Equal Protection Under the Law? Examining Tennessee's Drug Free School Zone Act (TNDFSZA)

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EQUAL PROTECTION UNDER THE LAW?
EXAMINING TENNESSEE’S DRUG FREE SCHOOL ZONE ACT (TNDFSZA)

by

Jordan Thomas Smith

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of

Stacy, Whitt & Cooper, Attorneys at Law

Knoxville, TN
Abstract

Drug free school zone laws have become the next weapon at the state’s disposal in the now four-decade-old War on Drugs (Suddath, 2009). Due to the relative youth of these statutes, little research surrounding their application and efficacy exist. This thesis paper examines the 1995 Tennessee Drug Free School Zone Act (DFSZA), which allow for prosecutorial discretion to increase penalties for drug related activities in designated school zones. Little attention has been paid to what factors influence this decision. I gathered data on drug arrests in Knoxville for the past 2 years, a total of 2031 cases, performing a regression analysis of the potential factors that might determine whether a defendant is charged under the DFSZA. Based on a statistical model created by IBM’s Statistical Package for the Social Sciences (SPSS), the following variables were found to be statistically significant predictors of whether a drug defendant arrested in a drug-free school zone will face enhanced penalties:

1. Being charged with a Class A felony;
2. Possession of amphetamines (including MDMA);
3. Possession of crack cocaine;
4. Possession of any combination of 4 or more types of drugs;
5. Classification of race as “black”
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CHAPTER 1: Statement of the Problem

The War on Drugs

On June 17, 1971, President Richard Nixon declared drug abuse as “public enemy number one in the United States.” (Frontline, 2000) Three years later, he created the Drug Enforcement Administration (DEA) for the purpose of enforcing the War on Drugs. The War on Drugs has been gaining speed ever since. Thirteen years after Nixon began his war on drugs, Nancy Reagan began her “Just Say No” anti-drug campaign, which soon became a centerpiece of the Reagan Administration. Every president since Reagan has spent in excess of a billion dollars supporting and advancing their own versions of the War on Drugs. Although controversial, the War on Drugs has played a key role in American domestic and foreign policy since its inception. (Frontline, 2000) Over the course of the past forty years, the US government has spent over $2.5 trillion fighting this War. Despite this massive influx of money and attention, the number of illicit drug users in America has steadily risen and now hovers around twenty million. (Suddath, 2009) In spite of these discouraging numbers, the War continues on today, arguably stronger than ever due to the sheer immensity of money and attention paid to the War each year. It is obvious that this policy, the War on Drugs, and its underlying tactics are central to the modern American President’s drug policy, as it is continually supported and funded. Thus, the strategies for winning this prolonged war must be examined.

The United States Congress as well as state governments have attempted many new strategies and techniques in furtherance of the goal of eradicating drugs from within their borders – mandatory minimums, increased jurisdiction for state and federal governments,
harsher penalties, etc. However, due to many factors, these tactics do no seem to have fixed
the problem – systemic drug use. One of the latest attempts to give police and prosecutors
more power in fighting this War was the creation of drug free school zones, which allow allows
the state to extend its reach in drug prosecutions and strengthen its grasp on drug offenders –
by throwing kids into the equation. But this isn’t the first time legislators have assigned harsher
penalties to drug offenses that take place within pre-determined prohibited zones.

“Drug Free Zone” Laws

In 1970, Congress enacted the Comprehensive Drug Abuse, Prevention and the Control
Act (CDAPCA) and the Controlled Substances Act (CSA), which created five schedules of drugs,
categorized based on their medical value and potential for addiction. Embedded within this law
was an early version of the Drug Free School Zone Act, creating areas in which penalties for
drug offenses could be raised. (Frontline, 2000) Starting in the 1984, when the federal statute
was amended to its current form, state governments began to follow suit. By 2000, an analysis
by the National Alliance for Model State Drug Laws (NAMSDL) found that all 50 states and the
District of Columbia had enacted statutes increasing penalties for drug offenses committed in
prohibited zones surrounding schools and other public locations. (Greene, Pranis, & Ziedenberg,
2006)

The federal statute, as well as state drug free school zone laws, provides heightened
penalties for drug offenses that occur within restricted areas surrounding schools, public
housing projects, parks, and playgrounds. Typically, statutes such as these establish a one
thousand (1,000) foot zone surrounding schools (or the other locations mentioned above). However, the size of these zones can vary from three hundred (300) feet to three miles, depending on the specific statute. One key distinction to be made is that most statutes like this apply only to the manufacture, distribution, or possession of a controlled substance with intent to distribute, not simple drug possession. Further, the enhancement of penalties varies greatly from state to state, but often includes mandatory or presumptive sentences. (Greene, Pranis, & Ziedenberg, 2006)

The motive for the enactment of drug free school zone laws is simple and often stated in the statue itself. Tennessee Code §39-17-432(a) states that “It is the intent of this section to create drug-free zones for the purpose of providing vulnerable persons in this state an environment in which they can learn, play and enjoy themselves without the distractions and dangers that are incident to the occurrence of illegal drug activities. The enhanced and mandatory minimum sentences required by this section for drug offenses occurring in a drug-free zone are necessary to serve as a deterrent to such unacceptable conduct.” (TCA, 2010) Lawmakers want to protect children from drug activity by creating a safe harbor around schools and other locations that they might frequent.

**Tennessee’s DFSZA**

The Tennessee Drug Free School Zones Act (DFSZA – TCA §39-17-432) was passed into law by the Tennessee General Assembly in 1995. At the time, it was very similar to federal law and statutes in many other states that had already created drug free school zones. It has been
amended slightly over the years, but has mostly remained untouched. Section 1 provides for punishment one (1) classification higher than is provided in the criminal drug offense statute (TCA §39-17-417(b)-(i)) if the violation occurs on the grounds of or within one thousand (1,000) feet of “a public or private elementary school, middle school, secondary school, preschool, child care agency, or public library, recreational center, or park.” This distance of 1,000 feet is to be measured “as the crow flies” – or, based on a straight radius extending from the school or daycare, rather than based on roads or visibility of the school or daycare from the indicated point.

Section 2 levels harsh fines against convicted offenders. It outlines that a person convicted shall be subject to fines of:

(A) Ten thousand dollars ($10,000) upon conviction of a Class E felony,

(B) Twenty thousand dollars ($20,000) upon conviction of a Class D felony,

(C) Forty thousand dollars ($40,000) upon conviction of a Class C felony,

(D) Sixty thousand dollars ($60,000) upon conviction of a Class B felony,

(E) One hundred thousand dollars ($100,000) upon conviction of a Class A felony.

Section 3 states that any offender convicted of violating the DFSZA is “required to serve at least the minimum sentence for the defendant’s appropriate range of sentence. Any sentence reduction credits the defendant may be eligible for or earn shall not operate to permit or allow the release of the defendant prior to full service of the minimum sentence.” It further states that a defendant convicted under this statute may not receive parole before serving the minimum sentence set out in the law. (TCA, 2010)
Despite its passage into law in 1995, charges and prosecutions under were infrequent in most areas of Tennessee until about three years ago. Davidson County (where the state’s capital, Nashville, is located) District Attorney General Torry Johnson stated that “when the law was first enacted ... it was not something that the police were really aware of or that they had an easy time determining [when to charge the offense].” (Nix, 2010) This was mainly due to deficiencies in technology. Prosecutors, until recently, used physical (as opposed to digital) maps to determine the drug free school zones and were forced to walk behind a measuring wheel to calculate the distance from a school or daycare before each and every prosecution. However, technology has made this process much easier with the advent of new, cheaper software that greatly increased police awareness about when to add the charge. Thus, in the past few years, the number of cases charged under the DFSZA has dramatically spiked, and continue to rise each year. Prosecutors in Nashville and Knoxville, two of Tennessee’s largest cities, estimate up to one thousand (1,000) charges per year in each city. (Nix, 2010)

It is important to note that the number of cases in which a defendant is charged or convicted under the DFSZA does not adequately represent the frequency with which the DFSZA is used by prosecutors. In fact, the most cases involving the enhanced penalty of drug-free school zone charges are settled before going to trial, and thus are not counted in the number of charges. Rather than charging a defendant under the DFSZA, prosecutors use it as an effective negotiating tool. While a defendant might not be convicted of the DFSZA charge, prosecutors who threaten to prosecute under the statute can offer to drop that charge in exchange for a defendant agreeing to a higher sentence. In these cases, more stringent punishment is achieved without ever charging a defendant under the DFSZA. In this sense, the DFSZA directly and
indirectly allows for the enhanced punishment of drug offenders. Davidson County District Attorney General Torry Johnson even stated that “we settle a lot of these cases upon pleas of guilty to enhanced punishments – punishments that we couldn’t have gotten but for the threat of the drug free school zone case.” (Nix, 2010)

**Current Legal Status of Drug Free School Zone Laws**

As with most new criminal statues, DFSZ laws have been the subjects of quite a few legal challenges. These challenges have claimed that the drug-free zone laws violate due process, the constitutional protection from cruel and unusual punishment, and the equal protection clause.

**Due Process Challenges**

The first major legal challenge is that the law is overly broad, a facial challenge to the constitutionality of the law that claims this law does not allow for full due process. This would violate the 14th Amendment to the Constitution. Proponents of this view argue that the statute is not effective at accomplishing its sated purpose because its language is far too broad. A radius of 1,000 feet, although it may seem small, is in fact quite large and encompasses many places that may seem unconnected to schools or children at all. As an example of this law’s overly broad language, consider a man who is arrested for selling cocaine 950 feet away from a school. However, this distance of 950 feet consists of a forest, a river with no bridge for miles, and the beginnings of an abandoned lot. Does the spot where the man is arrested actually
affect children, as the law would suggest? In essence, this challenge maintains that these zones can include areas that are in no way connected to schools or children.

Further, proponents of this view hold that many people are simply unaware of when they are in one of these statutory “school zones.” Because of the limitations that most people face in determining all of the protected sites and their respective 1,000 feet radiuses, this view holds that inherent ignorance of the law that most people would exhibit automatically makes this law unconstitutional, as it violates due process. "When the zones are so very large, they become meaningless," said Barbara Dougan, director of the Massachusetts chapter of Families Against Mandatory Minimums, or FAMM, a nonprofit that advocates for sentencing reforms. "Nobody really understands whether they really are or are not within a zone, so [the laws] lose their deterrent value, they lose the very reason they were enacted. The one thing it does not do is deter drug transactions based on the knowledge that you're within a school zone. What it does do is impose harsher penalties on people because of where they live, not what they do” (Turner).

However, in most jurisdictions, this challenge is unsuccessful. In Tennessee, specifically, Thomas Smith raised this issue in 2000. In State v. Smith (2000), Tennessee Supreme Court considered nullifying the law on the following grounds:

1. The appellant was not “fore-warned” concerning the Drug-Free School Zone Act and its impact upon drug offenses committed in the public housing project where he was arrested.
(2) A person of ordinary intelligence would face considerable difficulty in measuring a one thousand (1,000) foot radius around a school and, in this case, the State required maps and a city engineer to demarcate the school zone.

(3) The statute does not explicitly set forth the requisite mens rea and does not clearly and unambiguously apply in the appellant's case.

(4) The Drug-Free School Zone Act enhances penalties for violations of Tennessee Code Ann. § 39-17-417 which occur, as in the appellant's case, beyond regular school hours of operation.

The Court first noted that in order for a statute to be ruled overly broad, its language “literally encompasses constitutionally protected activity” (State v. Forbes, 1995). Because the drug-related drug activity outlined in the statute is not constitutionally protected, the statute itself cannot be overly broad. As with most laws, ignorance of the law was held to be an invalid defense. For, a person engaging in illegal drug activity anywhere should be reasonably aware that his or her actions are illegal. His or her ignorance of the specific law that is rendered applicable (and its specific language) was not sufficient to warrant overturning the law. Further, it reaffirmed its 1999 ruling (in State v. Jenkins) that simply asserting that reasonable people could not determine how to measure 1,000 feet from schools or daycares is not sufficient for overturning the law.

However, it is important to note that in most jurisdictions, it is common practice that an arrest for drug-related activities (covered by the DFSZA) made while a defendant is driving
through a designated school zone is not eligible for enhanced penalties. This practice began through a ruling in 2003 by the Kansas Supreme Court, in State v. Barnes (64 P.3d 405, 2003).

Cruel & Unusual Punishment Challenges

Defendant Smith (from State v. Smith, 2000) also challenged the law on the basis that the mandatory minimums imposed constituted cruel and unusual punishment. Indeed, many similar challenges have been levied across the nation, for this law specifically and for other criminal statutes as well. This would violate a defendant’s 8th and 14th Amendment rights. This argument holds that in many cases, defendants are charged with a prison sentence of over twenty years for drug violations such as selling .5 grams of cocaine. This happens when a defendant has multiple previous drug arrests and convictions, due to mandatory minimums for repeat offenders as set out in the TCA and similar statutes across the nation.

In Tennessee, this issue was brought to the Supreme Court’s attention in 2010 by Terrence Davis, who was convicted of two relatively minor cocaine offenses (less than 1 gram in each case) in school zones, then sentenced to 22 years imprisonment. (Davis v. State, 2010) He alleged in his brief to the court that his sentence was illegal because it made no provision for the possibility of early release on parole. The Court decided that in cases where the punishment seems at odds with the crime (such is the case Davis), the judicial analysis must proceed by comparing (1) the sentences imposed on other criminals in the same jurisdiction, and (2) the sentences imposed for commission of the same crime in other jurisdictions. Due to the fact that
in most cases regarding the TN DFSZA, defendants are charged relatively the same within and between/among jurisdictions, habeas relief was denied to Mr. Davis, and this challenge failed to overturn the law.

*Equal Protection Challenges*

A final legal challenge is that of a facial challenge, stating that though race-neutral on its face, the DFSZA is applied in a racially discriminatory manner, which violates the Equal Protection clause of the 14th Amendment. Based on the *Yick Wo v. Hopkins* and *Wo Lee v. Hopkins* (*118 US 356, 1886*), this type of claim is allowed. When a claim like this is made, the courts are to strictly scrutinize the discrimination, determining if the state’s interests outweigh those of the infringed party. If they do not, the law shall be overturned.

However, in order for the courts to apply this strict scrutiny test, the appellant must first prove that state actions were indeed motivated by racial discrimination. Without this evidence, courts must then employ the rational basis test, allowing any law that can claim any rational basis (which most, including this one, can). According to the Supreme Court’s ruling in *Arlington Heights v. Metropolitan Housing Corp. (429 US 252, 1977)*, this motive of racial discrimination can be shown through statistics, legislative history, departure from usual procedures or events, etc. If proven, the state must then prove that the same outcome would have resulted absent the discriminatory motive. If the state cannot prove this, the law shall be overturned.
This type of claim is intrinsically bound up with my research and statistics. Though I will delve into this much more in the “Discussion” chapter, it is important to note the role of statistics in an as-applied challenge to the constitutionality of a statute. In *McCleskey v. Kemp* (481 US 279, 1987), a black defendant claimed that Georgia death penalty sentencing was applied racially disproportionately. He presented the appellate courts with a statistical study, based on the race of both defendants and victims. This study empirically showed a disparity in the imposition of death sentences in the State of Georgia. The study was extremely comprehensive, including statistics on over 2,000 murder cases occurring over a period of several years. The Court held that the statistical study (that they agreed did suggest that racial considerations entered into capital sentencing decisions) did not establish a denial of equal protection. A defendant must show either that the decision maker (in that case, legislators; in the case of DFSZ laws, prosecutors) acted with a discriminatory purpose. Starting then and continuing today, any defendant who alleges an equal protection violation has a burden of proving the existence of purposeful discrimination, which is difficult if not impossible to do with statistics alone.

Because of these strict new burdens, it has been difficult for defendants to mount successful challenges to DFSZ laws on this basis. As a matter of fact, all challenges claiming this basis thus far have been denied or dismissed, due to a lack of evidence.
CHAPTER 2: Review of Literature

Due to the youth of drug-free school zone laws, there is little empirical evidence of their effects. Further, meta-data on drug-free drug convictions is scarcely available (if at all) due to the small amount of time between the enactment of these laws and present day. Despite these facts, the Justice Policy Institute published a nearly exhaustive review of research that focuses on drug-free zone laws. It examined research endeavors in four key states: Massachusetts, New Jersey, Connecticut, and Washington. I will briefly discuss the relevant findings for each, as outlined by the Justice Policy Institute Report.

In Massachusetts, William N. Brownsberger, former Assistant Attorney General for Narcotics for the state, found that “large chunks of each city were blanketed by interlocking drug-free zones... 56 percent of the surface area lay enclosed in school zones.” Further, he found that seventy percent of violations occurred when school was not in session; less than one percent involved children; eighty percent of drug offenses in the entire state occurred within school zones. Most notably, he found that nonwhites are more likely to be charged with offenses that carry a drug-free zone enhancement. That is, this study found that (controlling for other variables) race is a significant factor in determining punishment level for defendants in Massachusetts. (15-16) These findings seem to support the challenges based on due process and equal protection. Included in that study is graph 2.1 (below), which sums up the relevant findings:
Also in Massachusetts, a group of Northwestern University researchers found that “more than 80 percent of defendants that received mandatory, enhanced sentences under the drug-free zone statute are black or Hispanic, even though 45 percent of those arrested for drug violations statewide are white” (16). The researchers found that black or Hispanic suspects were significantly more likely to be up-charged than white suspects (75% to 63%). Most notably, the team found that though 80 percent of all drug arrests took place in a designated
school zone, only 15 percent of whites were charged with an enhancement-eligible offense, while 52 percent of non-white defendants were. Most shockingly, though, the study found that non-white suspects were charged (on the whole) more harshly for the same amount of drug in question. Upon questioning the arresting officers on what factors increase the likelihood of being charged with a DFSZA-eligible crime, the most common answer given was “it has to do with whether it’s a good kid or bad kid” (16).

The study then addresses New Jersey. They note that New Jersey has among the country’s toughest drug laws due to the Comprehensive Drug Reform Act (CDRA). This law provides for harsh penalties for relatively small amounts of drugs. Further, the Drug Free Zone laws there specify that distributing drugs in a school zone is a separate offense from the act of selling drugs. That is, a defendant can be charged twice for one action, selling drugs. Because of these harsh laws, the New Jersey Commission to Review Criminal Sentencing sought to investigate the DFSZ laws and their effects and impacts on the community.

In that commission’s 2005 report, Judge Barnett Hoffman charged that these laws result in “a devastatingly disproportionate impact on New Jersey’s minority community” (26). He notes that in areas with high population density, the number of schools rises. When that happens, the total area enclosed in designated school zones skyrockets (see graph 2.2, below). This is a problem for minorities because they often populate urban areas (with many schools, and thus, many school zones) in higher percentages than whites. The report notes that 76 percent of Newark and over half of Camden and Jersey City (all urban areas) are covered by drug-free zones. Further, arrests stemming from DFSZ laws are concentrated disproportionately
in urban areas – that is, they affect minorities more than whites. Based on where a person lived, blacks were 4 to 14 times more likely to be arrested under a DFSZ law than whites. What’s more, the report found that this law had little effect of drug use and drug activity in school zones.

Graph 2.2

This report – which appears to be the most advanced and well founded report of its kind – concludes that these drug-free zones are ineffective and unfair to minority communities. This fact becomes hard to deny when one considers that ninety six percent of all inmates in NJ whose most serious offense is a school zone violation are African American or Latino (despite those two demographics only accounting for 27 percent of the state’s population). Further, graph 2.3 (below), which summarizes the findings of the NJ report, shows an uneven
distribution of arrests among minorities, especially in urban areas – the areas with the highest rates of drug-free zone violation convictions.

Graph 2.3

In Connecticut, conditions are similar. Sarah Bray of the Yale Center for Interdisciplinary Research conducted research in 2001 on the drug free school zone laws there. She tallied the number of drug-free zones in 166 cities and towns and used land- area data to calculate the density of the zones for each locality. She found that localities where more than 25 percent of residents were minorities (black or Hispanic) had zone densities that averaged more than six times higher than the average for localities where less than 10 percent of residents were black or Hispanic. In essence, the school zones tended to be centered on the areas with the highest
populations of minorities. As in similar reports before this one, Bray found that seven in eight
drug arrests in school zones occurred outside school hours, and just one tenth of one percent
were actually linked in some way to the schools in question.

Last, the report considers Washington State. In a slight twist from what other
researchers found, analysis of sentencing data there shows that the Drug Free School Zone laws
are being used by prosecutors not to sanction those who sell drugs in the presence of children,
but instead to scare defendants into a plea bargain, resulting in fewer trials and more plea
bargains. In fact, drug defendants who went to trial were found to be 30 times more likely to
get drug-free zone enhancement (see graph 2.4 below). Some prosecutors there even claim
that this law “is routinely used as a ‘trial penalty’ that helps to persuade defendants that they
should plead guilty rather than risk facing an enhanced prison term” (40). This “weapon” as it is
often called by the researchers, often falls harder on blacks than white, the study claims, for the
proportion of black defendants sentenced with a drug-free zone enhancement was more than
twice as large as the proportion of whites.
Though the findings presented above seem to support the claim that these drug-free zone laws are racially discriminatory in their respective applications, it is important to note that the majority of the research I encountered while researching this topic yielded insignificant results. This may be due to the fact that researchers have yet to find a good way to quantify the variables needed, or it could indicate that there is no racial discrimination. However, I feel that the above extant literature warrants further investigation into local drug-free school zone laws.

Graph 2.4
CHAPTER 3: Methodology

I began with the basic assumption that because there is a choice involved with each drug-free school zone charge, there must be factors that influence that choice. Indeed, most prosecutors seem to be aware of the fact that the majority of defendants arrested for drug-related crimes in school zones were not charged with enhanced penalties under the TNDFSZA. I set out to empirically measure the factors that account for whether a defendant is charged with enhanced penalties or not.

Procedures & Measures

I collected my relevant data with the help of a local attorney, Joshua Hedrick. By submitting a DFSZ FOIA (Freedom of Information Act) Request to the Knoxville Police Department and the City of Knoxville, we were given access to a previously compiled list (by the City of Knoxville) of drug offenses eligible for penalty enhancement under the TNDFSZA. This list was exhaustive of all drug arrests for the past two calendar years (January 2010 – December 2011) that were marked by prosecutors, police officer, and administrators (or any combination of the three) as eligible to be charged under the DFSZA. In essence, this list represents the raw data given to prosecutors just before a decision on increased penalties is reached.

In total, 2031 cases were marked as eligible for DFSZ prosecution. The variables I was able to ascertain (for each and every case) were:
(1) Race  
(2) Gender  
(3) Age  
(4) State Residency  
(5) Legal Indigency – whether or not a defendant can pay for his/her own legal services.  
(6) Type of Drug found upon arrest  
(7) Class of Crime charged  
(8) If the defendant is charged with enhanced penalties or not.

**Operalization of Variables**

In order to construct actual, concrete measurement techniques, I created several operations that numerically represent the above concepts.

I chose to analyze race by classifying three types of race: black, white, and Hispanic. These categories adequately represented the data given to me, as these three divisions were the only ones used by Knoxville police and by the City of Knoxville when criminally prosecuting defendants.

The operalization of gender was fairly straightforward; a simple Boolean determination of male or female sufficed. This was similar for the cases of state residency (I considered TN residency as one category, and non-TN residency as the only opposing category), legal indigency (a simple yes or no partition), and whether or not a defendant was charged with
enhanced penalties under the TNDFSZA (a simple, yes or no partition as well). However, age was not as clear-cut. Because many different researchers use many different classifications of ages, I chose to break age into categories based on the measurement techniques of the US Census Bureau, which breaks age down into four categories: Under 18 years of age, 18-44 years of age, 45-64 years old, and 65 or more years. However, these categories needed a bit more clarification. Because the law deals with underage offenders (under 18 years of age), I chose not to include the category of “under 18 years old.” Further, there were only two cases of offenders on this list under the age of 18 years old (these two were put in the closest category, with 18 year olds. Next, I chose to further divide the category of “18-44 years old” into two categories: 18-24 years and 25-44 years, as these two categories represented distinctly different generations (at least, in my mind). I felt this further distinction would add to the overall understanding of the research model used.

For the type of drug on the defendant variable, I chose to create my own, somewhat exhaustive list of potential drugs before even beginning to analyze the data. The following categories resulted: marijuana (including hashish and synthetic equivalents of either), powder cocaine, crack cocaine, methamphetamine, amphetamines (such as ecstasy – including MDMA), hallucinogens (such as LSD, synthetic equivalents, mushrooms, etc.), steroids, narcotics (other than those already listed, such as heroine, morphine, etc.), any combination of two (2) or three (3) of the aforementioned categories, and a combination of four (4) of the previous categories. Thus, there were ten possibilities for the classification of the type(s) of drugs on a drug defendant at the time of arrest.
Similarly, the variable of “class of crime” was broken down according to the Tennessee Code Annotated (TCA). Current law specifies a drug crime can fit into any of the following categories: Class A felony (the highest classification), Class B Felony, Class C felony, Class D felony, Class E felony, and Class A Misdemeanor (the lowest classification used in drug cases). These predetermined six (6) categories were applied to my data.

**Preliminary Examination of Data**

Before any advanced calculation is done, some important frequencies and totals are immediately evident. The table below (3.1) represents the frequencies of each of the operations listed above.

<table>
<thead>
<tr>
<th>RACE</th>
<th>White</th>
<th>39.8 % (808)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Black</td>
<td>58.6 % (1190)</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>1.6 % (33)</td>
</tr>
<tr>
<td>GENDER</td>
<td>Female</td>
<td>20.5 % (417)</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>79.5 % (1614)</td>
</tr>
<tr>
<td>AGE</td>
<td>18-24 years</td>
<td>20.9 % (425)</td>
</tr>
<tr>
<td></td>
<td>25-44 years</td>
<td>63.3 % (1286)</td>
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<tr>
<td></td>
<td>45-64 years</td>
<td>14.8 % (301)</td>
</tr>
<tr>
<td></td>
<td>65+ years</td>
<td>0.9 % (19)</td>
</tr>
<tr>
<td>STATE RESIDENCY</td>
<td>TN Resident</td>
<td>99.7 % (2025)</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------</td>
<td>---------------</td>
</tr>
<tr>
<td>INDIGENCY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Legally Indigent</td>
<td>93.4 % (1896)</td>
<td></td>
</tr>
<tr>
<td>Not Legally Indigent</td>
<td>6.6 % (135)</td>
<td></td>
</tr>
<tr>
<td>TYPE OF DRUG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marijuana/Hashish</td>
<td>29.5 % (599)</td>
<td></td>
</tr>
<tr>
<td>Powder Cocaine</td>
<td>3.5 % (72)</td>
<td></td>
</tr>
<tr>
<td>Crack Cocaine</td>
<td>22.0 % (446)</td>
<td></td>
</tr>
<tr>
<td>Methamphetamine</td>
<td>1.9 % (40)</td>
<td></td>
</tr>
<tr>
<td>Amphetamines</td>
<td>0.9 % (19)</td>
<td></td>
</tr>
<tr>
<td>Hallucinogens</td>
<td>0.7 % (14)</td>
<td></td>
</tr>
<tr>
<td>Steroids</td>
<td>0.1 % (2)</td>
<td></td>
</tr>
<tr>
<td>Other Narcotics</td>
<td>11.8 % (239)</td>
<td></td>
</tr>
<tr>
<td>Combination of 2-3</td>
<td>26.9 % (546)</td>
<td></td>
</tr>
<tr>
<td>Combination of 4+</td>
<td>2.7 % (54)</td>
<td></td>
</tr>
<tr>
<td>Class of Crime</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class A Felony</td>
<td>3.3 % (67)</td>
<td></td>
</tr>
<tr>
<td>Class B Felony</td>
<td>33.8 % (687)</td>
<td></td>
</tr>
<tr>
<td>Class C Felony</td>
<td>29.2 % (594)</td>
<td></td>
</tr>
<tr>
<td>Class D Felony</td>
<td>14.2 % (288)</td>
<td></td>
</tr>
<tr>
<td>Class E Felony</td>
<td>19.3 % (392)</td>
<td></td>
</tr>
<tr>
<td>Class A Misdemeanor</td>
<td>0.1 % (3)</td>
<td></td>
</tr>
<tr>
<td>TNDFSZA used? (Independent Variable)</td>
<td>Charged with Increased Penalties (DFSZA used)</td>
<td>20.5 % (416)</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>---------------------------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td></td>
<td>Not Charged with Increased Penalties (DFSZA not used)</td>
<td>79.5 % (1615)</td>
</tr>
</tbody>
</table>

Table 3.1 – Variable Frequencies

It is clear, from Table 3.1, that black suspects and males with drug crimes disproportionately compared to their makeup of society. According to the US Census Bureau, black persons account for roughly 17.1 % of the residents of Knoxville (which boasts a total population of roughly 180,000). However, in the data I collected, black persons account for nearly sixty (60) percent of drug arrests. Further, the census shows that nearly 52 % of Knoxville residents are female, though females only account for 20.5% of drug arrests in designated drug-free school zones. Similarly, Hispanic arrests accounted for only 1.6 % of those in the data set, whereas Hispanics make up about 4.6 % of Knoxville.

Further, because the variables of “indigency” and “state residency” yielded results that were significantly skewed toward one variable, I considered not using them in the multivariable regression analysis. Though I did end up including these variables, neither was flagged as significant predictors of enhanced penalties.
Methodology

In order to create a structural equation model for the data collected, I used IBM’s SPSS (Statistical Package for the Social Sciences). Structural equation modeling (SEM) refers to a family of related procedures that are often a blend of exploratory and confirmatory analyses (Kline, 2005).

Generally, there are five steps in SEM (Kline, 2005). The first step is model specification, which means that the study hypotheses are expressed in the form of a structural equation model – a series of equations – that is then expressed in the form of a conceptual drawing.

The second step is model identification to ensure that the program can derive a unique estimate from every model parameter. A model can be just identified, under-identified, or over-identified. A just identified model means that there are an equal number of data points (variances and covariances) and model parameters to be estimated. This results in a “perfect fit.” An under-identified model, where there are more model parameters than data points, cannot yield a solution from the program.

The third step involves selecting measures (like scales) to operationalize the variables given, followed by collection, preparation, and screening of the data (checking for multicollinearity, outliers, normality, etc.). Any missing data was addressed in this step.

Step four involves computer analysis to conduct the analysis. This process is known as model estimation. Several important checks occur in this step – evaluation of model fit, interpretation of parameter estimates, and consideration of equivalent models are the most
notable. In effect, the program completes a “measurement model” that represents a confirmatory factor analysis on each of the latent variables, within the overall composition of the model. (Klein, 2005)

Step five of SEM is to re-specify the model and evaluate the fit (Kline, 2005). SEM is complete using maximum likelihood estimation (Hoyle & Panter, 1995). Maximum likelihood estimation yields three types of factor loadings (or, effects): direct, indirect, and total. All are reported as standardized regression weights. The direct effects represent the predicted variance of the independent variables directly on the dependent variable. Indirect effects are approximated through the sums of the direct effect products through the intervening variables in the model. Total effects combine the two, and are reported as squared multiple correlation.

**Multivariable Logistic Regression**

I applied a multivariable, logistic regression analysis of the data collected. Specifically, I used binary logistic regression, which converts the dependent variable to a dummy variable; that is, the dependent variable (whether a suspect is charged with enhanced penalties under the TNDFSZA) is coded as 0 for NO and 1 for YES.

The focus of this type of technique is to determine the relationship between the independent variables (race, age, gender, state residency, legal indigency, type of drug, and class of crime) and the independent variable (enhancement of penalties). More specifically, regression analysis helps us understand how the value of the dependent variable fluctuates (in
this case, from 0 to 1) when one of the independent variables is altered while holding the others unaltered.
CHAPTER 4: Results

Based on the data given and the logistical regression run, SPSS generated a model to predict whether or not a suspect will be charged with enhanced penalties using only the factors given as guides. The model created had the following characteristics:

Table 4.1 - Omnibus Tests of Model Coefficients

<table>
<thead>
<tr>
<th></th>
<th>Chi-squared</th>
<th>Degrees of Freedom (df)</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step</td>
<td>228.297</td>
<td>5</td>
<td>.000</td>
</tr>
<tr>
<td>Block</td>
<td>228.297</td>
<td>5</td>
<td>.000</td>
</tr>
<tr>
<td>Model</td>
<td>228.297</td>
<td>5</td>
<td>.000</td>
</tr>
</tbody>
</table>

Table 4.2 - Model Summary

<table>
<thead>
<tr>
<th>Step</th>
<th>-2 Log likelihood</th>
<th>Cox &amp; Snell R Square</th>
<th>Nagelkerke R Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1593.646</td>
<td>.205</td>
<td>.322</td>
</tr>
</tbody>
</table>

Table 4.3 - Classification Table

<table>
<thead>
<tr>
<th>Charged with Increased Penalty?</th>
<th>Predicted</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Correctly Predicted</td>
<td>1515</td>
</tr>
<tr>
<td>Yes</td>
<td>Incorrectly Predicted</td>
<td>307</td>
</tr>
<tr>
<td>Overall Percentage Correct</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 4.4 – Variables in the Equation

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>Sig.</th>
<th>Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charged with Class A Felony</td>
<td>1.895</td>
<td>.135</td>
<td>198.406</td>
<td>1</td>
<td>.000</td>
<td>6.654</td>
</tr>
<tr>
<td>Possession of Amphetamines</td>
<td>1.310</td>
<td>.512</td>
<td>6.537</td>
<td>1</td>
<td>.011</td>
<td>3.706</td>
</tr>
<tr>
<td>Possession of Crack Cocaine</td>
<td>1.253</td>
<td>.169</td>
<td>54.881</td>
<td>1</td>
<td>.000</td>
<td>3.502</td>
</tr>
<tr>
<td>Possession of a combination of 4 or more types of drugs</td>
<td>1.156</td>
<td>.161</td>
<td>51.5020</td>
<td>1</td>
<td>.000</td>
<td>3.178</td>
</tr>
<tr>
<td>Black (race)</td>
<td>.637</td>
<td>.149</td>
<td>18.340</td>
<td>1</td>
<td>.000</td>
<td>1.890</td>
</tr>
<tr>
<td>Constant</td>
<td>-3.548</td>
<td>.169</td>
<td>439.370</td>
<td>1</td>
<td>.000</td>
<td>.029</td>
</tr>
</tbody>
</table>
CHAPTER 5: Discussion

The Model

The first three tables above (4.1 – 4.3) show that the model created predicts performance of the independent variable 89.7% correctly. This has improved from 79.5% for the null model. In other words, without regression analysis, we can predict performance up to 79.5 percent, for this is the percentage of suspects who are not charged with enhanced penalties. That is, given a random suspect, the chances that the null model would correctly predict whether or not a suspect is charged with enhanced penalties are around 80 percent. However, with this model, we can now correctly predict nearly 90 percent of all cases; this is a significant improvement.

The Chi squared statistic, also called discrepancy analysis, compares the expected and observed hypothesis to determine how well predictions fit the data. This statistic should not be significant if there is a good model fit. It is evident that this model is statistically significant because the p-value (represented by “Sig.” in Table 4.1) is .000. The p-value calculates the probability of obtaining the chi-square statistic given that the null hypothesis is true. In simpler terms, it determines the probability of obtaining the chi-squared statistic (228.297) if there is no effect of the independent variables on the dependent variable. In this case, the .000 finding shows that this is not possible. This proves the significance of this model.
The Variables and Statistics

In order to understand how and to what magnitude these independent variables significantly affect the dependent variable, one must understand each of the statistics in Table 4.4. Before discussion of these numbers, though, it is important to note that many of the operations of variable were left out of the above table. This was done for one reason – the operations listed (charged with class A felony, possession of amphetamines, possession of crack cocaine, possession of a combination of 4 or more drugs, and being identified as racially black) are the only ones that (according to this model) significantly affect performance of the dependent variable. In essence, this means that the only significant factors a prosecutor takes into account are the above variables. By inference, then, prosecutors do not base decisions in any large part on the following operationalized variables:

(1) White or Hispanic race
(2) Gender
(3) Age
(4) State Residency
(5) Legal Indigency
(6) Possession of any of the following types of drugs:
   i. Marijuana, hashish, or synthetic equivalents
   ii. Powder cocaine
   iii. Methamphetamine
   iv. Hallucinogens
v. Steroids

vi. Other narcotics (as detailed earlier)

vii. Any combination of 2 or 3 of the types of drugs measured

b. Perceived guilt (measured by the charge against a defendant) of any class of
crime other than Class A Felony

Thus, we are left with the 5 operations that statistically significantly affect performance of the dependent variable (its 0 or 1 value).

The “S.E.” column in Table 4.4 represents the standard errors associated with the coefficients. This standard error is then used for testing whether the parameter is significantly different from 0; that is, the standard error is used to form confidence intervals, which are then used to determine the reliability of the estimate (Kline, 2005). I did not create confidence intervals for this model, but the values speak for themselves.

The “Wald” and “Sig.” columns represent the values obtained through the Wald test. The Wald test is used to test the true value of the parameter based on the sample size. The value in the “Sig.” column represents the p-value, or the probability of seeing a result similar to the returned result in a compilation of random data in which the variable has no effect. This value is not used to predict the size of the effect that independent variable might have on the dependent variable, but rather it is a measure of the reliability of the variable. The returned value from the Wald test, found in the “Wald” column of Table 4.4, and the p-values for each variable (which are all below the generally accepted threshold of .05) show that each other variables listed actually has a real effect in the sample population tested.
Perhaps the most important values in Table 4.4 are the “B” and the “Exp(B)” values. The “B” column represents the values for the logistic regression equation for predicting the dependent variable from the independent value. These values give insight into the relationship between the specific independent variable in question and the dependent variable. Basically, it tells the amount of increase (as opposed to decrease, which would be indicated by a negative B value) in the predicted odds of the dependent variable being 1 that would be predicted by a 1 unit increase in the predictor (or independent variable), while holding the other predictors constant (Kline, 2005). In other words, for a one-unit increase in the operator “black (race)” – which, in the real world, would translate to someone switching from a previously non-black racial identity to a black racial identity, thus representing a one-unit increase) we expect to see a 0.637 increase in the log-odds of being charged with enhanced penalties, while holding all other variables constant.

Because it is difficult to understand the B value, as it is in terms of log-odds, the coefficient of the B value is often exponentiated, which transforms the “B” value into the “Exp(B)” value found at the right-hand side of Table 4.4. In essence, this value becomes the odds ratios for the predictors tested, which is a measure of the effect size or the strength of association between the two data values of the dependent variable and the independent variable in question (Kline, 2005). For example, consider the “possession of crack cocaine” variable. Its Exp(B) value is 3.502, which roughly means that one who is found in possession of crack cocaine (as opposed to any other type of drug) has roughly 34 times the odds of being charged with enhanced penalties. In this sense, it is clear that all of the significant independent variables have a strong association with the dependent variable.
Interpreting the Findings

The most immediately significant result of the data analyzed is that the following factors most significantly affect a suspect’s odds of being charged with enhanced penalties (in the order of strength of association with the independent variable, strongest to weakest):

(6) Being charged with a Class A felony
(7) Possession of amphetamines (including MDMA)
(8) Possession of crack cocaine
(9) Possession of any combination of 4 or more types of drugs
(10) Classification of race as “black”

Shockingly, based on its Exp(B) value of 6.654, we can infer that a suspect charged with a class A felony has roughly 780 times the odds of facing enhanced penalties than someone who is not. Prima facie, this makes sense. If the goal is to punish those who commit more harsh crimes more harshly, then this seems to accomplish that goal. Further, it is not illegal or immoral to punish the suspects with the worst crimes with enhanced penalties. This result is not surprising, though the large magnitude may be. Similarly, possession of a combination of 4 or more types of drugs raises a suspect’s odds of facing prosecution under the TNDFSZA by a factor of 24. Once again, this finding is to be expected.

Further, it is evident that a suspect in possession of amphetamines has 43 times the odds of being charged under the TNDFSZA than one who is not. Unlike most of the variables that yielded statistically significant results, this result cannot be explained by pure common sense. Why would prosecutors punish possession of amphetamines more harshly than
possession of any other type of drug? Perhaps the answer lies in the recent ‘epidemic’ of young people having medical issues at parties or raves due to the consumption of amphetamines. Whatever the case, this warrants more discussion, interpretation, and research; this finding lacks a clear explanation as to why.

With respect to crack cocaine, a drug arrest yielding possession of crack cocaine makes raises a suspect’s odds of being charged with enhanced penalties raises a factor of 34. This is a particularly interesting finding; the research and literature on the connection between crack cocaine and race is quite robust. According to the US Sentencing Commission found in 2006 those who were considered racially “black” constitute around 80% of recreational crack cocaine users. Further, the study found that among the total population of black Americans, 1.6 regularly use cocaine; this is contrasted to a 0.8% use rate among white and Hispanic Americans. Use of this drug seems to be much more correlated with racial patterns (especially black) than most other drugs. Because of this fact, enhanced penalties for possession of this drug may seem to have a racial bias grounding them. However, there is no direct evidence of this bias.

Simply being black, according to this model, raises the odds that a suspect will be charged with enhanced penalties under the TNDFSZA by a factor of roughly 6.5. This finding alone suggests that the Knoxville prosecutors’ office does indeed use race as a determining factor for whether or not a person is charged with enhanced penalties under the TNDFSZA. This fact raises questions about whether black drug defendants are receiving their constitutionally protected equal protection under the law. However, we must realize two potentially limiting
factors that bring into question the extent to which this is actually the case: that race carries
the least strong association to the independent variable (of the five factors found to be
statistically significant) and that one very important variable is missing.

First, it is important to note that of the factors that were found to be significantly bound
to the independent variable, race is the least strong indicator. That is, four factors affect a
prosecutor’s decision *more* than race. In fact, it is by far the weakest predictor of note, with an
odds ratio of nearly half that of the next closest predictor, possession of 4 or more types of
drugs. Because of the weak association, it would be improper to say that this model yielded
that race was the determining factor in the prosecutor’s decisions. Rather, the strongest
statement we can make about race (given that the only foundation is the findings of this
research endeavor) and the TNDFSZA is that race tends to play some minor role in determining
the outcome of whether or not a defendant is charged with enhanced penalties.

Second, the data set used is missing one essential variable: prior criminal history.
Information about the prior criminal histories of drug defendants is more closely guarded than
other information regarding drug trials, as this information is often times considered
confidential or access to it is limited to those in the legal profession. Further, even with access
to criminal records, one must comb each individual defendant’s personal file to find this
information; with 2031 cases to look at, this would be an incredibly arduous and tedious task –
an endeavor that I was unable to undertake due to temporal, financial, and feasibility concerns.

However, a defendant’s prior criminal record has been shown to be an important factor
in explaining indictment and sentencing decisions and in accounting for sentencing disparity
(Spohn & Welch, 2006). With this in mind, it is possible to explain the correlation between race and enhanced penalties through this missing variable. Perhaps the model incorrectly assumed that a suspect was charged with enhanced penalties due to his race, when, in fact, the decision was based on the defendant’s prior criminal record. This must be considered a viable explanation until it is empirically disproven; it must enjoy the benefit of the doubt. Conversely, it is possible that even if the model were to control for prior criminal history, race would still be found as a significant predictor. According to data from the National Criminal Justice Reference Service, “after taking into account defendant criminal history and current offense seriousness, African-Americans were generally sentenced more harshly than whites” (MacKenzie & Mitchell, 2004). This seems to suggest that prior criminal history would not account for the weak but clearly existent association between race and enhanced penalties stemming from TNDFSZA prosecution. Without data on this all-important variable, I cannot place my complete confidence in the findings at hand, as both theories above must be considered valid until empirically proven or disproven.
CHAPTER 6: Implications for the Future

Further Research

The findings of the research at hand warrant a further, more in-depth investigation into this matter. These findings will not be persuasive enough to affect action until the data set is complete, with all the potential predictors accounted for. This means that prior criminal history must be included in future research if that research is to build on this project.

Further, looking into indictment patterns for more than just the past two years would shed more light on the situation. A longer period of time considered translates to more cases considered, which in turn translates into a more legitimate and accurate portrayal of the factors that influence a prosecutor’s decision to invoke enhanced penalties for certain drug defendants but not others. Of course, this also applies to considering DFSZ prosecutions in other major cities in Tennessee and throughout the US; the more, the better.

With the data set on hand, an interesting study could be conducted to test the hypothesis that black suspects are punished more harshly if they are arrested in a predominantly white neighborhood. Surely data exists on the racial housing patterns of Knoxville; if not, this data could feasibly be gathered. Because the data set in this research project includes arrest locations of most (if not all) defendants, this could become another predictor to test. A variable for “arrested in racially different neighborhood” could be operationalized to account for this phenomenon, with a value of 1 for yes and 0 for no.
Suggestions for Drug Free Zone laws

Several of the research teams mentioned in chapter 2 ("Review of Literature") also listed suggestions for further action that would limit the potential racial bias in drug prosecutions under DFSZ laws. Though these suggestions are not meant specifically for Tennessee or Knoxville, they certainly apply to both. The list of suggestions includes:

1. Reducing the protected or designated “school zone” (the specific recommended distance varied from 100 feet to 300 feet) (Turner);
2. Removing mandatory minimums for first time offenders;
3. Redefining the law so that only those who engage in drug activity that is directly tied to children in school zones (selling to children, in the presence of children, etc.) are eligible for enhanced penalties (Justice Policy Institute)

However, as with any proposed changes to existing statutes, there is worry that these types of changes will in effect remove the “bang” from this weapon in the War on Drugs.
References


