk for juvenile offenders. SAVRY has been shown to be effective at predicting needs for juveniles but is criticized for reliability among individuals who administer the tool (Childs et al., 2014). This displays a common concern with pretrial risk assessment tools because the tool can be effective but will not show intended results if administered incorrectly.

The Level of Service Inventory (LSI) is a risk assessment tool used to help determine and identify a defendant's needs while also tracking personality traits such as antisocial behavior (Werth, 2019). The Level of Service Inventory Revised (LSI-R) not only attempts to predict future offending but is intended to allow a better understanding of deviant behavior as it takes into consideration personal attributes as well as social changes (Hsu et al., 2009). With personal and social aspects included, the LSI-R allows for a better understanding of the needs an offender may possess. Many instruments designed for risk evaluations are focused on male offenders and a common concern for pretrial risk assessments is determining if the tools are suitable for both male and female defendants. The LSI-R has shown to accommodate for males but not entirely recognize the needs for female offenders (Hsu et al., 2009). Many concepts and tools are designed around male offenders because they make up the majority of the prison population. Manchak et al. (2009) claim that the LSI-R could predict recidivism well for females, but should not necessarily be used due to specific female dynamic factors not being taken into consideration (e.g. abuse). Male and female offenders should not be assessed by the same tool because each sex will have differing reasons for recidivating.

Furthermore, Holtfreter and Cupp (2007) concur with other studies stating that females are often overlooked for risk assessments and need to be examined closer. Hsu et al. (2009) states the LSI-R showed female offenders had higher financial and family/marital scores compared to males. The LSI-R accommodates for a wide range of offenders and we can use effective tools to constantly adapt and improve the quality of risk assessment tools.

### Drug and Violent Offenses

The current study focuses on the comparison of pretrial risk assessment scores for drug and violent offenders. These two offenses were chosen to compare based on the assumption that those who are considered a danger to the public should be detained, yet many of those who are currently detained are due to drug-related offense (Federal Bureau of Prisons, 2020). This comparison does not diminish the importance of detaining offenders for other offenses such as property crimes, white collar crimes, or organized crimes. Future research should consider comparing risk assessment tools to various offenses to determine if the tools can be generalized while producing an appropriate risk.

### Drug Offenders

The "War on Drugs" era was due to this concept that America needs to "get tough on crime" which has led to the increase of the prison population. Specifically, prisons have a high proportion of drug offenders in the United States. Currently, 46.2% of the prison population is filled with drug offenders (Federal Bureau of Prisons, 2020). Since prisons have taken in more drug offenders due to the "War on Drugs", the bail process has also been impacted because of the growing numbers of individuals arrested (United States Department of Justice [DOJ], Bureau of Justice Statistics [BJS], 1988). With the increase in drug offense arrests, there has naturally been a stigma created about drug offenders. The stigmas of having erratic behavior and impaired

judgement have created negative perceptions of drug offenders the last few years (Abadie et al., 2018). Judges and other criminal justice officials may feel pressured by the public to be tough on drug offenders when making bond or sentencing decisions. Elected criminal justice professionals often times make decisions that will allow them to be reelected, so if the community perceives drug offenders as "bad", public officials may charge them harsher to satisfy the public.

### *Drug Offender's Pretrial Misconduct*

FTAs are assumed to be higher among drug offenders (Gehring & van Voorhis, 2014; Johnson et al., 2014). Due to the lawful components (i.e., FTAs, previous criminal history, and likelihood to commit pretrial misconduct) that are assessed during the pretrial release decision, it is assumed that drug offenders will have a higher risk score. Drug offenses have previously been described as a victimless crime because the primary victim in the offense is the offender themselves. The current study questions the practice of the pretrial detention of defendants who are potentially only victimizing themselves. When discussing risk assessment tools, a statistical approach is used, but it is possible that a simple count of previous offenses and FTAs is not an accurate description for defendant's needs. Furthermore, using pretrial conditions (e.g. urinalysis or drug testing) is not as effective as treatment or rehabilitation for drug offenders—this may result in pretrial misconduct rather than improved health and quality of life for the defendant (Abadie et al., 2018). It is possible that alternative approaches may be better suited to serving drug offenders compared to testing for misconduct.

It has been found that the use of narcotics is associated with poorer brain functioning (Ross et al., 2020). Specifically, patterns and constant use of drugs across a variety of drugs (cocaine, methamphetamines, cannabis, opiates, and benzodiazepines) have been in accordance

with neuropsychological functioning. Ross et al. (2020) disclose that the association was unclear and it was not determined if drug usage actually causes damage to the brain.

Regardless, drug usage and damage to the brain may require more help or pretrial conditions compared to non-drug defendants. In a study conducted by Sievewright and Daly (1997) it was found that the majority of drug users in their sample also had personality disorders, poor social functioning, and a higher likelihood of dropping out of treatment programs. Johnson et al. (2014) concur, stating functioning with society is tough for drug offenders because personality disorders can be developed through continuous drug use. Furthermore, personality disorders can actually grow due to repeatedly being involved in delinquent acts that have potential to result in arrest (Sievewright & Daly, 1997). Though personality disorders may develop, drug offenders are not necessarily physically dangerous to the community. Drug offenders can have a combination of various mental illnesses (e.g. personality disorders, depression, anxiety, and mania) along with addictive behaviors that lead them to be involved with risky behaviors, such as pretrial misconduct or criminal activities (Johnson et al., 2014; Olfson et al., 2017; Sievewright & Daly, 1997).

### *Defining Drug Offenses*

The UCR part 2 index defines a drug offense as the sale, possession, or use of any substance, drug, or drug paraphernalia (i.e. injection needles, smoking pipes, etc.) that is prohibited by law (Federal Bureau of Investigation [FBI]: Uniform Crime Report [UCR], 2018). The sale, possession, or use of drugs or drug paraphernalia is what a drug offense will be classified as throughout the entirety of this paper. In the state of Colorado, a drug offense is considered a felony and can involve prison time. Drug offenses can include trafficking drugs, the possession of drugs, or drug paraphernalia—which includes other equipment that may be utilized

by drug users (i.e. needles, pipes, etc.). Other drug offenses may include the manufacture or solicitation of drugs. There have been political and public debates about drug usage in the United States. From a social perspective, citizens believe that drug use is a victimless crime—meaning that it is an offense that does not harm anyone (Schmalleger, 2015). Other opinions around the topic claim that the offenders are victims of their own offense. Regardless, there is debate on whether drug offenders are harmful to the community or if they are just harming themselves.

**Violent Reoffenders**

Johnson et al. (2014) claim that more than half of felons who are released from jail are given some sort of pretrial conditions (i.e. GPS monitoring, protection/no contact orders, weapons prohibition, etc.). Compared to drug offenders, it is possible that violent offenders are less likely to reoffend while out on bail because they would be given different pretrial conditions. According to Childs et al. (2014) violent juvenile offenders were likely to be involved with nonviolent offenses and also recidivate. It is possible that violent offenders are not given drug testing as often as drug offenders. Though violent offenders may not be given drug testing as a pretrial condition, other requirements such as GPS monitoring or restraining orders may be demanded. Johnson et al. (2014) also report that drug traffickers and those with prior arrests are more likely to be involved with pretrial misconduct—raising questions as to how frequently drug offenders are given pretrial conditions compared to violent offenders.

Violent offenders and those charged with felonies are less likely to be offered a bail bond compared to misdemeanor offenders (Johnson et al., 2014). Depending on the state and details of the crime, violent offenses can be charged as misdemeanors, but they typically are counted as a felony. Similarly, drug offenses are often charged as a felony in the state of Colorado.

The current study further explores the notion that evidence based practices should continue to be utilized in the criminal justice system. The literature addresses how legal components are at the core of the pretrial decision-making process, which may ultimately harm drug offenders more than violent offenders (Kennedy et al., 2013; Schaefer & Hughes, 2019). The literature has given insight that drug offenders may be deemed as higher risk of receiving technical violations as well as not returning to court (Demuth, 2003; Gehring & van Voorhis, 2014; Johnson et al., 2014; Nally et al., 2014; Oleson et al., 2014). Though this may be the case, violent offenders pose more of a physical threat to the community. It is worrisome that offenders may be assessed ineffectively, which questions the integrity of evidence-based tools used in the justice system. Although there is limited research on the effects of pretrial risk assessment tools, it is understood that it may help determine pretrial release decisions, which can impact the overall outcome of a case (Oleson et al., 2014). The literature has provided sufficient information that a further examination of risk assessment tools on drug offenders must be explored.

CHAPTER III

METHODOLOGY

**Research Questions**

The purpose of the current study was to examine if drug offense defendants have differing risk scores, on average, compared to violent offense defendants. Furthermore, how much is the risk score likely to increase/decrease for drug offenders compared to violent offenders. Considering that the lawful components play a more significant role than external factors when making pretrial release decisions, it is sensible to have pretrial release risk assessments focus on such factors (Kennedy et al., 2013; Schaefer & Hughes, 2019). Judges and risk assessments alike scrutinize and calculate the legal and extralegal components of the defendants, all of which predict the reoffending risk rather than the risk posed to the physical safety of the community. The current study expanded on the previously mentioned lawful components (criminal history, offense seriousness, and number of FTAs) and examined how drug and violent defendant scores were impacted. Drug offense defendants may be harmed in the pretrial process more than other types of defendants due to the likelihood of having high FTA rates and extensive criminal history, as well as having low employment rates or what is seen to be as unstable living conditions (Gehring & van Voorhis, 2014; Johnson et al., 2014).

To meet the purpose of the current study, questions assessing the average risk scores among drug offenders and violent offenders must be proposed. The research questions are as follows:

Q1      Is there a difference in risk score means between drug and violent offenders?

Q2      How much is the average risk score likely to increase for drug offenders compared to violent offenders?

Previous literature states that drug offenders have a higher chance of engaging in pretrial misconduct, including failing to appear to court compared to violent offenders (Gehring & van Voorhis, 2014; Johnson et al., 2014). The best statistical analysis to answer these questions will be an independent two-sample t-test and a multivariate regression analysis. With these tests, two hypotheses were created:

H1      How much is the average risk score likely to increase for drug offenders compared to violent offenders?

H2      Drug offenders are likely to have a higher average risk score when compared to violent offenders.

**Colorado Pretrial Assessment**
**Tool- Revised (CPAT-R)**

In January of 2018, faculty from the University or Northern Colorado set out to evaluate and create a new version of the Colorado Pretrial Risk Assessment Tool (CPAT) in hopes of helping judges make informed decisions about bail, bonds, and other pretrial release decisions. The revised version, Colorado Pretrial Risk Assessment Tool- Revised (CPAT-R), included data used for the current study. These tools were implemented in various counties around the state of Colorado including: Boulder, Weld, Denver, Larimer, Pueblo, Mesa, and Garfield. These counties were instructed to administer the CPAT-R tools at random to offenders awaiting pretrial decisions in jail.

Pretrial release decisions consist of judges taking into consideration the seriousness of the current offense, previous offenses, and number of FTAs—all of which may give insight to the

chances of reoffending and reappearing to court while released during the pretrial phase. Pretrial risk assessments evaluate the stability within the community to further predict the flight-risk of the defendant. Factors such as residence, type of employment, and duration of employment are elements of the CPAT-R that indicate community stability. Risk assessments provide a statistical visual for judges to utilize while making the pretrial release decision. Although they are not required in the state of Colorado, such evidence-based tools give insight to the defendants' previous history and are thought to decrease biases that judges have (Werth, 2019). Risk assessments are also helpful when determining what type of bond and other pretrial conditions to give an offender. The bond a defendant receives and any pretrial misconduct that occurs can affect the overall outcome of the case at hand (Johnson et al., 2014; Oleson et al., 2014). However, as the RNR model eludes to, judges can override the tools suggestion if the reason governs necessary (Polaschek, 2012).

The CPAT-R is composed of questions relating to both legal and extralegal indicators about the defendant. The CPAT-R tool used can be found on Appendix B. This includes criminal history, number of prior FTAs (including FTAs within the past year), active warrants, employment/education, and any history of drug/alcohol abuse and/or mental illness. The CPAT-R score ranges from 0-20, the lowest risk category being a score from 0-7, category 2 having a score from 8-11, category 3 having a score from 12-14, and the highest risk category, category 4, having a score from 15-20. The final stages of the validation study were completed in June of 2020. As indicated on Appendix B, the tool specifically examines: employment/education status, drug/alcohol usage, prior arrests, arrests within the last year, age at first arrest, prior FTAs, FTAs

within the last year, pending charge at the time of the arrest, and any active warrants. The points associated are specific to each category depending on which categories are more predictive of FTAs or reoffending.

Out of the seven counties which administered the CPAT-R data, the current study was conducted using data collected from Weld and Larimer Counties. The two counties were also considered to have reliable data and available measures within the completed assessments. By utilizing the data from two counties, the study was able to ensure generalizability of the sample to the Northern Colorado population as well as obtain an adequate sample size. Both Weld County and Larimer County have a mixture of rural and urban environments which are representative of the Northern Colorado population.

*Participants*

The original CPAT-R validation tool pilot study was distributed at random to defendants in the participating counties which included: Boulder, Weld, Denver, Larimer, Pueblo, Mesa, Garfield (Terranova & Ward, 2020). Since the CPAT-R was tested as a validation tool, two groups were compared. All of the tests were administered at random, however, either the CPAT tool was administered or both were administered concurrently. Once an offender was arrested, the pretrial officers randomly assigned both tools to be administered concurrently (Terranova & Ward, 2020). Officers were instructed to fill out the interview-less sections if defendants were unavailable for a pretrial risk assessment interview. The total sample number for all seven counties was 3,757 defendants (Terranova & Ward, 2020).

The current study used the CPAT-R data from Weld and Larimer Counties only. This consisted of 1,345 defendants. Both counties were compiled into one list and sorted through. Since multiple offenses/charges can occur for a single arrest, the data was carefully examined to

include only data that fit the criteria of the study. The criteria being mutually exclusive for drug offense and violent offenses. In other words, only offenders with either a drug or a violent offense were included in the data. Any defendant with either both offenses or neither offense were discarded from the sample. A total of 1,047 defendants were removed, leaving a total of 292 defendants in the final sample.

It should be noted that permission to conduct the study was obtained from the CPAT-R creators, Weld and Larimer Counties, and the Institutional Review Board (IRB). The IRB application was submitted on January 15th, 2021 and was approved on January 28th, 2021 (see Appendix A). The secondary data used in the study did not include any identifiable private information nor was the information able to be traced back to the defendants. Furthermore, the data received was stored on a password protected Universal Serial Bus (USB) drive. All information regarding the arrest information was destroyed following the completion of the study in late April of 2021. The IRB committee determined the study to be of "exempt" status as noted in Appendix A.

**Variables**

*Independent Variables*

The independent variables in the study were drug offenders and violent offenders. It is important to note that individual offenders can have multiple charges, which is why unit of analysis for the data was the arrest of the offender and not the offenders themselves. The current charge of the arrestee was the determinant factor on categorizing as either a drug or violent offender. Violent and drug offenses were specifically chosen based on the assumption that those incarcerated should be violent offenders, however, the make-up of prisons are largely drug

offenders. Any blank or missing information from the Weld County or Larimer County assessments including the current charge, previous arrests and charges, number of FTAs, or final risk assessment score was discarded from the data analysis.

The study did not include the manufacture or solicitation of drugs, as it distracted from the purpose of non-physical violence being inflicted to the public. There was consideration of including DUI/DWAI, however, charges with either were not included, as it appeared to fit into both the violent and drug offense categories. Furthermore, DUI and DWAI were not specific enough to differentiate if the offense involved alcohol or drugs. The manufacture and solicitation of drugs would presumably be more harmful to the public than one using drugs themselves because the crime changes from being their own victim to involving others. Drug and violent offenses were mutually exclusive groups—meaning a defendant charged with a drug offense as well as a violent offense was not be included in the analysis.

The UCR defines violent crimes as the use of force or the threat of force (Federal Bureau of Investigation [FBI]: Uniform Crime Report [UCR], 2011). It is understandable for one to think that violent offenders would be more dangerous to the community's physical well-being than drug offenders. If this were the case, it would be plausible to have violent offenders detained before trial.

An element that was expected to be encountered was having a domestic violence charge for defendants. In the state of Colorado, domestic violence cases are used as sentence enhancers—meaning that someone can be charged with any offense against a significant other (or any intimate relationship) and the charge will include domestic violence, the offense does not necessarily have to be a violent crime. Any violent act, including on with a domestic violence

enhancer, was included in the study unless multiple charges included both a drug and violent offense. Individuals charged with a violent offense that involve a weapon were also included due to the enhanced threat it may pose on the pretrial risk assessment.

According to the FBI's Uniform Crime Report (UCR) Part 1 index, violent crimes include aggravated assault, forcible rape, murder, and robbery. However, since the definition of a violent offense includes the use of force or the threat of force, any offense deemed as such was used. Common violent charges that fit this description include: aggravated assault, forcible rape, murder, and robbery. The FBI's UCR includes numerous index offenses, however, index one offenses were chosen to examine because it involved a common street crime. In other words, these offenses were common enough to examine the effect on pretrial release. Drug charges that deemed appropriate were any drug charge that did not pose a direct threat to the community. Charges that can be argued as a victimless drug crime included offenses such as drug paraphernalia and drug possession.

The independent variables were coded dichotomously—meaning the defendant's charge was either a drug offense or a violent offense. The variables were coded as 0= at least one drug offense at arrest, and 1= at least one violent offense at arrest.

### *Dependent Variable*

The dependent variable was the CPAT-R score for each risk assessment tool. The risk assessment scores range from 0 to 20 points. The CPAT-R validation tool utilized in the study are found on Appendix B. The level of risk was separated into four categories. Risk category 1 is the lowest risk category, followed by category 2, category 3, and finally category 4—the highest risk score category (see Appendix B). Naturally, low risk defendants have a higher likelihood of being released pretrial compared to a higher risk offender.

The point system for the CPAT-R was specific for each category, meaning some categories such as prior FTAs and prior criminal history have a higher number of points one can receive than others (see Appendix B). The items relevant to the current study include the number of FTAs, prior arrests, and drug or alcohol use. The previous number of FTAs account for as many as three points toward the final risk score and three additional points if one or more of the FTAs occurred within the last year. Two or more prior arrests account for three points, but if one or more arrests occurred within the last year an additional three points were added to the final risk score. Additionally, self-reported problems with drugs or alcohol was worth one point.

### Control Variables

The current study used age, race/ethnicity, sex, and employment status of the defendant as control variables in the study. These variables being controlled for were to eliminate the influence that they may have on the final risk score. Any variable can be controlled for however, it is not uncommon for descriptive characteristics such as race/ethnicity, gender, and age to be controlled for in criminal justice research (Hsu et al., 2009). Since the objectives for the current study focus on the varying risk scores for the different type of offenders, race/ethnicity, gender, age, and employment status were controlled for. Employment status is a category on the CPAT-R, however, it deemed necessary to include as it controlled for socioeconomic status. Each of these demographics could have resulted in some risk scores being higher than if not controlled for. Race/ethnicity, gender, age, and employment status would result in possible biases of the risk score.

The "War on Drugs" may have allowed for the over-arresting and over-charging of minorities for drug offenses (Abadie et al., 2018; Rosino & Hughey, 2018). Minorities, specifically Black individuals, have been more likely to interact with law enforcement which

could result in an overrepresentation of the actual race/ethnicity of the population. Without including race in the sample, the differences in scores is proportionate to the population. Race/ethnicity was controlled for because the disproportionate number of minorities arrested and convicted of drug offenses would likely skew the data into having a higher risk score.

Likewise, males are arrested more often than females and controlling for gender would have the same effect as controlling for race/ethnicity. If gender were included in the data, there would most likely be an overwhelming and disproportionate number of female defendants for drug offenses compared to violent offenses because males commit more violent crimes than females (Hornsveld et al., 2018). The Age Crime Curve would similarly skew the results unless age was controlled for. Assuming from the Age Crime Curve that most offenders commit crime from teenage years to the mid-twenties, risk assessment scores would be more likely to be higher for this particular age range. The age of the sample for the current study were defendants 18 years and older.

Employment status was also controlled for because it could possibly show disparities in one offender over another. Low SES individuals have a higher probability of involvement with the criminal justice system than those not in the lower class due to the over-policing of poorer areas (Abadie et al., 2018). Though disparities among those of employment status are not necessarily associated with low SES, defendants that are unemployed would have a negative impact on risk assessment scores (Freiburger et al., 2010; Gehring & van Voorhis, 2014; Johnson et al., 2014; Werth, 2019).

From the CPAT-R, sex was defined as the birth sex of the offender with the variables being coded as dichotomously as male (1) and female (2). The categories listed for race/ethnicity include Black (1), White Non-Hispanic (2), White Hispanic (3), and Other (4). The age at arrest

for the offender was the only continuous variable in the demographic section and did not require recoding. The variable was an open-ended response and the average age was reported for both drug and violent offenders. The employment variable was coded as either full-time (1), part-time/temporary/seasonal (2), student (3), retired/disability (4), or unemployed (5). The findings were later interpreted as categorial variables rather than the code given for the analysis.

<div align="center">**Analysis**</div>

The study examined two research questions:

Q1      Is there a difference in risk score means between drug offenders and violent offenders?

Q2      How much is the average risk score likely to increase for drug offenders compared to violent offenders?

It was hypothesized that drug offenders would receive higher average risk scores for both questions. To answer both questions an independent two-sample t-test and a multivariate regression analysis were conducted. The subsequent paragraphs explain why each test was the most appropriate.

**Independent Two-Sample T-Test**

The hypothesis for the first question states:

H1      How much is the average risk score likely to increase for drug offenders compared to violent offenders.

To successfully test hypothesis 1, an independent two-sample t-test was conducted. An independent two-sample t-test is used to determine if there is a difference in means between two different groups (Pallant, 2020). This is the most appropriate test to use for hypothesis 1 because it allows us to examine any differences between the means of the two samples within the population. The independent two-sample t-test will bring forward any differences between the

two group means and allow for a simple analysis between the means. The independent two-sample t-test is used with inferential statistics, where the samples allow generalizations to be made about the population (Pallant, 2020).

After the final CPAT-R tools were chosen for each type of offender, the final risk score, current charge, previous charges, and number of FTAs were inputted into SPSS. The average risk score was calculated separately for each type of offender (either drug or violent). An independent two-sample t-test was used to estimate any differences in drug offender and violent offender risk score means.

The independent two-sample t-test for hypothesis 1 will include the CPAT-R score and the drug charge. To allow for the independent variable to be dichotomous, drug charges were recoded as 1 and all of the other charges (which were all violent charges) were recoded as 0. The findings were later interpreted as categorial variables rather than the code given for the analysis.

**Multivariate Regression**

The second hypothesis states:

H2    Risk assessment scores are likely to be higher among drug offenders compared to violent offenders.

Hypothesis 2 was tested by using an Ordinary Least Squares (OLS) multivariate regression model. A multivariate regression analysis was conducted to determine if drug offenses have an increased likelihood of receiving a higher risk score compared to violent offenses. A multivariate regression analysis was used to measure how much of a change in risk assessment scores occur between the drug and violent offenders (Pallant, 2020; Stockemer, 2018). It is expected that the analysis will identify a positive relationship among the variables meaning that with every unit increase from zero to one in drug or violent offenders the risk score will also increase. This was the most appropriate analysis to use for hypothesis 2 because it predicted which group is more

likely to receive a higher risk score. The method predicted the response of each variable associated to a change in the predicted variables. A multivariate regression analysis is also used for inferential statistics but is used to predict outcomes of more than one variable. The independent variable was the type of defendant (either drug or violent) while the dependent variable was the average risk score for each offense group. The control variables included race/ethnicity, sex, age, and employment status.

Assuming that drug offense risk scores are, on average, higher than violent offense risk scores, a multivariate regression will be conducted after the independent two-sample t-test. The sample will be the same as the independent two-sample t-test. The independent variables were drug offense defendants and violent offense defendants while the dependent variable was the risk score for each type of offense (either drug or violent). The Variance Inflation Factor (VIF), which assesses multicollinearity in the coefficients, was also examined. None of the VIF results reached above a 2, indicating that the coefficients did not fluctuate the effect that the type of charge had on the risk score.

Similar to the independent two-sample t-test in hypothesis 1, the data used will include the average CPAT-R score variable for each offense and a dichotomous drug charge coded as 1 (violent charges coded as 0).

**Cross Tabulations**

Variables specific to offender demographic will include sex of the offender, race/ethnicity, age at arrest, and employment. Although not normally listed as a demographic variable, the county was also included in this section. The counties were coded dichotomously as either Larimer or Weld county. Cross tabulations for various demographics were also examined. These demographics include race/ethnicity, sex, age, and employment status.

The CPAT-R includes a number of components (see Appendix B), however, the variables that are thought to increase the raw score for drug offenders more frequently than violent offenders include if this is the first arrest for the offender, prior FTAs, and alcohol/drug usage. The first arrest for the offender and alcohol/drug usage were coded as 0= no this does not apply to the defendant, and 1=yes this does apply to the defendant. Prior FTAs was originally coded as 0=no the defendant does not have prior FTAs, and 3= yes the defendant has prior FTAs, however, to make the coding consistent and eliminate confusion, this variable was recoded as 0= no the defendant does not have prior FTAs, and 1=yes the defendant has prior FTAs. The data was coded into SPSS in order to run various cross tabulations, however, the results presented in the study were translated into words rather than numbers.

CHAPTER IV

RESULTS

**Results**

The purpose of the study was to examine if drug offense defendants have differing risk scores, on average, compared to violent offense defendants. To determine if pretrial risk assessment scores vary among the two groups, an independent two sample t-test and a multivariate regression analysis were conducted.

**Descriptive Data**

After excluding the missing information from the data, there was a total of 184 pretrial defendants from Larimer County and 108 from Weld County, adding up to a final count of 292 pretrial defendants. Once the charges were categorized as either drug or violent offense and missing data were accounted for, there was a total of 189 drug offense defendants and 103 violent offense defendants.

**Table 4.1**

*Descriptive Statistics for Violent and Drug Offenses*

| Variable | | Violent Offenses | | Drug Offenses | | Total | |
|---|---|---|---|---|---|---|---|
| | | *n* (103) | Percent | *n* (189) | Percent | *n* (292) | Percent |
| CPAT-R Score | Average Score | 2.95 | N/A | 7.30 | N/A | N/A | N/A |
| Sex | Male | 96 | 93.2 | 147 | 77.8 | 243 | 83.2 |
| | Female | 7 | 6.8 | 42 | 22.2 | 49 | 16.8 |
| Race/ Ethnicity | White | 61 | 79.2 | 121 | 71.6 | 182 | 62.3 |
| | Black | 4 | 5.2 | 9 | 5.3 | 13 | 4.5 |
| | Hispanic | 7 | 9.1 | 35 | 20.7 | 42 | 14.4 |
| | Other | 5 | 6.5 | 4 | 2.4 | 9 | 3.1 |
| Age | Average Age | 36.2 | N/A | 32.7 | N/A | N/A | N/A |
| Employment | Full-time | 63 | 68.5 | 85 | 71.4 | 148 | 50.7 |
| | Part-time/ Temporary | 9 | 9.8 | 17 | 14.3 | 26 | 8.9 |
| | Student | 2 | 2.2 | 2 | 1.7 | 4 | 1.4 |
| | Retired/Disabled | 3 | 3.3 | 2 | 1.7 | 5 | 1.7 |
| | Unemployed | 15 | 16.3 | 13 | 10.9 | 28 | 9.6 |
| County | Larimer | 42 | 22.8 | 142 | 77.2 | 184 | 63.01 |
| | Weld | 61 | 56.5 | 47 | 43.5 | 108 | 36.99 |

As indicated in Table 4.1, 93.2% (*n*= 96) of violent offenders were males while 6.8% (*n*= 7) were female. Drug offense defendants had 77.8% (*n*= 147) males and 22.2% (*n*= 42) female defendants. With an overwhelming majority of female defendants committing a drug related offense, if the t-test and regression estimates indicate that drug offenses are over-assessed on risk assessments, it is plausible that risk tools indirectly harm female defendants.

The self-reported race/ethnicity in the sample found that roughly 79.2% (*n*= 61) of violent offenders identified as White Non-Hispanic, 5.2% (*n*= 4) as Black, 9.1% (*n*= 7) as White

Hispanic, and 6.5% (*n*= 5) as Other. Drug offense defendants consisted of 71.6% (*n*= 121) White

Non-Hispanic, 5.3% (*n*= 9) Black, 20.7% (*n*= 35) White Hispanic, and 2.4% (*n*= 4) Other. The

data set is representative of the Northern Colorado region. It is noted that defendants with a drug

offense made up 64.7% (*n*= 189) of the data, however, since the independent t-test and the

multivariate regression assume heterogeneity of the variance the final outcome was not

impacted.

The reported average age of defendants was 32.7 years old for a drug offense and 36.2

years old for a violent offense. Since the average age for drug defendants was lower than the

average age for those with a violent offense, future research should further examine age and how

it impacts pretrial release and risk assessment scores. Age could also exemplify disparities in

pretrial release decisions and final dispositions across various offense types. Specifically,

younger offenders could be more common among one type of offense compared to another and

the risk assessment scores should be evaluated accordingly.

Noted on Table 4.1, of the violent offense defendants, 68.5% (*n*= 63) were full-time

employees, 9.8% (*n*= 9) were part-time/temporary/seasonal employees, 2.2% (*n*= 2) were

students, 3.3% (n= 3) were retired/disabled, and 16.3% (n= 15) were unemployed. The drug

offense defendants included 71.4% (*n*= 85) of full-time employees, 14.3% (*n*= 17) part-

time/temporary/seasonal employees, 1.7% (*n*= 2) students, 1.7% (*n*= 2) retired/disabled, and

10.9% (*n*=13) unemployed. Unemployment was of particular interest to this study. Prior

literature has led to the assumption that unemployment would result in a higher risk assessment

score, however, unemployment status for this study may not give much insight as to the scoring

of the CPAT-R (Freiburger et al., 2010; Johnson et al., 2014). Unemployment status between the

two defendant types were roughly the same. With a total of 28 unemployed defendants, only

10.9% (*n*= 13) were of a drug offense while 16.3% (*n*= 15) were violent offenders. Future research should continue to examine and evaluate how employment status impacts various types of offenders while going through the pretrial process.

**CPAT-R Factors**

Table 4.2 indicated below show cross tabulations for defendants with violent and drug offenses and three CPAT-R categories. The three categories below were of particular interest, as they seemed to be more likely applied to drug offenders rather than violent offenders. The first arrest was a dichotomous representation of prior arrests which, combined with prior FTAs, may apply to drug offenders more than others due to the "War on Drugs" and personality disorders associated with drug usage (Johnson et al., 2014; Rosino & Hughey, 2018; Sievewright & Daly, 1997). It also appears that those arrested with a drug charge would have a high rate of receiving points for the alcohol/drug usage category specifically due to the charge they were arrested for.

**Table 4.2**

*Potentially Biased Risk Assessment Item Responses*

| Variables | | Violent Offenses | | Drug Offenses | | Total |
|---|---|---|---|---|---|---|
| | | *n* (103) | Percent | *n* (189) | Percent | *n* (292) |
| First Arrest | Yes | 25 | 24.3 | 99 | 52.4 | 124 |
| | No | 78 | 75.7 | 90 | 47.6 | 168 |
| Prior FTAs | Yes | 4 | 3.9 | 22 | 11.6 | 26 |
| | No | 99 | 96.1 | 167 | 88.4 | 266 |
| Alcohol/ Drug Usage | Yes | 92 | 89.3 | 115 | 60.8 | 207 |
| | No | 11 | 10.7 | 74 | 39.2 | 85 |

As reflected on Table 4.2, 24.3% (*n*= 25) of violent offense defendants were experiencing a first-time arrest and 75.7% (*n*= 78) have previously been arrested. Roughly 52.4% (*n*= 99) have not been arrested before, whereas 47.6% (*n*= 90) have not been.

Violent offense defendants that had prior FTAs was 3.9% (*n*= 4) and 96.1% (*n*= 99) that did not have a prior FTA. Roughly 11.6% (*n*= 22) of drug offense defendants had a prior FTA and 88.4% (*n*= 167) did not. The majority of defendants (91.1%, *n*= 266) have not had any prior FTAs which will essentially allow for a lower CPAT-R score compared to having prior FTAs. This information should be evaluated further in future research. When considering that 47.6% (*n*= 90) of defendants with a drug offense have previously been arrested than not, prior research can be misleading about how frequently drug offense defendants receive FTAs.

Also indicated on Table 4.2 are the numbers for those who have experienced alcohol and/or drug problems. Violent offense defendants that did have alcohol/drug usage was 89.3% (*n*= 92) and 10.7% (*n*= 11) did not. As expected, about 60.8% (*n*= 115) of drug defendants self-reported 'yes' about alcohol and/or drug usage whereas 39.2% (*n*=74) reported 'no'.

**T-test**

When examining the average CPAT-R risk assessment scores, a total of 292 defendants were included the analysis, with 189 being of a drug offense and 103 being of a violent offense. The sample included more defendants of drug offenses compared to violent offenses, however, an independent two-sample t-test assumes the homogeneity of variances, meaning the variance in each group should be equal regardless of the number of individuals in each group. So, although there are more drug offenses than violent offenses in the sample, the t-test will recognize the sample sizes as equal and would therefore not impact the outcome of the analysis. The t-test also assumes the normality of the data and does not recognize any outliers in the groups. Finally, the

analysis assumes that the groups are mutually exclusive, meaning that no defendant could belong to both the violent and the drug offense category.

The research question and hypotheses (including the null) answered were as follows:

Q1    Is there a difference in risk score means between drug offenders and violent offenders?

H1    There will be a difference in risk score means between drug and violent offenders.

H01   There will not be a difference in risk score means between drug and violent offenders.

The average CPAT-R risk assessment raw score for defendants with a violent offense was a 2.93 ranging on a scale from 0-22 points (see Appendix B). Drug offense defendants had an average raw score of 7.30 points on the same scale, as shown on Table 4.3. Although the average risk scores between the two groups differ at first glance, an independent two sample t-test was still important to ensure that there was statistical significance. The standard deviation on Table 4.3 indicates that those with a violent offense are 4.16

**Table 4.3**

*T-test Results for Drug and Violent Offense Risk Scores*

| Variable | $n$ (292) | M | SD | $t$ | Sig. (2-tailed) |
|---|---|---|---|---|---|
| Violent Offenses | 103 | 2.95 | 4.16 | 6.47*** | 0.000 |
| Drug Offenses | 189 | 7.30 | 6.09 | | |

*p<0.05, ***p<0.001
*Note.* M= Mean. SD = Standard Deviation.

After conducting an independent two-sample t-test to determine if there was a difference in raw risk scores between drug and violent offenders, the results shown on Table 4.3 show that there was a statistically significant difference for the sample within the population. The

difference in means independent two-sample t-test estimate whether the averages differ across the two groups in the population.

The study concludes that the null hypothesis (H01) was rejected and the findings support the conclusion that drug offense defendants have different average pretrial risk scores than those with a violent offense. The result is said with a 0.05 confidence level, meaning that the study is 95% confident that average pretrial risk scores are higher for drug defendants than for violent defendants.

With the null hypothesis stating that drug offenders will not have a difference in risk score means compared to violent offenders, the results on Table 4.4 show that this was not true. With a raw t-statistic of 6.47, which lies within the critical region of 1.98, the null hypothesis is rejected, and it is concluded that the population mean of drug offense defendants does not equal the population mean of violent offense defendants. The sig. (2-tailed) value being below 0.05 was also indicative that the results were statistically significant and that defendants with a drug offense have a different average raw risk assessment score compared to defendants with a violent offense.

The inferential statistics of the t-test suggested that the data can be generalized. The results for drug and violent offenders are applicable for generalizations to be made about the population. A multivariate regression analysis will assist in examining how demographic factors impact the outcome as well as estimate how likely the change in the outcome is across groups.

**Multivariate Regression**

Consistent with the sample size of the prior analyses, there were a total of 189 drug offense defendants and 103 violent offense defendants used for the multivariate regression analysis. The multivariate regression analysis controlled for sex of the defendant, race/ethnicity,

age at arrest, and employment status while the dependent variable was the CPAT-R score.

Similar to the independent two-sample t-test, a multivariate regression does not require the

number of drug and violent defendants to be the same and the outcome of the analysis will not be

distorted if the groups differ in size. Furthermore, the analysis assumes that a linear relationship

is present between the variables. In this study, the relationship between average CPAT-R scores

and offense type was linear, meaning that with every unit increase (from 0 to 1) in drug offense,

CPAT-R risk score would also increase. Moreover, the risk assessment score in the study was

dependent on having a drug charge.

The research question and hypotheses for the multivariate regression were as follows:

Q2    How much is the average risk score likely to increase for drug offenders
      compared to violent offenders?

H2    Drug offenders are likely to have a higher average risk score when compared to
      violent offenders.

H02   Drug offenders are not likely to have a higher average risk score when compared
      to violent offenders.

The R square value of the multivariate regression model, as indicated in the footnote of

Table 4.4 was 0.09 which represents a weak positive linear relationship. In other words, this was

interpreted as 9% of the variation of CPAT-R scores can be explained by the model. The F-ratio

presented (2.81) indicates that at least one group mean is different. The high F-ratio concludes

that there is an association between risk score and offense type that is not coincidental.

**Table 4.4**

*Multivariate Regression Results for Drug and Violent Offenses*

| Variable | b | t | Sig. |
|---|---|---|---|
| Drug Charge | 2.75* | 3.31 | 0.0001 |
| Age at Arrest | 0.03 | 0.89 | 0.37 |
| Sex | -1.64 | 0.89 | 0.17 |
| Race/Ethnicity | -0.33 | -0.51 | 0.62 |
| Employment | -0.39 | -1.21 | 0.23 |

*$p<0.05$, \*\*\*$p<0.001$*
*Note.* $n= 292$. R= 0.30. $R^2= 0.09$. F= 2.81.

Table 4.4 reports the coefficients of the multivariate regression analysis. The unstandardized coefficient value for Drug Charges is listed at 2.75 which indicates that with every one unit increase in drug charges, the risk score increases 2.75 units. With both the t-value being at 3.30 and the sig. value at 0.0001 the null hypothesis is rejected, and it is concluded that drug offense defendants are likely to have a higher risk score compared to violent offense defendants.

The control variables were primarily examined through the unstandardized coefficient (*b*) value which represents the relationship that variable has with the CPAT-R score. The *b* value for age at arrest is 0.03, meaning that with every one unit increase in age, the CPAT-R score also increases by 0.03. Though the age increased with the risk score, it was a minimal effect. Negative numbers in the coefficient indicate a decrease in risk score with every one unit increase. It is reported that with every one unit increase in sex, race/ethnicity, and employment status, risk score will decrease slightly. These, along with the corresponding significance values indicate that these demographic variables are not predicting variables of increased risk score.

The multivariate regression concluded that drug charge was the only significant influence on increased risk assessment score and that a very weak association was present between the two

variables. Furthermore, age, sex, race/ethnicity, and employment status did were not associated with risk assessment score. Demographic characteristics should not necessarily be ignored, but lawful components should be the primary focus when examining tools to help pretrial decisions.

CHAPTER V

DISCUSSION AND CONCLUSION

**Discussion and Conclusion**

The pretrial process heavily impacts the final outcome of any case. With that being said, the pretrial release process should be examined and criticized for any flaws that may be biased towards any type of offender. Prior literature has not only specified how defendant demographics impact risk assessment tool outcomes but also how a number of components of the tool itself puts some offenders in a vulnerable position. The significant findings associated with the analyses convey implications for the pretrial release process.

The results of the multivariate regression imply that when race/ethnicity, sex, age, and employment status are controlled for, defendants with drug offenses have a higher average risk score than violent offenses. This is consistent with prior literature which accredited that lawful components play a more significant role in the risk assessment than demographic characteristics (Kennedy et al., 2013; Schaefer & Hughes, 2019). Contrary to a brief statement by Hopkins and Doyle (2018), pretrial risk assessments do not appear to enhance demographic characteristics, but the study would need to further examine the use of discretion in relation to the tools to fully deny the statement.

After an exploration of the RNR model, it was decided that the 'Risk' element would be the most applicable and crucial component of the study. Risk not only allow for the application of appropriate needs but allows for the critique of the tool itself. Evaluating the risk is an

essential component to the success of a program, or in this case the pretrial process. Having a higher risk assessment score can influence not only a judge's decision on pretrial release but the pretrial requirements associated with the defendant's needs. If given an over- or under-assessed score the needs of the defendant may be unwarranted or inappropriately applied and the defendant will ultimately be set up to fail. Given prior literature that drug offenders are more likely to have higher FTA rates, unemployment rates, and alcohol/drug dependencies, it was hypothesized that risk assessment scores cater heavily towards drug offenders (Gehring & van Voorhis, 2014; Kellough & Wortley, 2002; Nally et al., 2014). The findings suggest that such components are more applicable for drug offenders compared to violent offenders.

Although defendants with a drug offense have a higher pretrial risk assessment score, this does not prove an over- or under-assessment of the defendant. Since prior FTAs, criminal history, drug/alcohol dependencies, and employment status are factors that impact a defendant's ability to reappear in court, these components are necessary to include in a risk assessment (Demuth, 2003; Freiburger et al., 2010; Gehring & van Voorhis, 2014; Kennealy, 2018; Nally et al., 2014). However, by focusing on such elements, violence is ultimately taken out of the statistical equation that makes up the CPAT-R. The results imply that judicial discretion might be helpful to identify the risk of community harm of the defendant. Assuming that the risk score heavily impacts the judge's pretrial release decision, the CPAT-R findings and prior literature suggest that drug offenders have a higher opportunity to fail pretrial conditions and have a harsher sentence (Demuth, 2003; Freiburger et al., 2010; Kennealy, 2018; Nally et al., 2014).

By rejecting the null hypothesis, it is conveyed that the assessment of risk is different depending on the charge. The CPAT-R appears to impact defendants with a drug offense more than a violent offense. The findings from the study may impact the defendant's release decision

which can affect the overall outcome of the case. The findings from this study could give insight

as to why the majority of the prison population are drug offenders. Furthermore, the type of bond

and the bail amount may be impacted by the CPAT-R which impacts the personal life of the

defendant both financially and emotionally. The findings and prior literature imply that drug

offenders are more likely to face such financial hardships (Hopkins & Doyle, 2018). A

continuation of pretrial risk assessment research should be done and compared between various

offenses. Only then can the evidence-based practice be evaluated to the fullest.

Pretrial risk assessment tools are ultimately utilized as a tool for judges. The RNR model

states an important principle that judges discretion is used for the final pretrial release decision.

This can bring about both favorable and unfavorable consequences because discretion allows for

a biased opinion. Although drug offenders might have a higher average risk score, a judge may

not see the defendant as a concern and go against the recommendation of the tool. Biased

decisions arguably go against the need for the risk tool, however, it may be necessary if the tool

is over-assessing defendants with drug offenses. A focus on the how judges use discretion to go

against the tool's recommendation would allow for a better understanding of how discretion

interplays with pretrial release.

**Limitations**

Though the findings yield that there is a statistically significant difference in the average

raw risk scores between the two offender groups, there are a number of limitations to the study.

It is important to be transparent that the study is limited by the CPAT-R responses and the

officers receiving accurate responses. Although the CPAT-R tool is a combination of officially

recorded and self-report data, mistakes can still be made. An important consideration is that there

are more mistakes to be made for violent offenses compared to drug offenses, meaning that violent offenses have a more sensitive measure and can vary in level of seriousness especially when compared to drug offenses.

The analysis conducted did not consider the risk assessment score with various charges and solely focused on drug and violent offenses. Violent charges can range from a simple harassment charge to murder which will have vastly different pretrial bond outcomes compared to drug offenses. A limitation to the study is the various ways that violent charges can be defined and interpreted. The study defined a violent offense as the use or threat of force. Although the study followed the definition very closely, the categorization of offenses is overall biased. In other words, an opinion was made about where to place each charge. Moreover, a similar limitation applies to the categorization of drug offenses.

The study may not include a conclusive list of drug or violent offenses. For example, the study did not include cases where both drug and violent charges were present, yet this is a combination of charges that would occur simultaneously in the population. Cases that included both were excluded from the study which ultimately included some, but not all DUI charges. DUI charges were included only if a drug or violent charge was also included. DUIs could be seen as a drug or a violent charge, so this is a huge limitation to the study.  It was assumed at the beginning of the study that cases that included both would have a higher pretrial risk assessment score compared to when both are identified independently. Future research should examine how combined drug and violent offenses (including DUI/DWAI) impact the final risk score.

## Implications

The effects of race/ethnicity, sex, age, and employment status should not be ignored or invalidated, however, future research should consider focusing on the consequences of offense

type. Furthermore, demographic characteristics should consistently be evaluated with every aspect of the criminal justice system due to biases that could have occurred due to prior legislation, such as the "War on Drugs".

A further examination of the CPAT-R scoring should be conducted. As indicated on Table 4.1 above, prior literature led to the assumption that unemployment would allow for a higher risk score, however, defendants with a violent offense not only had a lower risk score, but also a higher unemployment rate compared to drug offenders. As the multivariate regression suggests, when controlled for, employment status did not have an impact on the outcome. It should be questioned as to why employment status is listed on the CPAT-R tool if it does not influence the risk score. It is possible that employment status is used as a form of communication to the judge, which questions if the use of discretion is biased against those who are unemployed.

Similarly, alcohol/drug usage should be further examined on the CPAT-R. The literature suggests that unstable living, poor mental health, unemployment, and abusing substances has resulted in having more FTAs (Gehring & van Voorhis, 2014). Similarly, drug offenders typically had a high likelihood of reoffending and abusing substances has been shown to increase chances of failing to appear to court (Gehring & van Voorhis, 2014; Nally et al., 2014). With a total of 189 drug offenders total (see Table 4.2), it was expected that almost all of the responses should have been 'yes' for alcohol/drug problems, yet this was not the case. Only 115 (60.5%, see Table 4.2) drug defendants reported having problems with alcohol and drugs. Proportionately, 92 (89.3% see Table 4.2) violent defendants reported having an alcohol/drug problem. It seems that marking 'yes' on alcohol and/or drug usage would result in a higher CPAT-R score compared to indicating 'no'. If this were the case, the violent offender risk score should have been increased, yet the violent defendant risk scores were still lower than drug

defendants regardless of percentage rates. It could be that alcohol/drug usage is helpful for judges to determine pretrial conditions and bond type. Future research should further examine the alcohol/drug usage category and its effects on pretrial risk scores and release decisions.

The risk assessment scores are utilized as a tool, which ultimately help with decisions regarding bail and bond as well as pretrial conditions. The results from the independent two-sample t-test and the multivariate regression suggest that drug offenders are being over-assessed and violent offenders may be under-assessed during the pretrial screening phase. Pretrial conditions associated with the risk score could have ramifications of reoffending or worsening behavior. When applying the RNR model, having an inappropriate need is adverse for the defendant.

It is assumed that pretrial conditions utilized in the Northern Colorado courts would not necessarily be appropriate for each offense type. When applying the RNR model to the study, the needs should not be identical for both drug and violent offense types given that there is a difference in how each is assessed (Andrews et al., 2011). The next steps for the RNR model should examine what bond, bail, and pretrial conditions are deemed appropriate for each offense type and how each type of offender responds to the conditions. Future research should focus specifically on assessing pretrial needs of drug offenders given the focus of the study.

The risk assessment may impact the release decision which may impact the overall outcome of the case. The findings support detaining drug offenders pretrial compared to violent offenders. When examining important risk factors of returning to court, such as prior FTAs and prior arrests, the data implies that drug offenders have a higher risk of not returning to court, which is consistent with prior literature (Demuth, 2003; Freiburger et al., 2010; Kennealy, 2018). Having prior FTAs increases likelihood of being detained pretrial which is likely to result in a

harsher sentence (Demuth, 2003; Kellough & Wortley, 2002; Oleson et al., 2014). To better understand the need for risk assessment tools and the importance of them, a comprehensive examination of pretrial release on sentencing should be conducted. The long-term consequences of the pretrial risk assessment must be examined as well. If it is found that pretrial risk assessment scores and release decisions have even the slightest impact on the disposition of the case, prior literature suggests that some defendants would struggle financially and emotionally (Demuth, 2003; Freiburger et al., 2010; Kennealy, 2018). Since the results indicate that defendants of a drug offense have a higher risk assessment score than those with a violent offense, drug offenders may be placed in a position where they are impacted the most my financial and emotional hardships.

The use of pretrial risk assessment tools should continue to be utilized as it is believed to give more of a practical use for judges. Evidence-based practices such as the CPAT-R uphold the integrity of the criminal justice system and keep judges accountable when regarding pretrial release decisions. The criminal justice system and specifically the judicial process may publicize a false sense of safety to the community. Moreover, politicians and judicial elects alike claim to uphold a safe community, yet the statistical analyses show otherwise. It is not to say that elements of the CPAT-R need to be diminished, but the tool should add components that account for the public's physical safety.

These results indicate not that drug offenders are facing a biased tool, but rather that violent offenders are slipping through the holes in the pretrial process. Alternatively, the results suggest that drug offenders could be of more risk of not returning to court compared to violent offenders, in which case it might appear that the court values assessing FTAs compared to community safety. Regardless, the results question the integrity of politicians and judicial elects

about the safety of the communities. Evidence-based practices should continue to be used but should consider focusing its efforts on physically violent offenders. It could be that the CPAT-R assessments do not necessarily allow for drug offenders to be at a disadvantage, but that it does not focus its efforts enough on offenses that put the public in physical danger. Future research must continue to polish the imperfections of risk assessment tools and understand how a judge's discretion mixed with the tool impacts the final release decision.

**Future Research**

For a comprehensive assessment of the findings, similar studies should continue to compare and contrast the detaining of drug and violent offenses. Understanding a judge's use of discretion overall is essential to upholding the integrity of the justice system. Though no association between various demographics (age, race/ethnicity, sex, and employment status) and risk score were discovered, such factors should continue to be examined to ensure discrimination is not present. Even more so, directing a focus on identifying biases of offense type is arguably a more valuable use of resources.

Pretrial risk assessments must be evaluated for faults if continued use of the tools occur. It would be important to examine the differences in pretrial risk assessment scores among different mind-altering substances to assess how each substance impacts the various questions on the risk assessment tool. Though the current study focuses on pretrial risk assessments scores, the final bond decision made by the judge should also be examined to fully understand the application of the RNR model. Furthermore, pretrial conditions given to various types of offenses should be compared to adequately assess the responsivity of such needs. It is recommended that such studies should include bail amount, bond type, and various technical violations for comprehensive evaluation of the entire pretrial process.

Future research should continue to compare the influence that offense type has on pretrial release as well as the final sentence of the case. The study did not include the severity level of the charges (misdemeanors and felonies) which similar studies may want to consider. Similarly, other offenses such as property, white collar, and organized crime would also benefit from being evaluated with the risk assessment tools.

The various risk assessment tools such as the SAVRY, LSI-R, and ODARA could also be compared to determine if the proper assessment of each offense type is being conducted. In other words, the specialized risk tools may assess the risk of a specific offender better compared to generic risk tools such as the CPAT-R. By doing so, the judicial system will be able to understand the most about pretrial defendants and their responsivity to the various mandated conditions. Furthermore, the final outcome of the case could be drastically impacted by the pretrial decision and it is pertinent that an adequate assessment is utilized in courts. Moreover, the use of discretion should continuously be monitored in how it is used with evidence-based practices.

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APPENDIX A

INSTITUTIONAL REVIEW
BOARD APPROVAL

**UNIVERSITY OF NORTHERN COLORADO**

**Institutional Review Board**

Date:                           01/28/2021

Principal Investigator:         Annaliese Engler

Committee Action:         **IRB EXEMPT DETERMINATION – New Protocol**
Action Date:                    01/28/2021

Protocol Number:            2101019227
Protocol Title:                 What's the Risk?: Comparing Average Pretrial Risk Scores Between Drug and Violent Offenders

Expiration Date:

The University of Northern Colorado Institutional Review Board has reviewed your protocol and determined your project to be exempt under 45 CFR 46.104(d)(704) for research involving

Category 4 (2018): SECONDARY RESEARCH USING IDENTIFIABLE DATA OR SPECIMENS. Secondary research for which consent is not required: Secondary research uses of identifiable private information or identifiable biospecimens, if at least one of the following criteria is met: (i) The identifiable private information or identifiable biospecimens are publicly available; (ii) Information, which may include information about biospecimens, is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained directly or through identifiers linked to the subjects, the investigator does not contact the subjects, and the investigator will not re-identify subjects; (iii) The research involves only information collection and analysis involving the investigator's use of identifiable health information when that use is regulated under 45 CFR parts 160 and 164, subparts A and E, for the purposes of "health care operations" or "research" as those terms are defined at 45 CFR 164.501 or for "public health activities and purposes" as described under 45 CFR 164.512(b); or (iv) The research is conducted by, or on behalf of, a Federal department or agency using government-generated or government-collected information obtained for nonresearch activities, if the research generates identifiable private information that is or will be maintained on information technology that is subject to and in compliance with section 208(b) of the E-Government Act of 2002, 44 U.S.C. 3501 note, if all of the identifiable private information collected, used, or generated as part of the activity will be maintained in systems of records subject to the Privacy Act of 1974, 5 U.S.C. 552a, and, if applicable, the information used in the research was collected subject to the Paperwork Reduction Act of 1995, 44 U.S.C. 3501 et seq.

Carter Hall 3002 I Campus Box 143 I Greeley, CO 80639 I Office 970-351-1910 I Fax 970-351-1934

**Institutional Review Board**

You may begin conducting your research as outlined in your protocol. Your study does not require further review from the IRB, unless changes need to be made to your approved protocol.

**As the Principal Investigator (PI), you are still responsible for contacting the UNC IRB office if and when:**

- You wish to deviate from the described protocol and would like to formally submit a modification request. Prior IRB approval must be obtained before any changes can be implemented (except to eliminate an immediate hazard to research participants).
- You make changes to the research personnel working on this study (add or drop research staff on this protocol).
- At the end of the study or before you leave The University of Northern Colorado and are no longer a student or employee, to request your protocol be closed. *You cannot continue to reference UNC on any documents (including the informed consent form) or conduct the study under the auspices of UNC if you are no longer a student/employee of this university.
- You have received or have been made aware of any complaints, problems, or adverse events that are related or possibly related to participation in the research.

If you have any questions, please contact the Research Compliance Manager, Nicole Morse, at 970-351-1910 or via e-mail at nicole.morse@unco.edu. Additional information concerning the requirements for the protection of human subjects may be found at the Office of Human Research Protection website - http://hhs.gov/ohrp/ and https://www.unco.edu/research/research-integrity-and-compliance/institutional-review-board/.

Sincerely,

Nicole Morse
Research Compliance Manager

University of Northern Colorado: FWA00000784

APPENDIX B

COLORADO PRETRIAL ASSESSMENT
TOOL REVISED VALIDATION TOOL

*Recommended CPAT-R*

| Risk Factor | Score | Definition |
|---|---|---|
| Employment/education | 0/2 | Self-reported employment or current student at the time of arrest. (0 = yes, 2 = no). |
| Current problems with alcohol or drugs | 0/1 | Self-reported current problems with alcohol and/or drugs (0 = no, 1 = yes). |
| Prior Arrests | 0/3 | Prior arrests confirmed with criminal history records (0 = 1 or less, 3 = 2 or more). |
| Arrest in the last year | 0/3 | Arrest within the last year confirmed with criminal history records (0 = none, 3 = 1 or more). |
| Age at first arrest | 0/1 | Defendant age at first arrest confirmed with criminal history (0 = 21 years old or older, 1 = 20 years old or younger). |
| Prior FTA | 0/3 | Prior FTA confirmed with court history records (0 = none, 3 = 1 or more). |
| FTA in the last year | 0/3 | FTA within the last year confirmed with court history records (0 = none, 3 – 1 or more). |
| Pending charge at arrest | 0/1/2 | Pending charge at arrest (0 = none, 1 = misdemeanor charge(s) only, 2 = at least 1 felony charge). |
| Active warrant | 0/2 | Active warrant at arrest (0 = no, 2 = yes). |

a) Range 0 – 20

b) Category 1, score 0-7
   Category 2, score 8-11
   Category 3, score 12-14
   Category 4, score 15-20