CAPITAL PUNISHMENT DECISIONS IN PENNSYLVANIA: 2000-2010
Implications for Racial, Ethnic and Other Disparate Impacts

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EXECUTIVE SUMMARY

Equity in the administration of justice is an overarching principle of the rule of law, yet, in Pennsylvania, where Blacks comprise less than 12% of the population, more than half of capital-sentenced offenders are Black. Thus, Blacks are highly disproportionately represented among those individuals who receive capital sentences in Pennsylvania, leading one to question whether this is the result of unwarranted disparity in the administration of the death penalty. Many studies around the country have looked at this question, but only Philadelphia's use of the death penalty has been the subject of study in Pennsylvania (Baldus, Woodworth, Zuckerman, and Weiner, 1997-98), the "Baldus study". Hence, our study breaks new ground by conducting the first statewide examination of potential death penalty case-processing in Pennsylvania.

A. Research Questions

Our primary research goal was to determine the impact, if any, a defendant's or a victim's race, ethnicity, or other social characteristics has on a prosecutor's decision to seek the death penalty; to retract it if sought; and the jury's or judge's decision to impose the death penalty. In addition, in previous studies (see, for example, Phillips 2009b), the type of defendant's legal representation has been found to affect death penalty case-processing, and we examine this issue as well.

It is important to note that time, resource, and data constraints did not permit us to measure possible bias at the beginning stages of the death penalty process – that is, the decision to stop, arrest, and charge a suspect in the first instance. At least one previous study (Levinson, 2009) has argued that implicit bias and pervasive stereotypes make discrimination and arbitrariness at these stages possible. Moreover, as discussed in more detail below, time and resource constraints also required us to limit our main analyses of disparity to only those cases that resulted in *convictions* for first-degree murder, noting that only those convicted of first-degree murder can receive the death penalty. We do however, present descriptive statistics on cases charged with any criminal homicide. These limitations must be kept in mind when reviewing the results set forth in this report, as we cannot say what disparities, if any, exist in the arrest and charging stages, or in cases that did not result in a first-degree murder conviction. These questions could be pursued in subsequent research.

B. Methods

We invested much time in research design and in compiling a strong and detailed data base. Ultimately, we decided to study murder cases initiated in the eleven-year period, 2000-2010, specifically case-processing decisions beginning with the prosecutors' charging decisions. We sought to identify each defendant charged with homicide and then follow them as they were processed through the criminal court system. We used three sources of statewide data. First, to identify all defendants arrested for homicide, we obtained data from the AOPC offender-based

tracking system (OBTS), which reports on all arrests and includes information on initial and final charge(s), conviction offense(s), and the age, race and gender of offenders as well as many other offender and case-processing variables. The data was further enhanced by reviewing each case through the web-based electronic docket system maintained by the AOPC. Second, we obtained the PCS data on the sentences imposed on defendants charged with homicide. The third statewide data source was provided by the DOC on all defendants convicted and sentenced to state prison. Merging these data sets allowed us to follow the sequence of decisions for cases from initial arrest and charging, to conviction or acquittal, and to sentencing and entry into the correctional system. Unfortunately, the data collected by the state agencies failed to provide crucial information on the offenses, such as the presence of one or more aggravating circumstances necessary for a murder to qualify as death-eligible. In addition, important information such as characteristics of the victim, the crime, and the type and quality of evidence were not available in the statewide data sets. Thus, while these data sets set the stage for a global view of homicide case-processing, they did not allow us to study, in detail, the capital case-processing decisions in which we were most interested.

We therefore built a model of the necessary data we wanted to collect, patterned after a well-known and high-quality study of the death penalty in Maryland by Paternoster and Brame (2008). We determined that the most complete single source of information was the District Attorney's office in each county, but time and financial limitations did not allow us to travel to each of the 67 counties to review files for each defendant accused of homicide in the Commonwealth during the period 2000-2010. While it was a difficult choice, we decided to limit our field data collection to offenders *convicted* of first-degree murder rather than all offenders, or a sample of offenders accused of homicide, and to the 18 counties with 10 or more first-degree murder convictions. However, since 87% of all first-degree murder convictions statewide in the subject time frame occurred in these counties, we believe these data provide a valuable and unprecedented empirical foundation for examining contemporary death penalty charging and sentencing in Pennsylvania.

C. Findings

The overview of our findings below represents conclusions based on our many multivariate analyses that controlled for (i.e., held constant) over 50 sets of legally relevant factors. These factors measure aggravating and mitigating circumstances, characteristics of the offense, victim behavior and relationship to defendant, issues raise by the defense, and evidence strength, as well as characteristics of the defendant.

- Prosecution
    - Black defendants were charged with, and convicted of, murder, and particularly of first-degree murder at higher rates than White defendants.

    - Prosecutors filed notices of aggravating circumstances in 39% of first-degree murder convictions and sought the death penalty in 36% of the cases.
    - In 47% of the cases in which a death penalty motion was filed, the motion was retracted.
    - The most common aggravating circumstances filed by prosecutors were that defendants: (1) "knowingly created grave risk of death" (15.5%), and (2) "committed [murder] in perpetration of a felony" (15.2%).
    - Black defendants had aggravating circumstances filed in 37% of the cases, while White defendants had aggravating circumstances filed in 43%.
    - No pattern of disparity to the disadvantage of Black or Hispanic defendants was found in prosecutorial decisions to seek and, if sought, to retract the death penalty.
    - No pattern of disparity to the disadvantage of Black defendants with White victims was found in prosecutorial decisions to seek or to retract the death penalty.
    - Prosecutors were 21% more likely to seek the death penalty in cases involving Hispanic victims than in cases involving White or Black victims.
- Defense
    - 31% of cases in which the death penalty was sought and not retracted resulted in the imposition of the death penalty.
    - Counsel for defendants at the death penalty sentencing trials primarily argued two mitigating circumstances: (1) age of defendant, and (2) no significant history of prior crime.
    - In 24% of the death penalty sentencing trials, no mitigating circumstance was argued.
    - Prosecutors were 7-8% less likely to file a death penalty motion against a defendant represented by a public defender, but the type of representation did not impact the retraction of a death penalty motion.
    - Defendants represented by privately-retained attorneys were 4-5% less likely to receive the death penalty, while defendants represented by public defenders were 5-7% more likely to receive the death penalty.
- Sentence
    - Juries, rather than judges, made the sentencing decision in 70% of death penalty trials.
    - Juries were more likely to impose the death penalty than judges.
    - No pattern of disparity was found to the disadvantage of Black or Hispanic defendants, relative to White defendants, in decisions to impose the death penalty.
    - Black defendants with White victims were not more likely to receive the death penalty than defendants in other types of cases.

- Defendants *of any race* with White victims were 8% more likely to receive the death penalty, while defendants with Black victims were 6% less likely to receive the death penalty.

- County Impacts
  - Prosecutorial decisions to seek the death penalty varied substantially among counties. Allegheny County prosecutors sought the death penalty less often than prosecutors in the other 17 counties in the field study.
  - Prosecutors retracted filings to seek the death penalty far more often in Philadelphia than in the other 17 counties in the field study.
  - Defendants in Philadelphia and Allegheny County were less likely to receive the death penalty than in the other 16 counties in the field study.
  - Defendants of all races and ethnicities in Philadelphia were less likely to receive the death penalty, regardless of the race or ethnicity of the victims, than the other 17 counties in the field study.
  - Defendants of all races and ethnicities with White victims in Allegheny County were less likely to receive the death penalty than in the other 17 counties in the field study.
  - Prosecutors in Allegheny County and Philadelphia were less likely to seek the death penalty against defendants with public defenders than prosecutors in the other 16 counties in the field study.
  - Defendants with public defenders were much less likely to receive the death penalty in Philadelphia, than their counterparts in the other 17 counties in the field study.

D. Conclusion

Our findings indicate that, net of legally relevant factors, between-county differences, the race of a victim, and the type of representation afforded to a defendant play more important roles in shaping death penalty outcomes in Pennsylvania than do the race or ethnicity of the defendant. These differences in the application of the death sentence can be more acute one way or the other, depending upon which county is conducting the prosecution.

Differences among counties in death penalty outcomes were the most prominent differences found in our study. Just as the likelihood of the various death penalty outcomes are locally variable, so too are the effects of other important variables, such as race of defendant and victim, and defense attorney. A given defendant's chance of having the death penalty sought, retracted, or imposed depends a great deal on where that defendant is prosecuted and tried.

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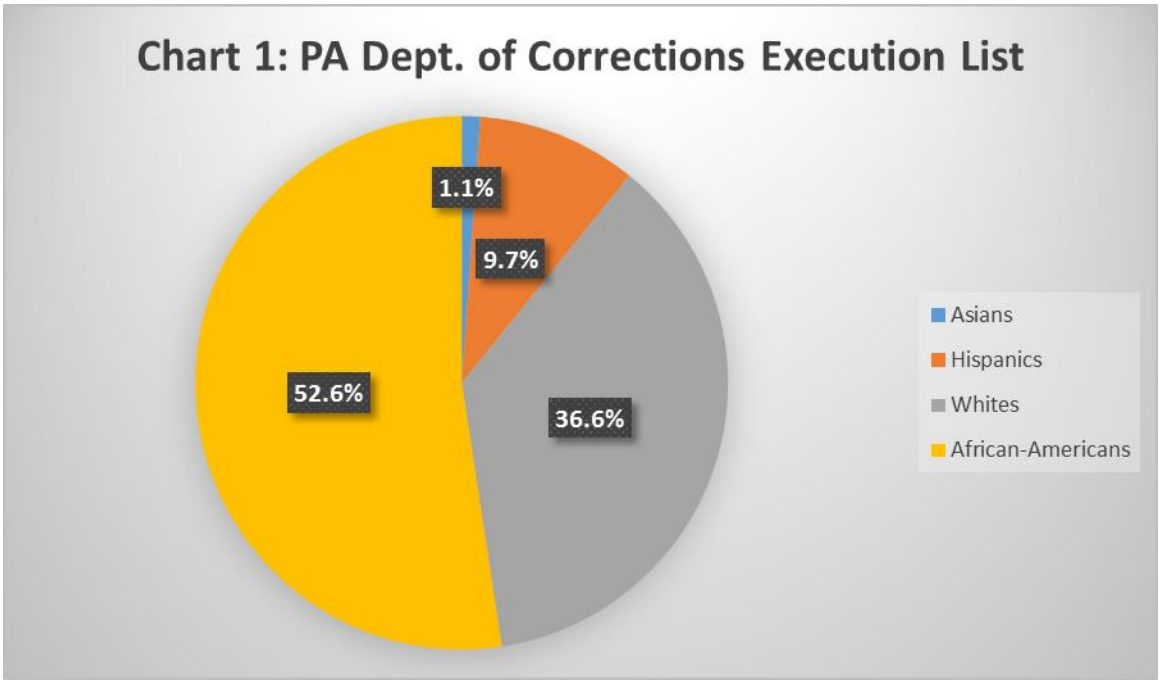
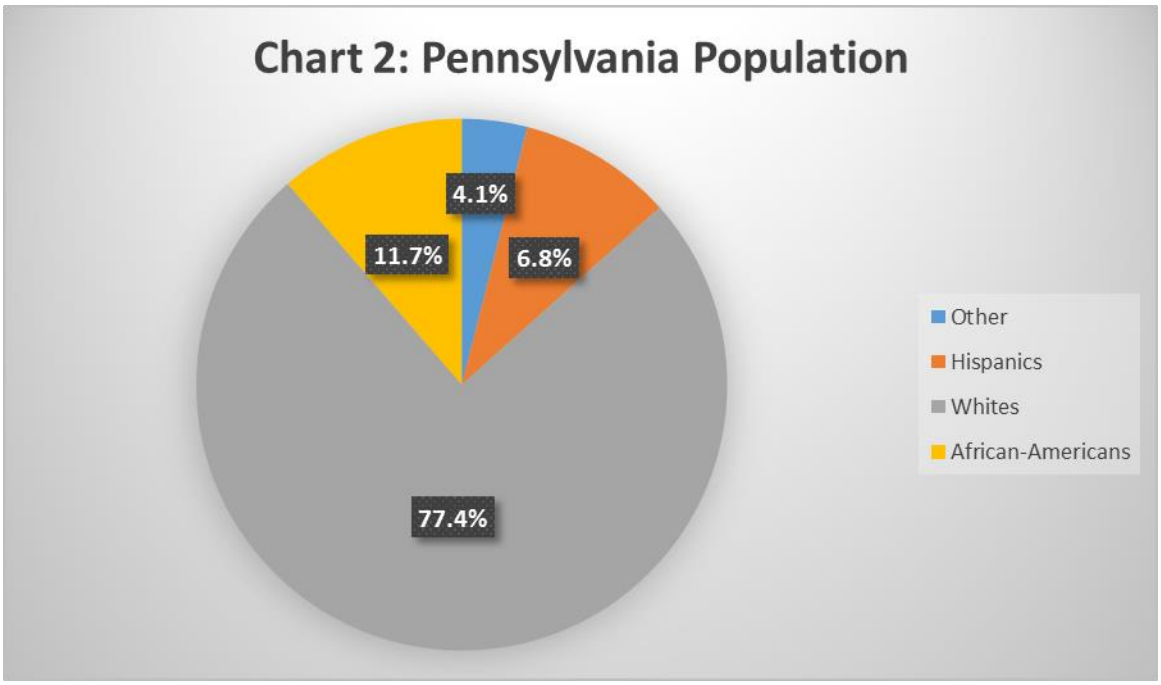
A. Background

According to the DOC,[1] as of December 1, 2016, there were two Asians (1.1%); seventeen Hispanics (9.7%); sixty-four Whites (36.6%) and ninety-two Blacks (52.6%) under sentence of death in Pennsylvania (see Chart 1 below). These proportions have changed little over time. By contrast, in 2015, Whites in Pennsylvania accounted for 77.4% of the overall state population, while the percentage of Blacks was 11.7%.[2] Hispanics accounted for 6.8% of Pennsylvania's population (see Chart 2 below). Thus, Blacks are highly overrepresented on Pennsylvania's death row relative to their proportion of the state population. If the number of Blacks under sentence of death were proportional to their presence in the population of Pennsylvania, there would be approximately 20 Blacks on death row. The actual number, 92, represents a more than four-fold overrepresentation. Our research challenge is to investigate this disproportionality in sentencing outcomes and develop an evidence-based explanation for it.

[1] Pennsylvania Department of Corrections, Persons Sentenced to Execution in Pennsylvania, December 1, 2016. Available at http://www.cor.pa.gov/General%20Information/Documents/Death%20Penalty/Current%20Execution%20list.pdf.

[2] U.S. Census Bureau, http://quickfacts.census.gov/qfd/states/42000.html as of July 1, 2015. Checked December 23, 2016.





This report details how we developed a research design to study whether the disproportionality of Blacks on death row is a result of discretionary decision-making by prosecutors, judges and juries; by the severity of the homicide offenses with which Blacks are

charged and convicted; or by other factors. Other research studies indicate that Blacks are disproportionately involved in homicide overall, relative to Whites and Hispanics in the United States (LaFree, Baumer, and O'Brien, 2010). Further, the Pennsylvania Uniform Crime Reports for 2010, the last year of our data collection, indicate that of the 552 arrests for murder, 92% were male and 68% were Black, with almost 52% of those under the age of 25. Thus, suspects arrested for murder in Pennsylvania are generally young, Black, and male. While this data does not break out the figures for first-degree murder, the only death-eligible offense in Pennsylvania, it does indicate the disproportionality of young Black males arrested for murders and consequently, their greater eligibility for the death penalty.

B. Research Questions

With the disproportionality of Blacks sentenced to death, the key research issue was to determine whether this disproportionality resulted from racial bias in decision-making, or whether legally relevant factors, such as the severity of the offense, prior record, and other appropriate sentencing factors, accounted for this disproportionality. We also address whether the type of legal representation a defendant receives plays a substantial role in the imposition of the death penalty.

More specifically, given the pool of those charged with murder, we sought to determine:

1) After accounting for relevant legal factors that indicate death-eligibility, did a defendant's or victim's race, ethnicity, or other characteristics predict the prosecutor's decision to seek death for first-degree murder charges, or to subsequently retract a filing to seek the death penalty?

2) After accounting for relevant legal factors in each case, did a defendant's or victim's race, ethnicity, or other characteristics predict the sentencing decision (life without parole or death)?

3) After accounting for relevant legal factors in each case, how did death penalty outcomes differ across counties?

4) After accounting for relevant legal factors in each case, did death penalty outcomes differ according to the type of legal representation a defendant had?

C. *Furman v. Georgia*

In *Furman v. Georgia*, 408 U.S. 238, decided in 1972, the United States Supreme Court articulated its concerns with unwarranted disparity in the administration of capital punishment. *Furman* struck down the death penalty in the forty death penalty jurisdictions, finding that Furman had been deprived of his constitutional rights. Specifically, the majority of the Justices ruled that the sentence of death was not unconstitutional, but the procedures and application of the death penalty across the states were unconstitutional in allowing for bias in its application against the poor, uneducated, mentally disabled, and minorities. The message to the states was that they needed to develop and implement procedures to ensure that the application of the death penalty would not be discriminatory against offenders because of their status.

Ultimately, in 1976, in *Gregg v. Georgia*, 428 U.S. 153 (1976), the United States Supreme Court upheld the constitutionality of Georgia's death penalty statute. In response to *Furman*, Georgia's new death penalty statute bifurcated the trial in death penalty cases to include separate proceedings to determine guilt and to determine the sentence after consideration of mitigating and aggravating circumstances. As under Pennsylvania's current statute, Georgia required the jury to find beyond a reasonable doubt that the offender had violated one of

specified aggravating circumstances. The Court found that this system of administration of the death penalty contained protections against unfair applications that were at the root of the *Furman v. Georgia* decision in 1972. It remains unclear whether the procedures approved in *Gregg v. Georgia* - and used in Pennsylvania - have reduced or eliminated these unwarranted disparities.

D. Theoretical Framework – Focal Concerns Theory

Focal concerns theory is an influential framework in the social science literature on sentencing, and criminal justice decision-making generally (Steffensmeier, Ulmer and Kramer, 1998; Kramer and Ulmer, 2009; see review by Ulmer, 2012). It also has recently been applied to studying the effect of race on death penalty decision-making (Jennings, Richards, Smith, Bjerregaard and Fogel, 2014). Focal concerns theory holds that decisions regarding the processing of alleged and convicted offenders draw on three key ingredients, or focal concerns, from which to make decisions. Specifically, Steffensmeier, et al. (1998) argue that criminal justice actors assess the blameworthiness (culpability) and dangerousness of the defendant, as well as the practical implications of their processing decisions. In part, the focal concerns model was developed from qualitative research involving scores of interviews with judges, prosecutors, and defense attorneys, and in part, through statistical research on sentencing under Pennsylvania's sentencing guidelines (see Steffensmeier, et al., 1998; Ulmer, 1997; Kramer and Ulmer, 2009). The focal concerns perspective argues that both legal and extralegal considerations can affect the assessment of defendants and cases in terms of the three focal concerns. It also specifies that status-linked attributions and stereotypes can sometimes shape decision-makers' assessments of defendant blameworthiness, dangerousness/rehabilitative potential, and/or practical contingencies and constraints, although they likely do so secondarily

to legally relevant factors (Kramer and Ulmer, 2009). Furthermore, the influence of social statuses like race, for example, may depend on the defendant's gender, age, or offense; criminal history; and especially local contexts.

In addition, a major theme in research on sentencing more generally is that courts resemble "communities" based on participants' shared workplace, interdependent working relationships among key sponsoring agencies, such as the prosecutor's office, judges, the defense bar, and the court's relation to its larger socio-political environment (Eisenstein, Flemming and Nardulli, 1988; Ulmer, 1997). Local courts develop distinctive formal and informal case processing and sentencing norms (see Eisenstein, et al., 1988; Ulmer and Kramer, 1998; Ulmer, 2005).

This literature argues that the use of and reliance on focal concerns tend to characterize courts and criminal case-processing decisions generally, but the meaning, relative emphasis and priority, and situational interpretation of the focal concerns is shaped by local court culture. This raises the possibility that stereotypes and biases based on race/ethnicity or other extralegal defendant characteristics can influence the sentencing process, *depending on whether the larger social context fosters such stereotypes and biases* (Kramer and Ulmer, 2009, see especially Figure 1, p. 10). Research in social psychology and criminal justice shows that implicit racial bias can indeed operate in contemporary criminal justice decision-making, including arrests, prosecution, and sentencing (see reviews by Devine, 2001; Harris, 2007).

Prosecutorial decisions as to whether to seek the death penalty and the jury's decision whether to impose the death penalty certainly consider the culpability of the defendants and their potential dangerousness. It is less clear whether practical issues, such as avoiding the costs of trials and appeals, or ensuring convictions by accepting pleas to lesser offenses or lesser

penalties, are considered in such serious offenses as death-eligible cases. Importantly, this means that we expect capital decisions to be made in reliance on these focal concerns, as they are filtered through the lenses of local decision-makers and the court community (Eisenstein, et al., 1988) within which they function. Jennings, et al., summarizing non-death penalty research supportive of the focal concerns framework, state:

> …young, Non-White males receive more severe sentences (Auerhahn, 2007; Spohn & Holleran, 2000) and are less likely to receive downward sentencing departures (Kramer & Ulmer, 2002) than defendants in other age/race dyads. In addition, research on victim attributes indicates that Non-White victims are perceived as partially responsible for their victimization given perceptions that crime and violence, in the form of victimization and offending, is normative in the lives of minorities (Baumer, et al., 2000).

Thus, the focal concerns theory highlights the complexity of decision-making, in that it indicates the importance of the characteristics of the offender, the victim, and the local normative culture within which decision-makers are elected or appointed. Each of these factors has been found to be important in processing potential death penalty cases, as we will highlight in the review of the literature below.

E. Prior Research

The focal concerns framework indicates the need to be sensitive to characteristics of the offender, the severity of the offense, characteristics of the victim and the local court culture. In fact, studies of potential death penalty cases have focused on the effect of the defendant's race, the victim's race, and interactions between defendant race and victim race, and their impact on the application of the death penalty. An early review of research on disparity in administration of the death penalty post-*Furman,* conducted by the General Accountability Office (1990), concluded that:

> The evidence for the influence of the race of defendant on death penalty outcomes was equivocal. Although more than half of the studies found that race of defendant influenced the likelihood of being charged with a capital crime or receiving the death

> penalty, the relationship between race of defendant and outcome varied across studies (U.S. General Accountability Office, 1990).

The GAO review, however, found that the race of the victim had a much stronger influence on outcome, concluding:

> In 82% of the studies, race-of-victim was found to influence the likelihood of being charged with capital murder or receiving a death sentence, i.e., those who murdered whites were found to be more likely to be sentenced to death than those who murdered blacks. This finding was remarkably consistent across data sets, states, data collection methods, and analytic techniques.

In the review of the literature that follows, we focus separately on the decision by prosecutors to file a motion to have the death penalty applied and on the decision by the judge or jury to impose the death penalty.

F. Prosecution Decisions: Seeking the Death Penalty

Race

Regarding the prosecutorial decision to move for the imposition of the death penalty, research has generally supported the notion that prosecutors are more likely to seek the death penalty in cases involving a White victim (Bowers and Pierce, 1980; Hindson, Potter and Radelet, 2006; Keil and Vito, 1995; Paternoster, Soltzman, Waldo, Chiricos, 1983; Paternoster, 1984; Paternoster, Brame, Bacon and Ditchfield, 2004; Radelet and Pierce, 1985; Songer and Unah, 2006; Williams, Demuth and Holcomb, 2007), and particularly when the defendant is Black and the victim was White (Keil and Vito, 1995; Lenza, Keys and Guess, 2005). For example, in their study of Missouri (1978-1996), Lenza, et al. (2005) found strong interactions between race-of-defendant and race-of-victim, with Black defendants who kill White victims five times more likely to be charged with capital murder than Black defendants who kill Black victims.

Not all research, however, finds prosecutors more likely to move for the death penalty when the victim is White. In their review of the federal processing study by Kentucky, Berk, Li and Hickman (2005), Vito, Higgens and Vito (2014) did not find prosecution decisions affected by the race of the victim. For example, Vito, et al.'s study of Kentucky death-eligible homicide cases from 2000-2010 (n=359) did not find that prosecutors were more likely to seek the death penalty when the defendant was Black and the victim was White. A very rigorous study by Unah (2011) found a sharp contrast to bias against minorities by prosecutors. Unah's study of North Carolina prosecutors' decisions to seek the death penalty (1993-1997) found that when prosecuting a case with a non-White defendant and a White victim, the prosecutor was 10% less likely to seek the death penalty than when a White defendant killed a White victim. Unah concluded "…racial disparity does not reside in the prosecutorial stage…" (Unah, 2011:13).

Plea Agreements

Another potentially important variable in prosecutorial processing of cases is whether the prosecutor agrees to a plea bargain. There has been only one study that we could locate that examined plea bargain acceptances. In their Kentucky study, Vito, et al. (2014) found that "…black offenders charged with killing a white victim were much less likely to benefit from a plea in a capital case" (p. 763).

Victim Social Class

An additional interesting study by Phillips (2009(a)) focused on the effect of socio-economic status of victims on the likelihood of prosecutors seeking the death penalty and its imposition. Phillips (2009(a)) used data from cases indicted for capital murder in Harris County, Texas from 1992-1999 (n = 504). He found that prosecutors were more likely to seek the death penalty, and the death penalty was more likely to be imposed, on defendants who were accused

of killing victims of higher socio-economic status. Unah's (2011) more detailed study of North Carolina examined defendant and victim education as his measure of social class. He found that defendant education did not affect the prosecutor's decision to move for the death penalty, but the victim's education was important, such that prosecutors were more likely to seek the death penalty when the victim had higher education. [3]

Size of Judicial District

Several studies found that the size of a judicial district is an important factor in the frequency with which the death penalty is sought, but these findings are contradictory across the studies. In their study in South Carolina, Songer and Unah (2006) found prosecutors in rural judicial districts were much more likely to seek the death penalty. But in stark contrast to this finding, Poveda (2006) found that prosecutors in smaller (i.e., generally rural) jurisdictions in Virginia were least likely to seek the death penalty. In Maryland, Paternoster and Brame (2008) studied the universe of first- and second-degree murders examining whether the case was death eligible (at least one aggravating factor was present) and whether the facts established the offense was a first-degree murder. They found that prosecutors were much more likely to seek the death penalty in suburban counties than in inner cities. The important point for our purposes here is that there is empirical support for the proposition that prosecutorial decisions about the death penalty vary among courts and jurisdictions.

[3] The issue of defendant and victim gender has been found to be an important variable in the decision by prosecutors to seek the death penalty. Studies generally conclude that female defendants are less likely to be prosecuted for the death penalty (Jennings, et al., 2014). Moreover, studies (Vito, Higgins and Vito (2014); Lenza, et al., 2005; Williams, et al, 2007; and Royer, et al. 2014; Songer & Unah, 2006) have all found that offenses involving female victims are more likely to result in prosecution for the death penalty. For example, a recent study by Vito, et al. (2014) of death-eligible offenders in Kentucky from 2000-2010 found that prosecutors were 3.17 times more likely to seek the death penalty when the victim was female.

Type of Legal Representation

Unfortunately, death penalty research has generally failed to focus on the type of legal representation of defendants in the analysis of prosecutorial decisions. One exception is Phillips (2009(b)), in his study of Harris County, Texas. He found defendants who hired legal counsel, as opposed to having assigned counsel (there is no public defender system in Harris County), dramatically affected the outcomes of potential death penalty cases. Defendants with privately-retained counsel had a greater probability of obtaining a negotiated plea, compared to defendants with court-assigned counsel. Another is Unah (2011) who analyzed death penalty outcomes, examining whether the defense attorney was privately-retained or a public defender. He found that defendants with public defenders were 22% more likely to be prosecuted for the death penalty than defendants with privately-retained attorneys.

G. Death Penalty Sentences

Race

The primary research focus has been on which defendants receive capital sentences. A considerable body of research has found that Black defendants who are convicted of killing White victims are the most likely to receive the death penalty (Bowers and Pierce, 1980; Gross and Mauro, 1984; Holcomb, Williams and Demuth, 2004; Keil and Vito, 1995; Lenza, et al., 2005; Paternoster and Brame, 2008; Unah, 2011; Williams, Demuth and Holcomb, 2007). The re-analysis by Williams, et al. (2007) of the 1970's Georgia data compiled by Baldus and Woodworth (1990) found that cases involving Black male offenders with White victims were treated most severely, while Black offenders with Black victims were treated most leniently among the interactions of race-of-defendant and race-of-victim. In their very in-depth study of Maryland, Paternoster and Brame (2008) found defendants with White victims were six times

more likely to receive the death penalty. Unah's (2011) study in North Carolina found that cases with non-White defendants and White victims were 8% more likely to receive the death penalty, despite controls for aggravating and mitigating circumstances.

In contrast, other research has failed to find a race-of-defendant/race-of-victim effect. Specifically, research by Blankenship and Blevens (2001); and Jennings, et al. (2014) in North Carolina; and Baldus, Woodworth, Grosso, and Christ (2002-2003) in Nebraska did not find a Black defendant/White victim effect. The Jennings, et al. (2014) study has important analytical implications for our current study. That study analyzed North Carolina capital murder trials held between 1977 and 2009, using a propensity score matching approach (similar to what we use in our analysis as described later), and found results that conflicted with the findings of Unah (2011), who used somewhat different data sets and logistic regression analysis. While it is not certain whether the analytical strategy or the differences in the data sets resulted in contrasting outcomes, the use of stronger matching capability under propensity score matching may well be the key factor.[4]

[4] Research has also focused on gender. Jennings, et al. (2014), in their analysis of the North Carolina capital murder trials data between 1977 and 2009, found that female defendants were much less likely to receive the death penalty, even when matching cases. Additionally, in Unah's (2011) study of North Carolina death penalty decisions, cases involving female victims were significantly more likely to receive a death sentence, controlling for seriousness of the offense and aggravating and mitigating circumstances. Other studies (Lenza, et al., 2005); Holcomb, et al., 2004(a) have supported the Jennings study's findings. Using data from Georgia collected by Baldus and colleagues (1983), Holcomb, et al. (2004a); Williams et al. (2007) found that defendants convicted of killing White females were 14.5 times more likely to receive the death penalty than similarly situated offenders accused of killing Black males. Importantly, these researchers and research by Royer, et al. (2014) both found that the pronounced likelihood of accused killers of White females being sentenced to death was explained by the sexualized nature of the victimization surrounding such homicides.

Type of Legal Representation

There have long been concerns with the quality of legal representation in capital cases. Unfortunately, death penalty research to date has generally failed to include this variable in the analysis. However, Lenza, et al. (2005) examined types of legal representation and found that defendants represented by public defenders were more likely to receive the death penalty than defendants who had assigned or privately-retained counsel. Phillips (2009(b)) study of Harris County, Texas focused on the impact of type of legal representation, but Harris County did not have a public defender system, so the comparison was between privately-retained and court-assigned legal counsel. Phillips found that privately-retained legal counsel dramatically affected the outcomes of potential death penalty cases. Specifically, he found that defendants with privately-retained counsel had greater probability of an acquittal and they were more likely to obtain a negotiated plea. Ultimately, no defendant in his study who retained private counsel was given a death sentence.

Anderson and Heaton (2012) took advantage of naturally occurring random assignment of indigent clients to either public defenders or court-appointed private attorneys in Philadelphia to study the effect of type of representation on case outcomes. One in five indigent murder defendants are randomly assigned by the court to public defenders and the rest are assigned to court-appointed private attorneys. While this study does not include cases involving defendants who are represented by privately-retained attorneys, it does provide significant insights into the importance of type of counsel for indigent clients. Anderson and Heaton found that defendants with Philadelphia public defenders had a reduced conviction rate and significantly lower sentence severity compared with defendants represented by court-appointed attorneys. This study points to the potential significance of type of representation in our analysis.

H. Type of Analysis

Our review of previous research raises the question of what type of analysis is most appropriate for studying the research questions in this study. In their initial analysis using standard logistic regression, Paternoster and Brame (2008) found a victim/race effect in prosecutors' decisions to file death penalty motions. However, the analysis by Berk, et al. (2005) of these same data, using a newer statistical approach, did not find such a victim/race effect. Paternoster, et al. (2008) subsequently re-analyzed their own data using even more refined statistical models (propensity score weighting) and found that prosecutors were 2.3 times more likely to file death penalty motions in cases with White victims than with Black victims, thereby reconfirming their original findings. Earlier, we noted the re-analysis by Jennings, et al. (2014) of the North Carolina death penalty data, which used a propensity score matching approach. While the original North Carolina analysis used traditional logistic regression analysis and found a White victim effect, the re-analysis by Jennings, et al., using propensity score weighting/matching analysis, did not find such an effect.

In general, however, there is evidence that more rigorous methodologies, such as those we employ later in our study, tend to produce smaller estimates of effect sizes, suggesting that less rigorous methods are less able to rule out alternative explanations or to identify "true" effects (Mihalic and Elliott, 2015; Lattimore, MacKenzie, Zajac, Dawes, Arsenault and Tueller, 2016; Weisburd, Lum and Petrosino, 2001). This is to say that stronger methods may produce a more accurate picture of the relationship between variables in studies such as the current one. Consequently, we analyzed the data using both approaches to see whether the propensity weighting/matching approach provided a different view of the processing of death penalty cases.

I. Pennsylvania Research on the Death Penalty

Prior to this study, in Pennsylvania there was only one study of decision-making in the application of the death penalty and another study consisting of interviews with jurors in capital trials. Professor David Baldus and his colleagues (Baldus, Woodworth, Zuckerman, and Weiner, 1997-98) studied death penalty case-processing decisions from 1983-1993 in Philadelphia. In their sample of death penalty cases, they included all cases sentenced to death, 80% of those cases that went to a penalty trial but received a life sentence and 60% of the cases that were first-degree murder cases and they identified as being death eligible (one or more aggravating circumstances were present). They found that 40% of all cases they identified as death penalty-eligible did not proceed to a death penalty trial. Interestingly, they found that "…53% of the pleas are to life without the possibility of parole (first-degree murder), 18% are to second-degree murder, which is also without parole, and 29% are to third-degree murder, which offers the possibility of parole when the minimum is served" (Baldus, et al., 1997-98: 1646, footnote 12). Another interesting finding in the Baldus, et al. (1997-1998) study concerned cases in which the defendant waived a jury trial in favor of a trial by judge. Typically, while the prosecutor has the discretion to seat a penalty trial jury if the defendant is convicted of first-degree murder before the judge, prosecutors rarely do so. For those cases sentenced by a judge, the Baldus study reported that the risk of receiving the death penalty was much lower than in cases sentenced by a jury. The study (1647) found that four of 41 (9.75%) defendants sentenced by judges in sentencing trials received the death penalty, compared with 114 of 384 (29.7%) defendants who were sentenced by juries. Pennsylvania law requires only one juror to find that a mitigating circumstance applies. However, the Baldus study found that in 55% (63/114) of the jury-sentenced death penalty cases, the jury did not find any mitigating circumstances, thus resulting

in a mandatory death penalty if the jury finds an aggravating circumstance. If the jury finds mitigating and aggravating circumstances, it must determine whether the balance between mitigating and aggravating circumstance favors aggravation or mitigation. The Baldus study found that in 22% (51/231) of these kinds of balancing cases, the jury reached a decision to impose a death sentence.

The Baldus study also found that the race of the defendant is "…a substantial influence in the Philadelphia capital charging and sentencing system, particularly in jury penalty trials" (Baldus, et al., 1997-1998: 1714). Regarding race-of-victim, the study did not find a race-of-victim effect in the prosecution's decision to move for the death penalty, but did find that cases with Black victims were less likely to have the death penalty motion retracted. Regarding death penalty verdicts, the Baldus study concluded that if the victim is not Black, the jury is more likely not to find mitigation in the case and therefore, to sentence the defendant to death. Further, in their analyses, Baldus, et al. (1997-1998) examined the socio-economic status of victims and found that it affects both prosecutorial decisions and jury decisions, such that cases with low socio-economic status victims are less likely to be prosecuted for the death penalty and, if prosecuted for the death penalty, are less likely to receive the death penalty. These findings provide an important context for the current study and whether our examination of capital case-processing in 18 counties corroborates these findings.

The Baldus study finding that race-of-victim and race-of-defendant were particularly strong in jury decisions raises questions as to why this might have been the case. In a 2003 study of Pennsylvania capital cases, Professor Wanda Foglia, interviewed 74 jurors who participated in 27 death penalty trials. Forty-three of those interviewed were jurors in cases in which the defendants were sentenced to death, and 31 were jurors in cases where the defendants were

sentenced to life without parole. Foglia found that most of the jurors whom she interviewed misunderstood the law of capital sentencing. They often based their decisions on the erroneous assumption that the defendant would be released after a term of years if given a life sentence. They also failed to understand jury instructions regarding mitigation in their deliberations. Foglia found that jurors who assumed that defendants given a life sentence would serve 15 years or less in prison were much more likely to vote for the death penalty. While these findings were based on different cases than those included in the Baldus study, they do reinforce the notion that jurors' ignorance of the law could result in their reliance on their perceptions of the risk posed by the defendant and the defendant's culpability. Such perceptions may well drive jurors to focus on victim characteristics in their decisions, rather than the evidence before them.

J. An Overview of the Pennsylvania Death Penalty System

The Pennsylvania death sentencing system consists of a prosecutorial, defense, and judicial decision-making system in each of the state's 67 counties. Pennsylvania's homicide statute provides for three grades of murder: first-degree murder is defined as "an intentional killing" (18 Pa.C.S. § 2501(a)), with possible penalties of death or life without parole; second-degree murder is defined as "homicide …when it is committed while defendant was engaged as a principal or an accomplice in the perpetration of a felony" (18 Pa.C.S. § 2502(b)), with a mandatory penalty of life without parole; and third-degree murder is defined as "…all other kinds of murder" and is graded as a first-degree felony, with a maximum penalty of 40 years.

In order to be classified as death-eligible under an offense that meets the statutory requirement that it was an "intentional killing", one of 18 aggravating circumstances listed in Title 42 § 9711(d), must be present and provable beyond a reasonable doubt. These circumstances are:

1. The victim was a firefighter, peace officer, public servant concerned in official detention, as defined in 18 Pa.C.S. §5121 (relating to escape); judge of any court in the Unified Judicial System; the Attorney General of Pennsylvania; a deputy attorney general; district attorney; assistant district attorney; member of the General Assembly; Governor; Lieutenant Governor; Auditor General; State Treasurer; State law enforcement official; local law enforcement official; Federal law enforcement official or a person employed to assist or assisting any law enforcement official in the performance of his duties, who was killed in the performance of his duties or as a result of his official position.
2. The defendant paid or was paid by another person, or had contracted to pay or be paid by another person, or had conspired to pay or be paid by another person, for the killing of the victim.
3. The victim was being held by the defendant for ransom or reward, or as a shield or hostage.
4. The death of the victim occurred while defendant was engaged in the hijacking of an aircraft.
5. The victim was a prosecution witness to a murder or other felony committed by the defendant and was killed for the purpose of preventing his testimony against the defendant in any grand jury or criminal proceeding involving such offenses.
6. The defendant committed a killing while in the perpetration of a felony.
7. In the commission of the offense, the defendant knowingly created a grave risk of death to another person in addition to the victim of the offense.
8. The offense was committed by means of torture.

9. The defendant has a significant history of felony convictions involving the use or threat of violence to the person.
10. The defendant has been convicted of another Federal or State offense, committed either before or at the time of the offense at issue, for which a sentence of life imprisonment or death was imposable, or the defendant was undergoing a sentence of life imprisonment for any reason at the time of the commission of the offense.
11. The defendant has been convicted of another murder committed in any jurisdiction and committed either before or at the time of the offense at issue.
12. The defendant has been convicted of voluntary manslaughter, as defined in 18 Pa.C.S. § 2503, or a substantially equivalent crime in any other jurisdiction, committed either before or at the time of the offense at issue.
13. The defendant committed the killing or was an accomplice in the killing, as defined in 18 Pa.C.S. §306(c) (relating to liability for conduct of another; complicity), while in the perpetration of a felony under the provisions of the Act of April 14, 1972 (P.L. 233, No.64), known as the Controlled Substance, Drug, Device and Cosmetic Act, and punishable under the provisions of 18 Pa.C.S. §7508 (relating to drug trafficking sentencing and penalties).
14. At the time of the killing, the victim was or had been involved, associated or in competition with the defendant in the sale, manufacture, distribution or delivery of any controlled substance or counterfeit controlled substance in violation of the Controlled Substance, Drug, Device and Cosmetic Act or similar law of any other state, the District of Columbia or the United States, and the defendant committed the killing or was an accomplice to the killing as defined in 18 Pa.C.S. §306(c), and the

killing resulted from or was related to that association, involvement or competition to promote the defendant's activities in selling, manufacturing, distributing or delivering controlled substances or counterfeit controlled substances.

15. At the time of the killing, the victim was or had been a nongovernmental informant or had otherwise provided any investigative, law enforcement or police agency with information concerning criminal activity, and the defendant committed the killing or was an accomplice to the killing as defined in 18 Pa.C.S. §306(c), and the killing was in retaliation for the victim's activities as a nongovernmental informant or in providing information concerning criminal activity to an investigative, law enforcement or police agency.
16. The victim was a child under 12 years of age.
17. At the time of the killing, the victim was in her third trimester of pregnancy or the defendant had knowledge of the victim's pregnancy.
18. At the time of the killing, the defendant was subject to a court order restricting in any way the defendant's behavior toward the victim pursuant to 23 Pa.C.S. Ch. 61 (relating to protection from abuse or any other order of a court of common pleas or of the minor judiciary designed in whole or in part to protect the victim from the defendant.

The process can be divided into nine steps:

(1) Homicide occurs;

(2) Homicide recognized by authorities;

(3) Case investigated by law enforcement and facts discovered/generated;

(4) Homicide suspect identified and arrested;

(5) Prosecution charges first-degree murder;

(6) Prosecution indicts for first-, second-, or third-degree murder;[5]

(7) If indicted for first-degree murder, prosecution decides whether to seek death penalty;

(7) Prosecution and defense unable to reach plea agreement;

(8) Defendant convicted of murder at trial by judge or jury;

(9) If convicted of first-degree murder, and prosecution has filed a motion for the death penalty, the sentencing authority (either the jury or judge) must decide on whether defendant deserves death penalty on basis of finding either (a) existence of aggravating circumstances and no mitigating circumstances or (b) aggravating circumstances outweigh mitigating circumstances.

The following are the current mitigating circumstances that may be presented by the defense during the sentencing phase of the first-degree murder trial:

(1) The defendant has no significant history of prior criminal convictions.

(2) The defendant was under the influence of extreme mental or emotional disturbance at the time of the commission of the murder.

(3) The capacity of the defendant to appreciate the criminality of his conduct or to conform his conduct to the requirements of law was substantially impaired.

(4) The age of the defendant at the time of the crime.

(5) The defendant acted under extreme duress, although not such duress as to constitute a defense to prosecution under 18 Pa.C.S. §309 (relating to duress), or acted under the substantial domination of another person.

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[5] Notice of Aggravating Circumstances has been required by order of the Supreme Court of Pennsylvania beginning in 1989.

(6) The victim was a participant in the defendant's homicidal conduct or consented to the homicidal acts.

(7) The defendant's participation in the homicidal act was relatively minor.

(8) Any other evidence of mitigation concerning the character and record of the defendant and the circumstances of his offense.

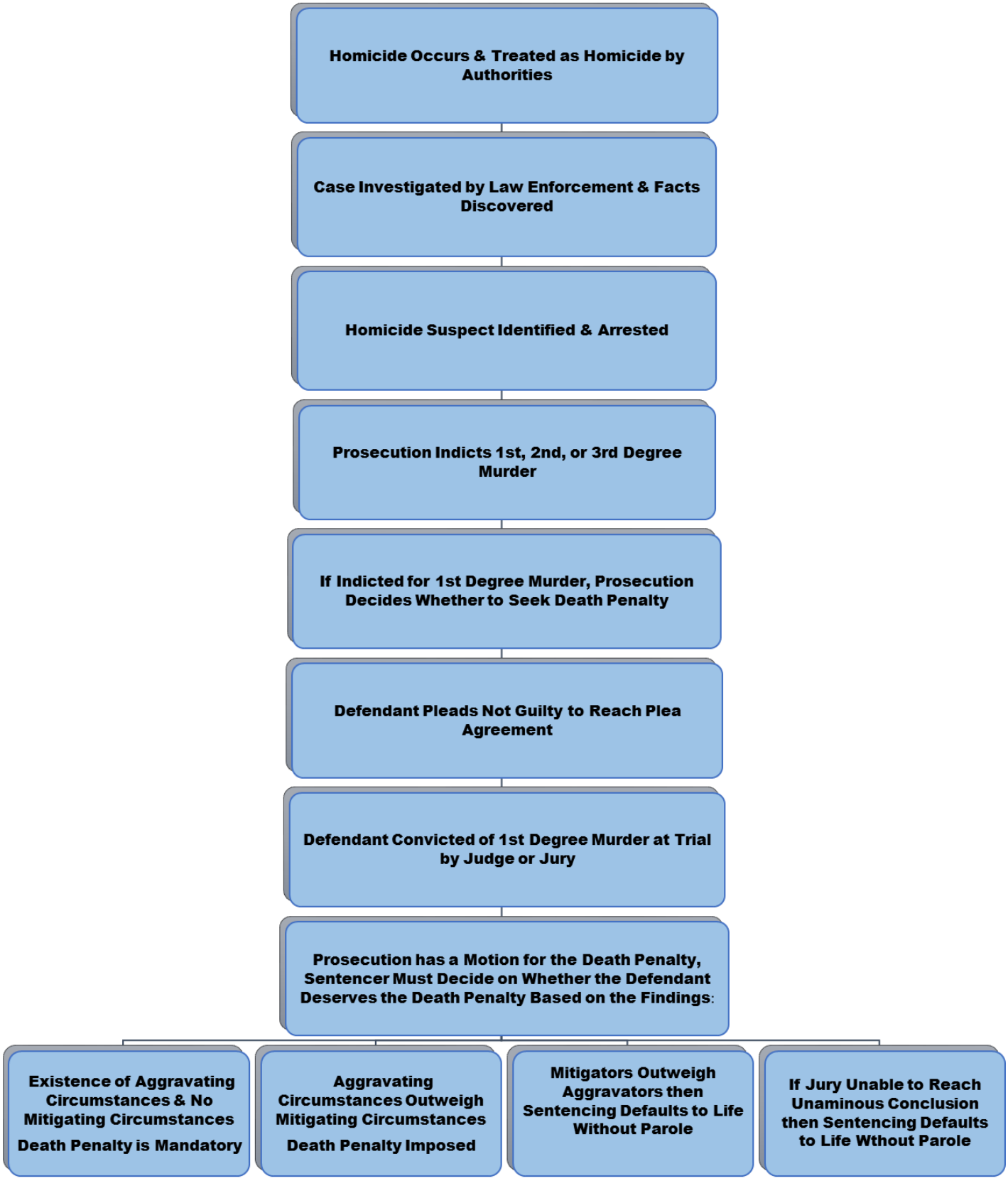
At each stage in the process, some attrition occurs and the universe of cases that could result in a death sentence narrows. By the end of the process, the number of individuals actually sentenced to death is a very small fraction of the number of people who commit a homicide. For this study, the focus is on those offenders who are potentially death-eligible because they have been convicted of first-degree murder. From among that class of offenders, some cases may have one or more aggravating circumstances, and prosecutors may file a motion to impose the death penalty on that basis. This sets in motion another series of decisions, including whether the prosecution will retract the motion for the death penalty and, if the motion is not retracted, whether the case will proceed to trial, and if convicted, whether the jury or judge will decide whether the death penalty is warranted.

The system contains numerous points at which discretion may be exercised by prosecutors, judges and juries to exclude individual death-eligible cases from the risk of a death sentence. This can result from the plea agreement process, in which prosecutors agree to reduce a first-degree murder indictment to a lesser murder charge, or to waive the death penalty as part of a plea agreement. It can also result from the court acquitting the defendant on the first-degree charge during the trial phase, or the judge or jury sentencing the defendant to life imprisonment in the penalty phase. Life without parole sentences can also result from a death sentence being reversed on appeal.

In the cases that advance to a jury penalty trial, a death sentence will be imposed in two different circumstances. First, if the sentencing authority finds one or more statutory aggravating circumstances present and no mitigating circumstances present, a death sentence is mandatory. A death sentence also will be imposed if the sentencing authority finds one or more aggravating circumstances and mitigating circumstances present, but concludes that the aggravating circumstances outweigh the mitigating circumstances. Finally, if the mitigating circumstances outweigh the aggravating circumstances, or if the sentencing authority finds no aggravating circumstances, or if a jury is unable to reach a unanimous conclusion (a "hung jury"), then sentencing defaults to life without parole. This process is flowcharted below in Chart 3.

Having reviewed some of the fundamental literature and contextual background on disparity in death sentencing both nationally and in Pennsylvania, we move next to a detailed discussion of the methods we used to collect and analyze the data for the current study.

Chart 3: Flow of Death Penalty Cases



Chapter II: Research Methods

To answer the research questions posed in Chapter I, we required extensive information on the offense, processing decisions, defendant characteristics, and victim characteristics. Specifically, we needed to be able to identify all offenders accused of homicide who were death-eligible by virtue of the fact that the offense qualified for first-degree murder, with at least one aggravating circumstance present. In addition, we needed information on potentially relevant factors that might be considered by the prosecution, judge, and jury in making the decision as to whether the appropriate punishment should be the death penalty. Building this data set was challenging and took several years to accomplish. Below, we first detail the need to identify a time frame for the study and then we review the data available from state agencies.

A. Time Period of Study

We faced three main considerations in determining an appropriate time frame for our study. First, the research questions focused on fairness and equity in the *current* administration of the death penalty, and therefore, it was imperative that we study the most current processing of potential death penalty cases possible at the time we began the study. Second, we needed a time period that provided a sufficient number of cases to allow for valid statistical analysis.

When we started planning the study in 2010-2011, we anticipated completing the study in late 2013. This meant that we needed to select an end date for the sample at least two years before the end of our data collection to allow for cases to reach the sentencing stage. Therefore, to capture the most recent cases possible, we selected 2010 as the end date for prosecution of homicide cases, so that the prosecution of the case would be completed well before the anticipated time period when we would be analyzing the data. As we later discovered, a few cases started in 2010 did not reach trial until late in 2014. Due to delays in data collection, however, we were able to see these cases through to sentencing.

A second, related issue we faced was to determine the case year in which to begin our sampling. A factor that helped us in this decision was a 1998 change in the law that raised the statutory maximum term of incarceration for third-degree murder from 20 to 40 years. Prior to this change, third-degree murder was a first-degree felony with a maximum sentence of 20 years. We discussed the potential impact of this change on case-processing with numerous county prosecutors, several of whom indicated that the change in the law had increased the possibility that prosecutors would accept guilty pleas to third-degree murder in cases charged as first- or second-degree murders. The prosecutors indicated that, prior to the change, they were very reluctant to accept a plea to third-degree murder with a maximum penalty of only 20 years, because this suggested that third-degree murder was equivalent to other felonies, such as robbery, aggravated assault and burglary of an occupied home. Thus, after factoring in the processing of cases with charges that were committed prior to the change in the sentencing law, we estimated that the year 2000 would be an appropriate year to start with, since by then, the new law would have applied to almost all cases being prosecuted. Thus, the sentencing change in 1998 was a watershed event that demarcated the contemporary status quo in capital sentencing practices in Pennsylvania, and therefore, served as a logical point in time to begin our analysis.

Another issue that influenced the decision regarding the appropriate time frame was the need for a sufficient number of cases to conduct a valid statistical analysis. To help us anticipate the number of cases in which the death penalty was imposed over the 2000-2010 time period, we asked the DOC for the number of offenders who had been incarcerated in their facilities in that eleven-year time period (2000-2010). The DOC indicated that 61 capital offenders had been incarcerated since the year 2000. In order to estimate the number of death penalty trials that took place during that period, we drew on the aforementioned Baldus study, which found that

approximately 25% of those for whom the death penalty was sought, received the death penalty. Assuming that such proportions were still applicable, we estimated that approximately 240 death penalty trials would have taken place during that period. We concluded that these were sufficient numbers on which to conduct our statistical analysis. Thus, we determined that the eleven-year time frame of 2000-2010 would provide a large enough pool of death-eligible offenders to result in a strong and reliable statistical analysis. While reaching back further in time to begin our case analysis would have yielded a larger number of cases, it also would have reduced the study's relevancy for contemporary capital sentencing practices, as discussed above.

B. Data Sources

Set forth below is our review of the secondary data sets that establish the basis for our field data collection effort. Based on our review of the DOC and PCS information, we estimated that approximately 60 offenders received the death sentence during this time frame, and another 1,200 offenders received a life sentence, with the vast majority of these life sentences imposed for first-degree murder. We concluded that these sample sizes would be statistically adequate to examine the decision to seek the death penalty, as well as the decision to sentence the defendant to death.

AOPC Data

The first significant challenge for the study at this stage was identifying sources of data on all death-eligible offenders across the Commonwealth. The only available statewide data set on offenders prosecuted in Pennsylvania's criminal justice system resides with the AOPC. The data compiled by the AOPC begins with police officers filing a Police Incident Report for all cases entering the court system. This data ultimately ends up in the Common Pleas Case Management System (CPCMS). The CPCMS includes demographic characteristics of the

defendant, the offense(s) the defendant is alleged to have committed, and the type of legal representation, as well as identifiers such as offense tracking number, state identification number, and the case docket number. The CPCMS data identifies all offenders alleged to have committed a homicide, including inchoate (attempted) offenses. Importantly, the data does not provide information that would have allowed us to identify death-eligible defendants that are central to this study.

This data set originates in each of 540 Magisterial District Courts, the 25 Philadelphia Municipal Courts, and the 12 Pittsburgh Municipal Courts. Due to the large amount of data being entered into the computer system by many different individuals at varying stages of the criminal justice process, it was necessary to verify the accuracy of the information whenever possible. The CPCMS data often has missing information on important variables, such as the defendant's race and the specific conviction offense. Despite these problems and concerns, we used this source of data to identify cases entering the criminal justice system and as the starting point for our study. We were fortunate that the AOPC was very helpful in providing the necessary data from its files, as absent that information, we would have not been able to conduct the study.

PCS Data

The PCS provides guidelines for all felony and misdemeanor sentences in the Commonwealth. However, it does not provide guidelines for sentences for either first- or second-degree murder offenses because the only sentencing decision in these cases is life in prison or death for first-degree murder convictions, and life in prison for second-degree murder convictions. During the implementation of the guidelines, the PCS did not request that courts submit guideline sentence forms for first- or second-degree murder. However, in the late 1990s,

the PCS decided that it was important to obtain this information and requested submission of guideline forms for those two degrees of murder. While PCS has no authority to enforce the submission of the forms, courts across the Commonwealth did submit information on these offenses during the 2000-2010 time frame we chose for our study. The data on convictions reported to the PCS enhanced the AOPC data by providing information on defendants' criminal history, as well validating the information contained in the AOPC data. However, the PCS data did not include information related to whether offenders were death-eligible as a consequence of the presence of at least one of the statutory aggravating circumstances, though it did provide criminal history, which speaks to one of the aggravating circumstances.

We obtained PSC data for sentences imposed during the period 2000 through 2014, which is the most recent data available to supplement and verify the AOPC data. The website for the full data compiled by the PCS on each sentenced defendant is available at: http://pcs.la.psu.edu/data/documentation/code-books/sentencing-data/sgs-web-data-code-book-2001-2011/view.

DOC Data

The DOC collects information on all offenders incarcerated for homicide. The data includes IQ, defendant psychological assessments, offense description provided by the offender, as well as demographic information that expanded our data on offenders. The DOC data also allowed for checking the accuracy of information from the AOPC and the PCS data files. In 2012, we requested and received this data from the DOC on all offenders incarcerated in the system for first-, second-, and third-degree murders during the period of 2000 through the date of the request. DOC provided the information on the 2400 cases in narrative form. During that summer, we created a coding form and codebook, and trained a team of coders to code each of

the cases into our data set. Because cases initiated in 2010 may not have resulted in convictions by 2012, we requested an update in May of 2014 on all new admissions, since the initial request and this information was entered into our data set during June of 2014. We subsequently requested another follow-up for additional cases in 2015.

C. Identifying Eligible Cases

One of the most challenging issues we faced in making our case-selection decision was due to Pennsylvania's practice of initiating homicide prosecutions by charging each defendant with general criminal homicide. This made it very difficult to distinguish "death-eligible" cases, which are central to our study, from those that are not death-eligible. This means that the particular class of cases we wished to study was embedded in a much larger pool of cases that could include any of the various degrees of murder or manslaughter. As a result, we determined that the simplest solution was to sample only cases with a first-degree murder *conviction*, as representative of cases that were potentially death-eligible. However, we had several concerns with limiting our sample to such cases. First, we knew that one decision for the prosecution is whether to negotiate a reduction from first-degree murder, to either second- or third-degree murder. To eliminate all lesser levels of murder would be to ignore the decision by the prosecution to accept a guilty plea to a lesser offense. There might be many reasons for reducing the initial first-degree murder charge, including evidentiary concerns or defendant cooperation in the prosecution of the case, among other possible justifications. If we were to eliminate this potentially critical filtering decision-point, we would reduce our opportunity to study the full range of decisions involved in processing cases from the time of the commission of the offense to a death verdict. A second issue was the overlap among the statutory grades of murder. Second-degree or felony murder is not eligible for the death penalty. However, if it is an

intentional killing during the course of a felony, then the defendant is considered to be death-eligible, since such a killing constitutes an aggravating circumstance under the statute.

The research challenge before us was to locate a sample of all defendants prosecuted during the 2000-2010 time period, whom prosecutors believed had committed a first-degree murder and might have been eligible for the death penalty. This meant that, to ensure that we included all potential death-eligible offenders in our base sample, we had to include all homicide cases that were initially charged under the general homicide statute during the time period of the study. We relied upon three data sets to assist us in identifying offenders targeted in our study. The key data source for identifying our sample was the AOPC, as it identifies all offenders charged with homicide. Rule 802 of the Rules of Criminal Procedure requires that the prosecutor file a notice of aggravating circumstances either at the time of arraignment or subsequent thereto if the prosecutor becomes aware of the existence of an aggravating circumstance after arraignment. Therefore, any individual prosecuted under the homicide statute is potentially death-eligible because at least one of the aggravating circumstances specified in 18 Pa.C.S. §9711 could be filed. The implications of this rule for our selection of cases was that it would be necessary for us to identify all potential homicide cases charged under the general homicide statute (18 Pa.C.S. §2502), and then follow the processing of those cases, including the filing of any aggravating circumstances, to determine whether or not they were first-degree murder cases and whether they were death-eligible.

The AOPC data identified a total of 4,274 criminal homicide cases. Tables 1-3 provide descriptive information on these cases, including the number of homicide charges and the number of convictions per case. As can be seen, the large majority of cases (90%) involved only one charge or count and one conviction, and of the cases charged with homicide, almost 30% did

not receive a homicide conviction, indicating that the prosecution for homicide was dropped or the defendant was found not guilty.

Table 1: Number of Homicide Charges/Counts and Convictions per Docket Case		
Number of Counts	**Frequency**	**Percent**
1	3,841	89.9
2	328	7.7
3	65	1.5
4 or more	39	.9
Number of Convictions	**Frequency**	**Percent**
0	1,260	29.5
1	2,776	65.0
2	186	4.4
3	36	.8
4 or more	15	.4

Table 2 shows the type of conviction outcomes received by the offenders who were convicted of homicide in the AOPC sample, for up to three homicide convictions. There were 1,115 docket cases with at least one first-degree murder *conviction*. Of those, 155 also had a second first-degree murder conviction, indicating that they were convicted of two counts of first-degree murder, and 38 had a third first-degree murder conviction. The data indicate that first- and third-degree murder convictions are the two most common outcomes, accounting for almost 79% of first convictions and higher percentages of second and third convictions. A total of 407

docket cases had at least one conviction for voluntary or involuntary homicide, other than first-, second-, or third-degree murder.

Table 2: Number and Type of Homicide Conviction Outcomes per Docket		
First Conviction		
Conviction Type	**Frequency**	**Percent**
First-Degree Murder	1,115	37.4
Second-Degree Murder	241	8.1
Third-Degree Murder	1,235	41.4
Lesser Homicide	392	13.1
Total	2,983	
Second Conviction		
Conviction Type	**Frequency**	**Percent**
First-Degree Murder	155	65.1
Second-Degree Murder	21	8.8
Third-Degree Murder	51	21.4
Lesser Homicide	11	4.6
Total	238	
Third Conviction		
Conviction Type	**Frequency**	**Percent**
First-Degree Murder	38	76.0
Second-Degree Murder	3	6.0
Third-Degree Murder	5	10.0

Lesser Homicide	4	8.0
Total	50	

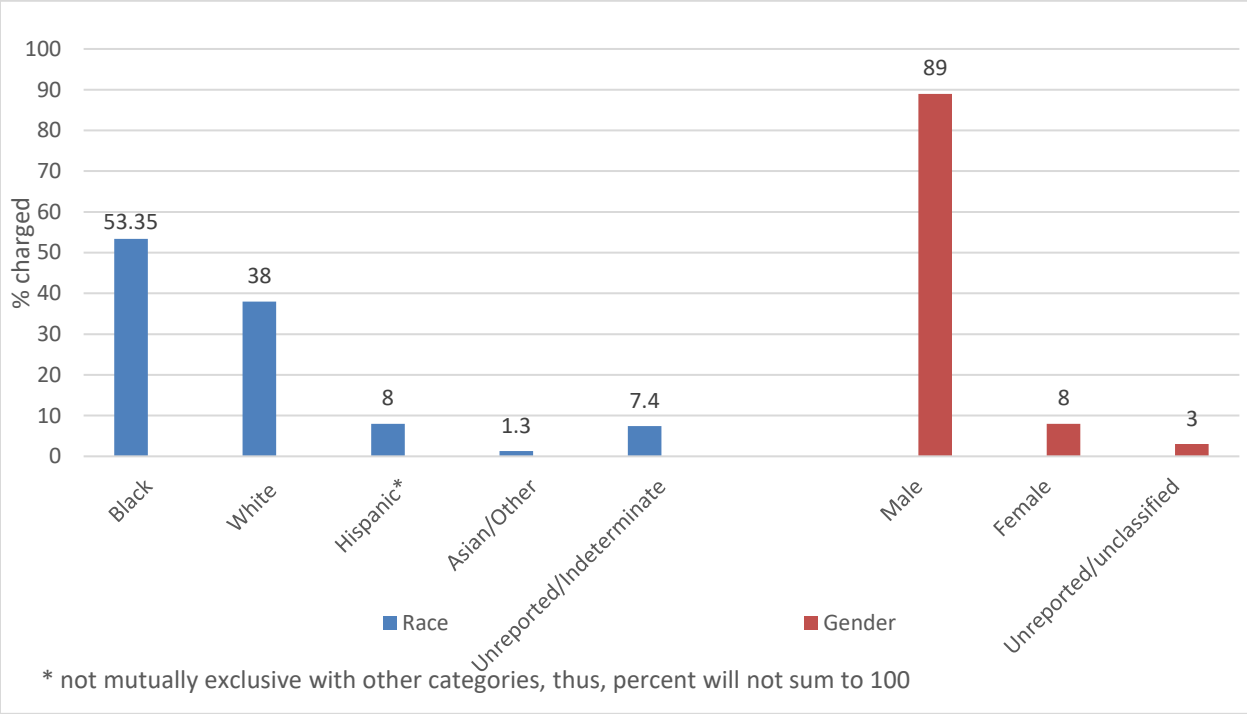
Table 3 shows the race/ethnicity and gender breakdown of all of the defendants charged with murder/criminal homicide. Black defendants comprise 53% of the cases, White defendants comprise 38%, and Hispanic defendants comprise 8%. In 2000, 10.8% of Pennsylvania's population was Black and 5.7% was Hispanic. Thus, the number of Black defendants charged with murder is highly disproportionate to their proportion of Pennsylvania's population. Further, the gender makeup is very disproportionately male. In turn, this means that the murder charge docket data from which we started our analysis was highly racially disproportionate, and overwhelmingly male.

Table 3: Race/Ethnicity and Gender of All Murder Charged Defendants (convicted and not convicted)

Race/Ethnicity	**Frequency**	**Percent**
Black	2,280	53.35
White	1,622	38.0
Hispanic*	341	8.0
Asian/Other	56	1.3
Unreported/Indeterminate	316	7.4
* Not mutually exclusive with other categories, thus, percent will not add up to 100.		
Gender	**Frequency**	**Percent**
Male	3,796	89
Female	352	8
Unreported/unclassified	126	3

Figure 1 shows these descriptive differences graphically. Appendix A contains a diagram of our sampling/data collection strategy in which we tracked cases with defendants charged with first-degree murder through the system.

Figure 1. Race/Ethnicity and Gender of All Murder Charged Defendants (convicted and not convicted)



D. In-Depth Field Data Collection

Compiling the AOPC, PCS, and DOC data, coding the DOC data, and linking the three data sets provided a foundation for our study, but failed to provide the information necessary for an in-depth study of the decisions made in identifying death-eligible offenders and processing death-eligible individuals through the criminal justice system. Specifically, the statewide data systems lacked key information that other high-quality death penalty research, such as that conducted by University of Maryland Professor Ray Paternoster, had found important in his study of the application of the death penalty in Maryland. While considerable information like that collected in the Paternoster study was contained in the AOPC, PCS, and DOC data sets,

critical information was missing from the Pennsylvania data sets. In order to obtain that information, we traveled to the counties where the cases were prosecuted and collected it there. Professor Paternoster provided us with his codebook containing the full list of the variables and the codes for these variables that his team had collected in his study. When we compared what we could obtain from the available data sets in Pennsylvania with what was identified in the Paternoster codebook, it became clear that much of that information could only be obtained from local county files. Below is a list of the additional information that we needed to collect from the county files (See Appendix A for the field data collection variables):

- Defendant information
    - Employment status
    - Criminal history (for some offenders, PCS and DOC provided conviction history)
    - Substance abuse
    - Education
    - Additional charges
    - Potential aggravating circumstances
    - Aggravating circumstances identified by the prosecution
    - Aggravating circumstances charged by prosecution in requesting death penalty
    - Aggravating circumstances found at trial
- Victim information (Up to three victims)
    - Name, age, gender, and race/ethnicity of the victim
    - Relationship to defendant
    - Marital status
    - Dependent children

    - Age of children
    - Victim occupation
    - Role of victim in offense (e.g., possible precipitation)
    - Location of homicide
    - How the victim was killed and whether the victim suffered multiple trauma, was tortured, was killed execution style, and other details of the offense that might influence the consideration for the death penalty
- Defendant's defense
    - Argued accident
    - Mistaken identity
    - Insanity
    - Witness credibility
    - Expert testimony by psychiatrist, psychologist, or other
- Strength of evidence
    - Physical evidence linking defendant to the crime
    - Physical evidence linking weapon to defendant
    - One or more eyewitnesses to the crime
    - Co-defendant who testified against defendant

We adapted Professor Paternoster's codebook into a draft data collection instrument appropriate for Pennsylvania. To test the instrument in the field, we contacted President Judge Joleen Kopriva of Blair County, requesting access to the County's files for homicide convictions. Judge Kopriva approved our request and provided the case files in a conference room at the Blair

County Courthouse for our review. Two of our principal investigators and two data collectors coded the files.

We learned much from this field testing, including the need to substantially revise our form and the draft codebook. The field testing also identified aspects of problems with the data collection that would require extensive training for our data collectors. Additionally, it gave us a reasonable estimate of the time it would generally take a data collector to code the data once we had the offense files. Based on this experience, we estimated that a coder with available files and a place to work could code, at most, five cases per day.

We then began to assess the number of cases we could afford to collect and the number of counties our financial resources would allow us to travel to, given the costs of travel, food, and lodging, and the considerable travel time that would be expended in traveling across the Commonwealth. We also recognized that materials might not always be made as readily available as they were in Blair County.

Based on the results of our test in Blair County, we were able to formulate a plan to determine the number of cases and counties we could afford to include in the study in the field. We ascertained that there were two ways we could improve the efficiency of our time and money in the field. First, we reduced the number of cases by narrowing the universe of defendants to those who were convicted of first-degree murder. We were able to do this with the AOPC charging data which, although it did not generally specify the level of homicide and never indicated whether the defendant was death-eligible, did provide information on the level of murder of which the defendant was convicted. By limiting the sample to those ultimately eligible for the death penalty due to the existence of an aggravating circumstance, we reduced the number of cases to review in the field from 4,274 to 1,115.

For the purposes of studying homicide case-processing more generally, this decision severely limited the generalizability of our study. In other words, for cases that did not result in first-degree murder convictions, we had only general data from the AOPC, PCS and DOC. For these cases, we did not have the very specific information involving the many variables that we had collected in the codebooks for cases with first-degree murder convictions. Moreover, for the cases that did not result in a conviction of any level of homicide, we now had only general AOPC data. However, since our primary charge was to study the application of the death penalty, rather than homicide case-processing more generally, we felt justified in focusing on first-degree murder convictions, since defendants with lesser homicide convictions cannot receive the death penalty. What we could not study was whether race or ethnicity influenced the decision-making associated with determining the degree of homicide to charge in the first place or determining whether to retract the motion to seek the death penalty in any case that did not result in a first-degree murder conviction.

Second, we decided to limit the travel time and cost by not collecting data in all 67 counties. After reviewing the data provided by AOPC, we determined that there were 18 counties that had ten or more first-degree murder convictions and that studying all of the first-degree murder convictions in these 18 counties would be the best strategy. The 18 counties were: Allegheny, Berks, Bucks, Chester, Dauphin, Delaware, Fayette, Lackawanna, Lancaster, Lehigh, Luzerne, Monroe, Montgomery, Northampton, Philadelphia, Washington, Westmoreland, and York. These sampling strategies allowed us to reduce travel time and costs, but still enabled the collection of detailed information on more than 80% of all first-degree murder convictions in the Commonwealth in our time frame. Further, these counties represented the state geographically, with the exception of the northwest. In addition, focusing on counties

with ten or more first-degree murder convictions enabled us to conduct meaningful comparisons among the counties.

In order to capture offenders who were death-eligible, we needed data on the presence of aggravating circumstances. This raised the question as to which files in the county would provide the best source of information on the defendant and his or her history, the details of the offense, the potential for aggravating circumstances,[6] and information regarding the evidence against the defendant. Based on discussions with those in the field and our experience with county records, we determined that the most detailed information was likely to be found in each county's District Attorney's files. Court files contain only the information presented in court, which would not include other information that the prosecutor might use in deciding on the level of murder to charge and, if potentially a first-degree murder offense, whether the defendant might be death-eligible. On the other hand, defense files would be located in a variety of offices, depending on the location of the attorney who represented the defendant. Thus, we attempted to gain access to District Attorneys' files in the 18 counties in our sample.

Before contacting the District Attorney in the first county chosen for our field study, we reviewed the AOPC public docket website for as much information as possible regarding the cases in that county. The dockets on the website provide a chronological review of major issues raised and decided during the processing of each case. Because this source provided important

[6] It should be noted that the initial notice of the presence of aggravating circumstances filed by a prosecutor does not necessarily mean that the defendant is actually death-eligible, as there is no standard of proof at this stage. The prosecutor may merely be preserving the option without regard to whether an aggravating circumstance can be proven beyond a reasonable doubt, which is the standard at sentencing. Moreover, notice can be used at this stage to impress the prosecutor's view of the seriousness of the offense and to use this threat as a pressure point to encourage a negotiated plea. Therefore, there are reasons to expect that a notice of aggravating circumstances significantly exaggerates the proportion of cases that would be death-eligible under scrutiny of a judge or jury post-conviction.

information not available in the data we received from the AOPC, we reviewed these dockets for all homicide charges/indictments we found in the AOPC data. We trained undergraduates at Penn State to conduct this data collection. The website docket sheets included demographic information on the defendant; the judge's name; the date of the offense and the imposition of the sentence; adjudication information on all charges; whether a motion for the death penalty and/or a notice of aggravating circumstances had been filed; any change of venue request and response; the type of defense counsel; any request for competency or psychological testing and response; information about the penalty trial; whether the defendant was sentenced by a judge or jury; the sentence; in the case of a penalty trial, the reason for the death or life sentence; and whether there was an appeal filed in the case. This data considerably enhanced the information we had collected on our largest sample of those initially charged with murder.

Following this first data collection effort, we began contacting counties by letter, indicating the purpose of the study and requesting permission to access the files regarding the case from the District Attorney's office. We also indicated the number of cases in our sample that we were interested in reviewing and the estimated time it would take to collect the information. The letter further indicated that one of the principal investigators would follow-up with a phone call, to review our request and answer any questions that they might have. We had no idea what the response would be and were pleasantly surprised at the level of cooperation and assistance we received from the District Attorneys we contacted over the course of the next two years of data collection. Certainly not all of them opened their files, but District Attorneys in 14 of the 18 counties in our field sample assisted us in gathering the information we needed. Ultimately, there were four counties (Chester, Westmoreland, Fayette, and Northampton) in which we were unable to obtain a response from the District Attorneys after numerous attempts

to contact them. Alternatively, we worked with the President Judge in Westmoreland County who brokered our access to the information in that county. In Fayette, Northampton, and Chester Counties, we searched the County Clerk's and court files and often contacted defense attorneys for information. Local newspaper coverage provided additional information. Thus, we were very pleased with the results of our search for information, even in the counties where the District Attorneys were uncooperative.

Philadelphia presented many special challenges that require a more detailed explanation. We identified 500 first-degree murder convictions in Philadelphia for the period 2000-2010, which meant that we needed two data coders in Philadelphia for approximately 10 weeks - a tremendous investment for the study. In September of 2013, we made our first request to Philadelphia District Attorney Seth Williams, which went unanswered. Subsequent phone calls were unsuccessful in eliciting a response, but ultimately, we were able to meet with representatives from the District Attorney's Office in February of 2014 to discuss our request for access to their files. In April of 2014, we received a letter rejecting our request from the First Assistant District Attorney. While we were disappointed by this turn of events, it did not deter us from searching for alternative methods of gathering data from Philadelphia. We reached out to the President Judge of the Philadelphia County Court of Common Pleas, Sheila Woods-Skipper, for assistance in our endeavor, and she arranged for the Philadelphia Clerk of Court's Office to provide the files we needed, as well as excellent work spaces for our coders. We began data collection in that office in the summer of 2014. In addition, we contacted the Defender Association of Philadelphia, a non-profit public defender organization which represented approximately 20% of the Philadelphia defendants in our sample. The Defender Association agreed to our review of their files and we started collecting data there in late July of 2014.

We also decided to make another attempt to gain access to the Philadelphia District Attorney's files and, in late August of 2014, we sent Mr. Williams another request for access to the files. In this request, we indicated that we were willing to reduce the length of time we would have to spend reviewing his office's files by reducing the sample years from 2000-2010 to 2005-2010. This reduced our sample size from 500 to approximately 250 cases (we ultimately collected information from 331 cases), while maintaining our focus on the most recent cases processed. We further advised that we needed information for only approximately 125 remaining cases. We were finally granted approval to search those files in late 2014, and data collection began in January 2015. Following another disruption during which the District Attorney's office advised our coders to cease their work and vacate the offices for several months, based on erroneous information, we finally completed data collection in the Philadelphia District Attorney's office in May of 2015, approximately 18 months after we first requested access to the District Attorney's office files.

The actual process of data collection in the county offices was very time-consuming. We primarily had to work with paper files, as very few of the files had been computerized. Instead, the files were contained in banker boxes, and in some cases, amounted to as many as 20 boxes per case. The organization of these files was largely idiosyncratic to the individual attorney or County Clerk's staff, and was not consistent even within a specific office. Moreover, we were searching for a different number of variables for each case, depending on what was missing after exhausting the data sets from the AOPC, PCS and DOC. Thus, for some cases, we had to search through a dozen boxes of randomly organized files to locate only a few variables (which were nonetheless critical to the coding of that case). The time to code these files varied from thirty minutes to several hours. As a result, the field data collection component was the most

demanding part of the overall data collection process, but was absolutely essential to constructing a complete data set. Finally, after searching all of these sources, we also reviewed local news reports and appellate documents to verify and to fill-in information we were unable to locate in the field.

E. Field Corrections to the Data

It should be noted that when we were in the field, we found some errors in the AOPC data's classification of murders. We provided District Attorney's offices with lists of the cases that the AOPC data indicated involved first-degree murder convictions. Often, we would receive responses indicating that some of the AOPC cases were incorrectly classified as either second- or third-degree, rather than first-degree murder cases. Occasionally, the District Attorney would identify first-degree murder cases that were not on the lists we provided. Finally, we that found that some defendants on the list were juveniles at the time of the murder and thus not death-eligible as a result of the 2005 United States Supreme Court decision in *Roper v. Simmons,* 542 U.S. 551 (2005).

Table 4 provides a list of our sample counties, the number of cases we originally identified as first-degree murder cases in the AOPC data and the final, accurate number of cases collected in the field for the study.

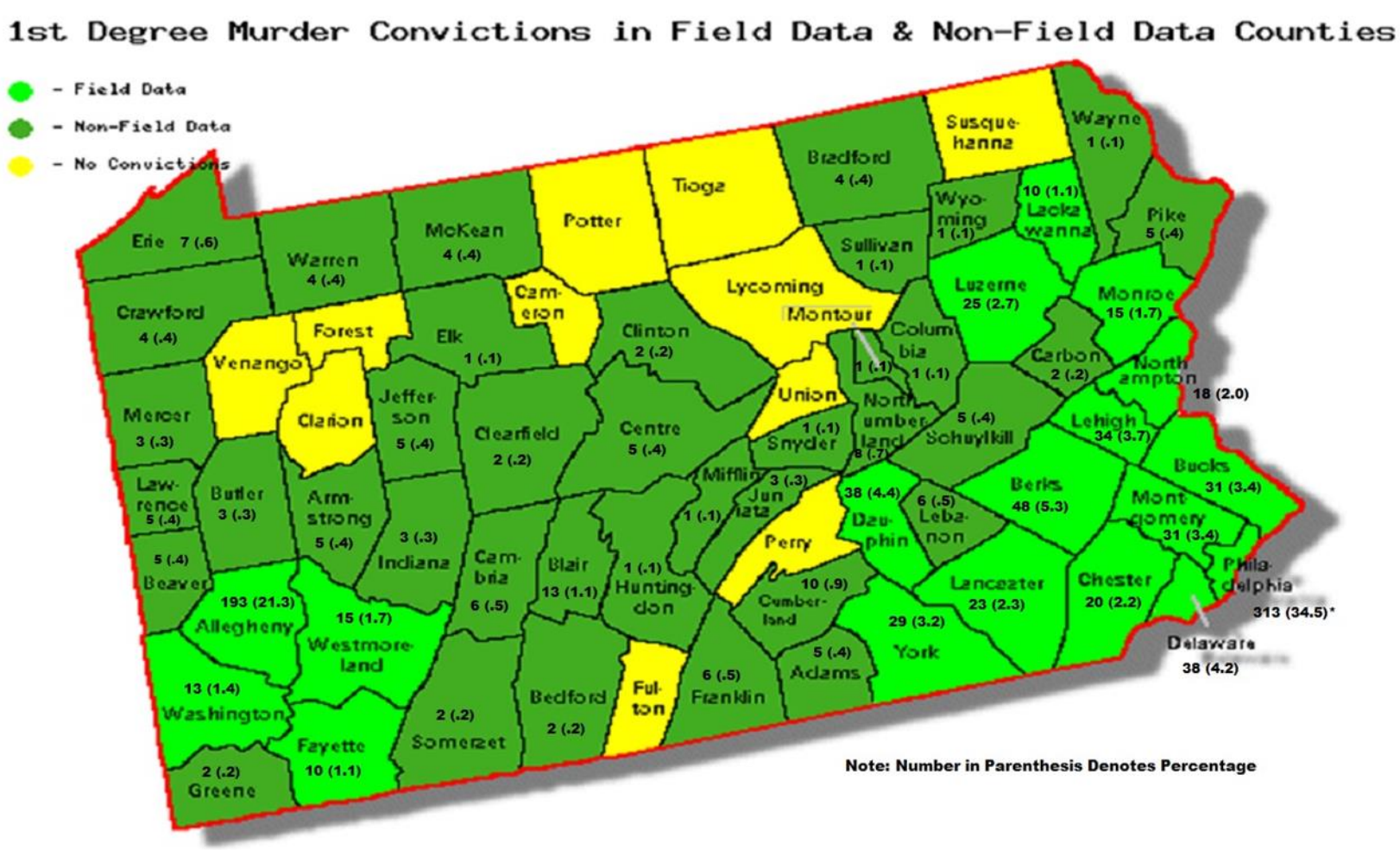
Table 4: Field Data Collection with Number of Cases Originally Identified as First-Degree Murder Cases and Number of Cases Collected in the Field

County	Initial Cases	Final Dataset
Allegheny	193 (21.3)	149 (16.9%)
Berks	48 (5.3)	38 (4.3%)
Bucks	31 (3.4)	24 (2.7%)

Table 4: Field Data Collection with Number of Cases Originally Identified as First-Degree Murder Cases and Number of Cases Collected in the Field		
County	**Initial Cases**	**Final Dataset**
Chester	20 (2.2)	15 (1.7%)
Dauphin	40 (4.4)	46 (5.2%)
Delaware	38 (4.2)	39 (4.4%)
Fayette	10 (1.1)	12 (1.4%)
Lackawanna	10 (1.1)	11 (1.3%)
Lancaster	23 (2.5)	34 (3.9%)
Lehigh	34 (3.7)	30 (3.4%)
Luzerne	25 (2.7)	22 (2.5%)
Monroe	15 (1.7)	17 (1.9%)
Montgomery	31 (3.4)	30 (3.4%)
Northampton	18 (2.0)	24 (2.7%)
Philadelphia	313 (34.5)*	331 (37.6%)
Washington	13 (1.4)	14 (1.6%)
Westmoreland	15 (1.7)	17 (1.9%)
York	29 (3.2)	27 (3.1%)
Total	906 (99.8)	880
* These cases were from the time period 2005-2010.		

We had anticipated that field data collection would take about 18 months, but due to the considerable delays obtaining access to files in some counties, locating cases in the field, and

travel delays, field data collection actually ended up lasting from September 2012 through April of 2015 (31 months).



Source: dyimaps.net ©

F. Cleaning Data

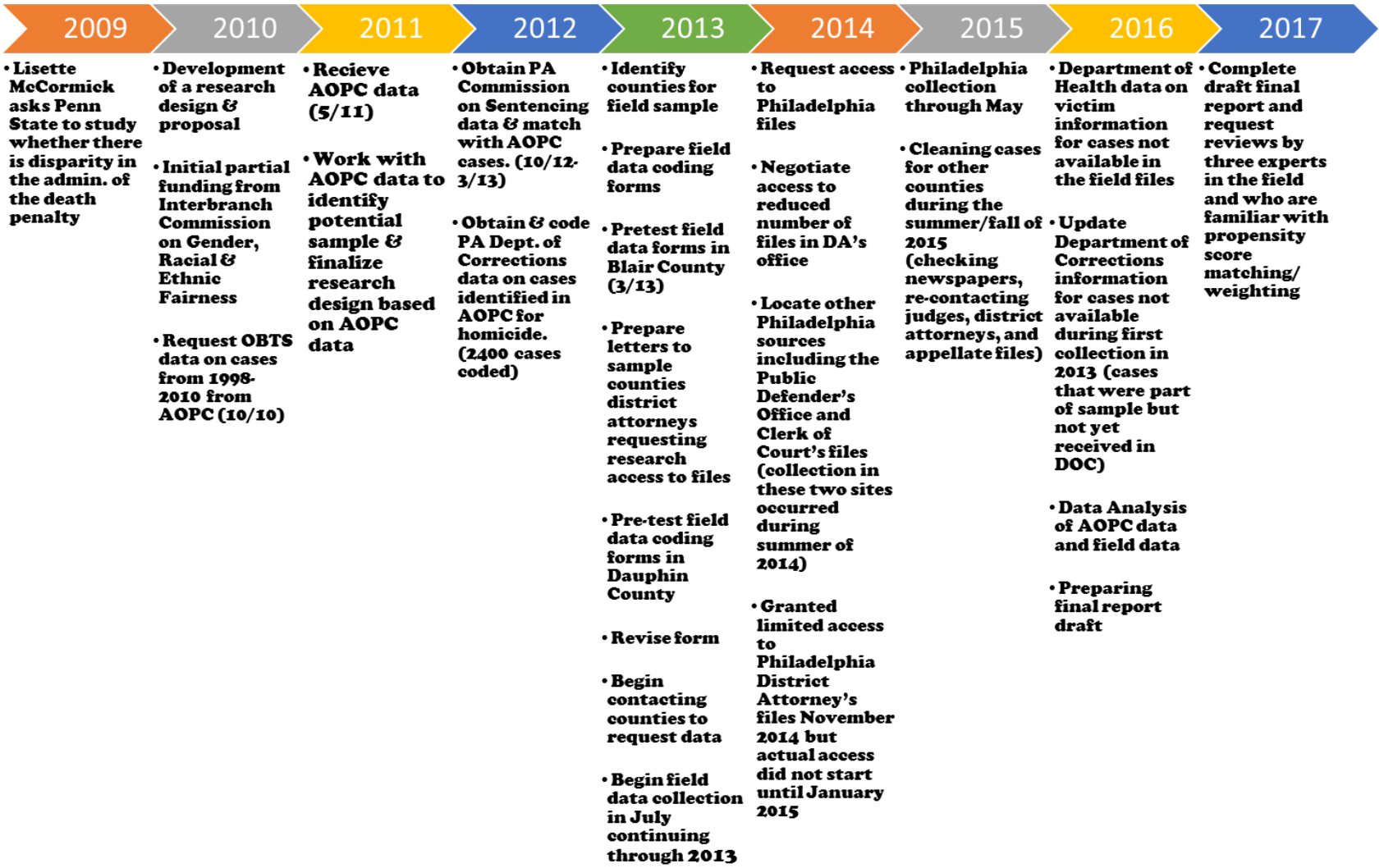
An important yet tedious component of the study required reviewing the AOPC, DOC, and PSC data sets and the field data set and identifying inconsistent or missing information. One set of variables that was crucial to the study was victim characteristics and the details of a victim's role in the offense. The research design limited the information regarding the victims to a maximum of three victims per case, and for each of the three victims, the design called for collecting the victims' names, ages, genders, ethnicities, races, marital status, relationship to the offender, dependents, and whether the victims precipitated the offense in any way. In addition, we collected detailed information on where and how the offenses were carried out. The information regarding the offenses was generally simple to collect from the police reports; however, information on the characteristics of the victims was much more difficult to find. If there had been a trial and sentencing hearing, the transcripts often provided information on the victim. Newspaper obituaries were also checked to locate information missing from the court files. However, after searching all of these sources and completing our work in the field, we found that we were still missing information for 81 victims.

To complete the collection of data on victims, we needed to gain access to the Pennsylvania Department of Health's death certificate information. The Pennsylvania Joint State Government Commission assisted us by submitting a request on our behalf that included the purpose of the study and the reason for the request. In response, we received an excel sheet with the race, ethnicity, gender, and date of birth of the deceased individuals. This process took several months to complete.

The next step in the cleaning process involved merging the data obtained from the files in the field with the data we had received from the AOPC, PCS, and DOC, and otherwise cleaning

the data in preparation for analysis. This consisted of removing duplicate cases, such as those in which a defendant committed multiple murders and was prosecuted under different docket numbers but part of the same criminal proceedings, and eliminating cases that did not qualify for the sample, such as cases in which the defendant was a juvenile at the time of the murder, and cases that did not actually involve a homicide (i.e., inchoate cases). We also had to identify missing or invalid data, and locate or correct it. For example, on occasion, we had identified a homicide from a review of a case file in the field but we did not have AOPC, PCS or DOC data to match it. In order to locate the missing information that would have been in the possession of these sources, we made additional DOC data requests and conducted internet searches of newspaper articles regarding the case and searches of dockets publicly available on the AOPC website. In June of 2016, we completed the data cleaning phase, and initiated the analysis phase of the study. This process is summarized in the timeline below in Chart 4.

Chart 4: TIMELINE OF CAPITAL PUNISHMENT DECISIONS IN PENNSYLVANIA: 2000-2010



Chapter III: Analytical Plan and Findings

Our analysis proceeds by presenting descriptive statistics from our field-collected data on major variables of interest: charges, case outcomes, and defendant race, ethnicity, and gender. Second, we present key cross-tabulations of case outcomes and characteristics by defendant race and ethnicity, as well as cross-tabulations of defendant race and ethnicity by victim race and ethnicity. In Appendix B, we present logistic regression models of three key decisions regarding the death penalty: the decision to seek the death penalty, the decision to retract a death penalty filing, and finally, the decision to impose the death penalty.

Our analysis culminates with propensity score analyses of the decision to seek the death penalty and the decision to impose the death penalty. Methods such as logistic regression are very useful, but can be vulnerable to omitted variable bias (i.e., cases being alike or different in ways that we cannot observe), risking the possibility that results might be spurious due to some unobserved factor connected to both of our predictors of interest (e.g., defendant race/ethnicity) and outcomes. Propensity score analysis is a widely accepted approach to address such omitted variable bias in research questions such as the ones we address here (that is, examining the effects of one or two predictors of interest while controlling for a large number of other observed and unobserved factors).

A. Descriptive Statistics: Field-Coded Data

Recall from Table 1 that of the 4,274 cases with criminal homicide charges statewide, 1,260 cases (about 30%) did not result in a conviction of any degree of homicide. In addition, as shown in Table 2, 62.6% of the homicide convictions are for a homicide graded less than first-degree murder. Thus, only a minority of cases in which the defendant is charged with or convicted of criminal homicide involve first-degree murder and exposure to the possibility of the death penalty. Unfortunately, our field data do not allow us to assess the processes (such as

acquittals or plea bargaining to lesser charges) by which some criminal homicide cases that are death-eligible result in first-degree murder convictions and other do not.

In our study, we focus on the detailed data collected from the 18 counties that encompass 87% of the first-degree murder *convictions* in the AOPC docket data, as described in Chapter II. Fuller descriptive statistics on the statewide AOPC data are presented in Appendix C. We first examine the conviction outcomes of these field cases, shown in Table 5. The majority of cases involve first-degree murder conviction by juries.

Table 5: Mode of Conviction, First-Degree Murder Convictions, Field Data

Outcome	Frequency	Percent
Guilty Plea	114	13
Convicted by Judge, First-Degree Murder	108	12
Convicted by Jury, First-Degree Murder	658	75

Table 6 lists the type of accompanying convictions, other than murder, in the field data cases. Most cases involved an additional felony conviction; notably, 128 cases had accompanying robbery charges, and 520 had other types of felonies.

Table 6: Type and Frequency of Conviction Accompanying First-Degree Murder Convictions

Type of Conviction	Frequency	Percent
Sex Offense	24	2.7
Robbery	128	14.6
Burglary	54	6.1
Any Felony	520	59.1
No Other Felony Convictions	155	18.0

Table 6: Type and Frequency of Conviction Accompanying First-Degree Murder Convictions		
Type of Conviction	**Frequency**	**Percent**
* Note: Percentages do not add up to 100 due to overlap between the conviction categories, which are not mutually exclusive.		

Next, for these field data cases, we examined the key outcomes related to the death penalty. Among the 880 first-degree murder convictions in our field data, prosecutors had filed notice of aggravating circumstances in 341 (38.8%) of them. Prosecutors actually *filed to seek* the death penalty in 313 of these 341 cases, or 35.6% of the 880 first-degree murder convictions in our field data. In the other 28 cases, there were filings of notices of aggravating circumstances, but prosecutors did not follow up by filing a notice to seek the death penalty. In 146 (46.7%) of these field data cases in which prosecutors filed a notice to seek the death penalty, however, they later *retracted* this filing. Then, of the 167 cases with defendants ultimately exposed to death at sentencing, 51 (30.5%) resulted in a death sentence. As a reminder, since we examined only *convictions* for first-degree murder, there were no cases in this analysis that resulted in an acquittal.

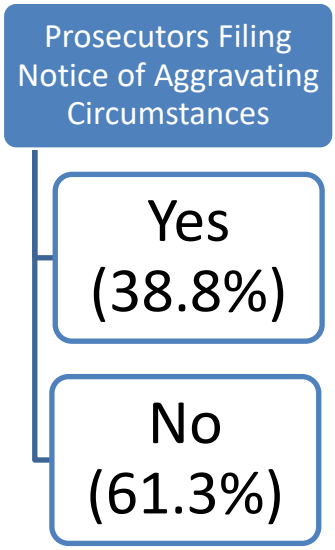
Table 7 lists the frequencies and percentages for these various outcomes relative to seeking and imposing the death penalty.

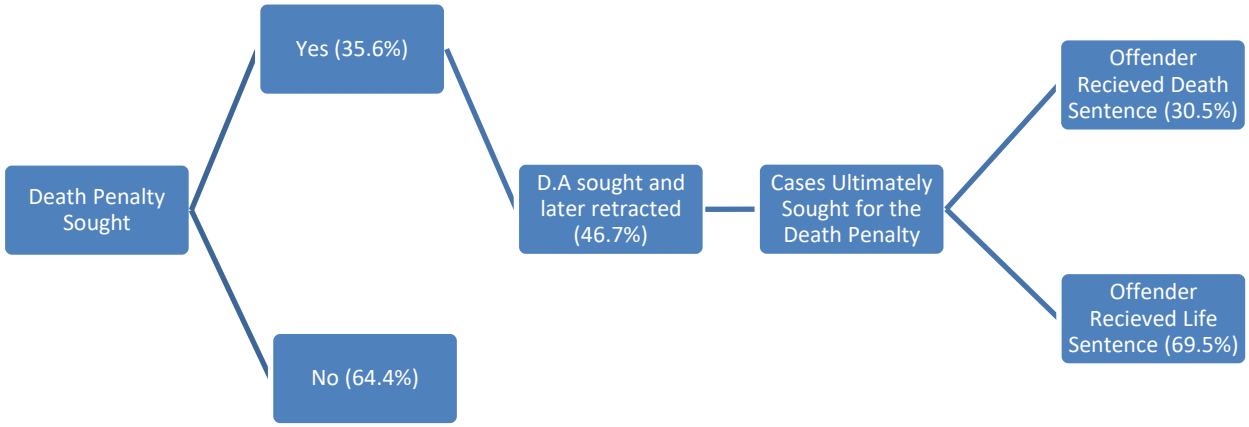
Table 7: Field Cases; Death Penalty Exposure and Sentences: a) Prosecutors Filing Notice of Aggravating Circumstances, b) Prosecutors Filing Notice to Seek the Death Penalty, c) Retracting Notice Seeking the Death Penalty, d) Death Penalty Imposed		
Aggravating Circumstance	**Frequency**	**Percent**
Yes	341	38.8
No	539	61.3
Death Penalty Sought		

Yes	313	35.6
No	567	64.4
Of 313 Cases Where Death Was Sought		
D.A. sought and later retracted	146	46.7
Of 167 Cases Ultimately Sought for the Death Penalty		
Offender Received Death Sentence	51	30.5
Offender Received Life Sentence	116	69.5

Figure 2 shows this flow of outcomes graphically.

Figure 2. Field Cases; Death Penalty Exposure and Sentences: a) Prosecutors Filing Notice of Aggravating Circumstances, b) Prosecutors Filing Notice to Seek the Death Penalty, c) Retracting Notice Seeking the Death Penalty, d) Death Penalty Imposed.





We also collected data on whether particular statutorily-defined aggravating circumstances were found to be present by prosecutors (whether they filed a motion to seek the death penalty or not, or retracted it or not) and whether the aggravating circumstances were found by the jury or judge at a penalty trial and entered on the sentencing form. Table 8 shows how often these aggravating circumstances were found to be present by prosecutors, and, if filed by prosecutors, how often they were found by the judge or jury.[7] The table also shows the frequency with which aggravating circumstances were found among the cases. Notably, many aggravating circumstances are quite rarely presented and even more rarely found. However, the aggravating circumstances, "Committed while in perpetration of a felony," "Defendant knowingly created grave risk of death to another," "Defendant has significant history of violent felony convictions," and "Defendant has been convicted of another murder" are presented more frequently than others (each aggravating circumstances is found in about 10% of cases or more).

[7] In our data collection, we coded aggravating circumstances two ways: 1) as filed by the prosecutor, and 2) as independently determined to be present by the data coders. Table 8 shows those aggravating circumstances that were filed by prosecutors. Our later propensity score analyses control for the aggravating circumstances as independently coded in the analyses of filing and retracting the death penalty, and as filed by the prosecutor in the analysis of the imposition of the death penalty.

This may not be surprising, as these appear to be more generic or widely applicable aggravating circumstances. Conversely, there were no aggravating circumstances filed for "[h]ijacking an aircraft", as this is typically a federal offense, and since the 1970s, has become an extremely rare occurrence. In addition, all of the aggravating circumstances are found by the court much less often than they are presented. This is equally true of the very frequently presented aggravating circumstances.

Table 8: Statutory Aggravating Circumstances: Filed by Prosecutors and Found at Trial by Jury/Judge: Frequency (percent of all field cases).

Aggravating Circumstances	Prosecutor Found	Jury/Judge Found
Victim was firefighter, peace officer	12 (1.4)	4 (.5)
Defendant paid for killing	3 (.3)	1 (.1)
Victim held for ransom, reward, or shield	3 (.3)	1 (.1)
Hijacking aircraft	0	0
Victim was prosecution witness	29 (3.3)	5 (.6)
Committed in perpetration of felony	134 (15.2)	23 (2.6)
Knowingly created grave risk of death	136 (15.5)	21 (2.4)
Offense committed by means of torture	48 (5.5)	11 (1.2)
Significant history of violent felonies	82 (9.3)	16 (1.8)
Defendant convicted of offense carrying life/death	39 (4.4)	8 (.9)
Defendant convicted of another murder	85 (9.7)	23 (2.6)
Defendant convicted of voluntary manslaughter	11 (1.3)	0
Defendant committed killing during drug felony	13 (1.5)	1 (.1)
Victim was associated with defendant in drug trafficking	23 (2.6)	2 (.2)

Victim was a nongovernment informant	4 (.5)	3 (.3)
Victim was under 12	27 (3.1)	6 (.7)
Victim was in third trimester or def. knew of pregnancy	8 (.9)	4 (.5)
Defendant was under PFA from victim	11 (1.3)	1 (.1)
Number of Aggravating Circumstances	**Prosecutor Found**	**Jury/Judge Found**
1	146 (17)	30 (3.4)
2	91 (10)	31 (3.5)
3	56 (6.4)	9 (1.0)
4	27 (3.0)	3 (.3)
5	15 (1.7)	0
6	0	0
7	2 (.2)	0
8	4 (.5)	0

Defense attorneys also offered a number of mitigating circumstances in the cases we examined. The statutorily-listed factors are set forth in Table 9, along with the frequency with which they were found by judge or jury. The two mitigating circumstances most frequently presented, and found, were "age of defendant" and "defendant had no significant history of prior crime." Again, as with aggravating circumstances, mitigating circumstances are found by the judge and juries much less frequently than they are presented by defense attorneys. Among the cases we examined, there were 167 death penalty trials, but we found mitigating circumstances presented in only 127 of these. In other words, in 40 of these cases, we found not one mitigating circumstance presented. We do not know if this is because there were no mitigating circumstances presented or that we could not find any record of the mitigating circumstances being presented.

Table 9: Mitigating Circumstances: Presented by Defense and Found by Jury/Judge: Frequency (percent of all field cases).		
Mitigating Circumstances	**Defense Presented**	**Jury/Judge Found**
No significant history of prior crime	51 (5.8)	22 (2.5)
Extreme mental or emotional disturbance	35 (4.0)	11 (1.3)
Subst. impaired capacity to appreciate criminality	35 (4.0)	7 (.8)
Age of defendant at time of crime	65 (7.4)	16 (1.8)
Acted under extreme duress or domination	13 (1.5)	3 (.3)
Victim was participant in defendant's conduct	0	0
Participation was relatively minor	6 (.7)	1 (.1)
Defendant act not sole proximate cause of death	1 (.1)	0
Number of Mitigating Circumstances*	**Defense Presented**	**Jury/Judge Found**
1	14 (1.6)	23 (2.6)
2	32 (3.6)	10 (1.4)
3	26 (3)	2 (.2)
4	16 (1.8)	2 (.2)
5	7 (.8)	1 (.1)
6	7 (.8)	0
7	6 (.7)	0
8 or more	19 (2.1)	0
* Statutory and other.		

In cases in which the death penalty is sought, the defendant is sentenced by a judge or a jury at a penalty phase trial. Table 10 shows the frequency with which these defendants are sentenced by a judge or a jury. Of the 167 cases in which the death penalty was sought by prosecutors, approximately 70% involved jury sentencings. Thus, when the death penalty hangs in the balance, the large majority of the defendants are sentenced by juries.

Table 10: Death Penalty Trial Cases Sentenced by Judge or Jury		
Cases Where Death is Sought		
Sentenced by	**Frequency**	**Percent**
Judge	50	29.94
Jury	117	70.1

The defendants in the field data cases utilized three different types of defense counsel: privately-retained attorneys, public defenders, and court-appointed attorneys. These are shown in Table 11. For the overall field sample and for the cases in which the death penalty was sought, the type of defense counsel is roughly evenly split among the three.

Table 11: Types of Defense Counsel		
All Field Data Cases		
Defense	**Frequency**	**Percent**
Privately-Retained	322	36.6
Public Defender	285	32.4
Court-Appointed	269	30.6
Cases Where Death is Sought (not retracted)		
Defense	**Frequency**	**Percent**
Privately-Retained	65	38.9
Public Defender	53	31.7
Court-Appointed	47	28.1

Finally, Table 12 shows the racial, ethnic and gender composition of the field data sample.[8] In terms of gender, as the overall statewide AOPC docket data indicates, the cases overwhelmingly involve male defendants. In terms of the race and ethnicity of the defendants, 67% of the field data defendants were Black, 24% White, and 7% Hispanic (note that the Hispanic category is not mutually exclusive to White or Black; a defendant can be White and Hispanic or Black and Hispanic).[9] The field data contain somewhat greater percentages of minority defendants, compared to the overall AOPC docket data (the AOPC docket data consist of 58% Black defendants, and 6% Hispanic defendants (see Appendix C). This difference is a by-product of the demography of our field data counties, which are among the larger and more diverse counties in the Commonwealth. The counties not contained in the field data are smaller, often rural, and tend to have predominantly White populations (both in terms of residents and murder defendants). But again, the counties not involved in the survey account for a very small percentage (13%) of overall first-degree murder convictions and an even smaller number of death sentences (8), and would add comparatively little probative value to the analysis contained in this report.

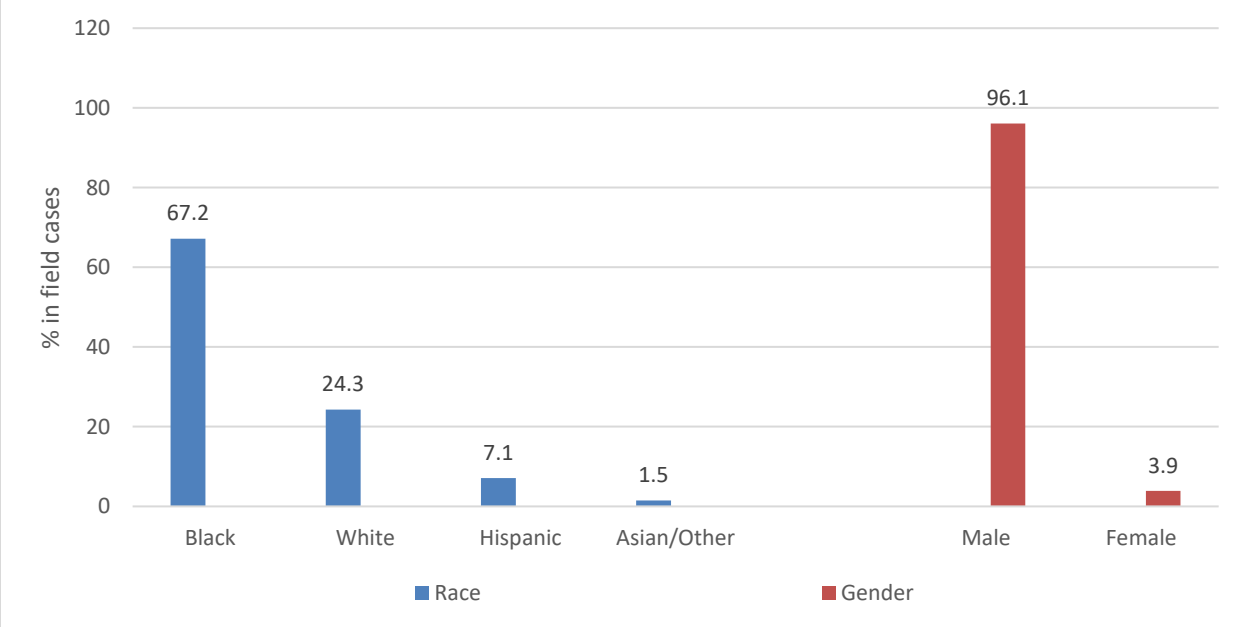
[8] Our coding of defendant race and ethnicity started with the race and ethnic categorizations found in the AOPC, PCS, and DOC data. We then cross–classified these race and ethnicity codings across the three data sets to identify any discrepancies. Codings of race and ethnicity were confirmed or corrected in the field data collection and cleaning.

[9] This coding follows the conventions of most sentencing data systems, such as the PCS and the United States Sentencing Commission, as well as the U.S. Census Bureau.

Table 12: Race/Ethnicity and Gender of Field Data Cases		
Race/Ethnicity	**Frequency**	**Percent**
Black	591	67.2
White	214	24.3
Hispanic	62	7.1
Asian/Other	13	1.5
Gender	**Frequency**	**Percent**
Male	846	96.1
Female	34	3.9

Figure 3 shows these descriptive differences graphically.

Figure 3. Race/Ethnicity and Gender of Field Data Cases



Our field data includes 34 female defendants convicted of first-degree murder, comprising about 4% of our data set. Of these 34 female defendants, prosecutors sought the death penalty against eight (about 24% of the female defendants). Of those eight females, the

death penalty filing was retracted for five. Thus, three females (8.8% of the 34 female defendants) were exposed to a death penalty trial. One of these three females received the death penalty. Put another way, one female defendant out of 34 female defendants (2.9%) in the data received the death penalty, and one death sentence out of 51 overall (1.9%) was imposed upon a female defendant. By comparison, 50 out of 846 (6%) males overall received the death penalty, and 50 out of the 164 males (31%) who faced a death penalty trial received the death penalty.

From these descriptive statistics, it appears that females are much less likely to be exposed to, or receive, the death penalty. While a broader examination of the role of gender in the processing and sentencing of murder cases would be valuable, we do not have adequate numbers of first-degree murder cases involving female defendants, and do not have adequate variation in death penalty outcomes among those females, to pursue the role of defendant gender further in our analyses. Thus, the subsequent analyses in this report do not focus on the gender of the defendant.[10]

In sum, the above tables present some basic descriptive parameters of interest for the field collected data. Next, we present some cross-tabulations involving key case outcomes and characteristics by the race/ethnicity of defendants. This will give us a picture of some bivariate relationships among race/ethnicity, case characteristics, and punishment outcomes.

B. Cross-tabulations and Bivariate Associations: Race and Ethnicity

We begin with cross-tabulations of race and ethnicity by the presence of different types of felony convictions that occurred concurrent with the first-degree murder conviction(s). Table 13 shows the concurrent felony convictions by race/ethnicity for the field data. Note that the

[10] In our multivariate analyses, we include the small numbers of female defendants, but do not include gender as a predictor or control variable. An alternative would be to omit the female defendants from the data set entirely, but we sought to retain as many of our field cases as possible.

conviction types do not add up to 880 (the total number of first-degree murder convictions in the field data) because the convictions are not mutually exclusive, that is, defendants may have more than one concurrent conviction type. A greater proportion (63%) of Black defendants had a concurrent felony conviction of any kind compared to White (49%) and Hispanic (58%) defendants. Also, White defendants in the field data (7.9%) had a smaller proportion of convictions for robbery, than Black (12.9%) or Hispanic (17.7%) defendants.

Table 13: Field Data—Types of Concurrent Convictions by Race/Ethnicity: Frequency (column percent).

	Race/Ethnicity				
Convictions	**White**	**Black**	**Hispanic ****	**Other**	**Total**
Sex offenses	4 (1.9)	11 (1.9)	0	1 (7.7)	16 (1.8)
Robbery	18 (7.9)	76 (12.9)	11 (17.7)	2 (15.4)	106 (12.1)
Burglary	9 (4.2)	31 (5.3)	9 (14.5)	2 (15.4)	51 (5.8)
Any Felony †	104 (49)	372 (63)	36 (58)	8 (62)	520 (59.1)
None	110 (51)	220 (37)	26 (42)	5 (38)	361 (100)
Total	214 (100)	591 (100)	62 (100)	13 (100)	

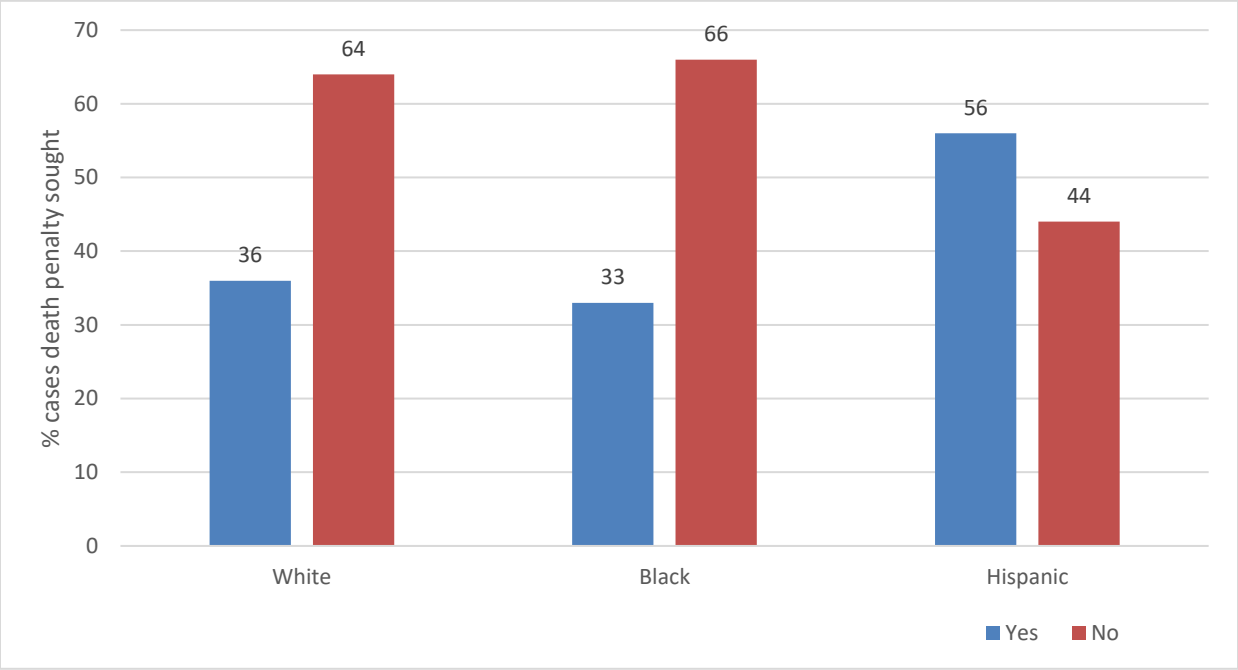
** Not mutually exclusive with White or Black.
† Conviction categories are not mutually exclusive.

Next, Table 14 presents the death penalty outcomes by race/ethnicity.

Table 14: Death Penalty Outcomes by Race/Ethnicity.†				
Death Penalty Sought (Column % in parentheses)				
	White	**Black**	**Hispanic**	**Total**
Yes	76 (36)	197 (33)	35 (56)	313
No	138 (64)	394 (66)	27 (44)	567
Of 313 Cases Where the Death Was Sought (Row % in parentheses)				
	White	**Black**	**Hispanic**	**Total**
D.A. sought and later retracted	27 (19)	97 (66)	19 (13)	146
Of 167 Case Ultimately Exposed to Death Penalty (Column % in parentheses)				
	White	**Black**	**Hispanic**	**Total**
Offender Received Death Sentence	19 (39)	25 (25)	6 (38)	51
Offender Received Life Sentence	30 (61)	75 (75)	10 (62)	116
† Other race/ethnicity not included. In this group, the death penalty was sought in five cases, retracted in three cases, and a death sentence was given in one case. The total number of death sentences in the field data was therefore 51.				

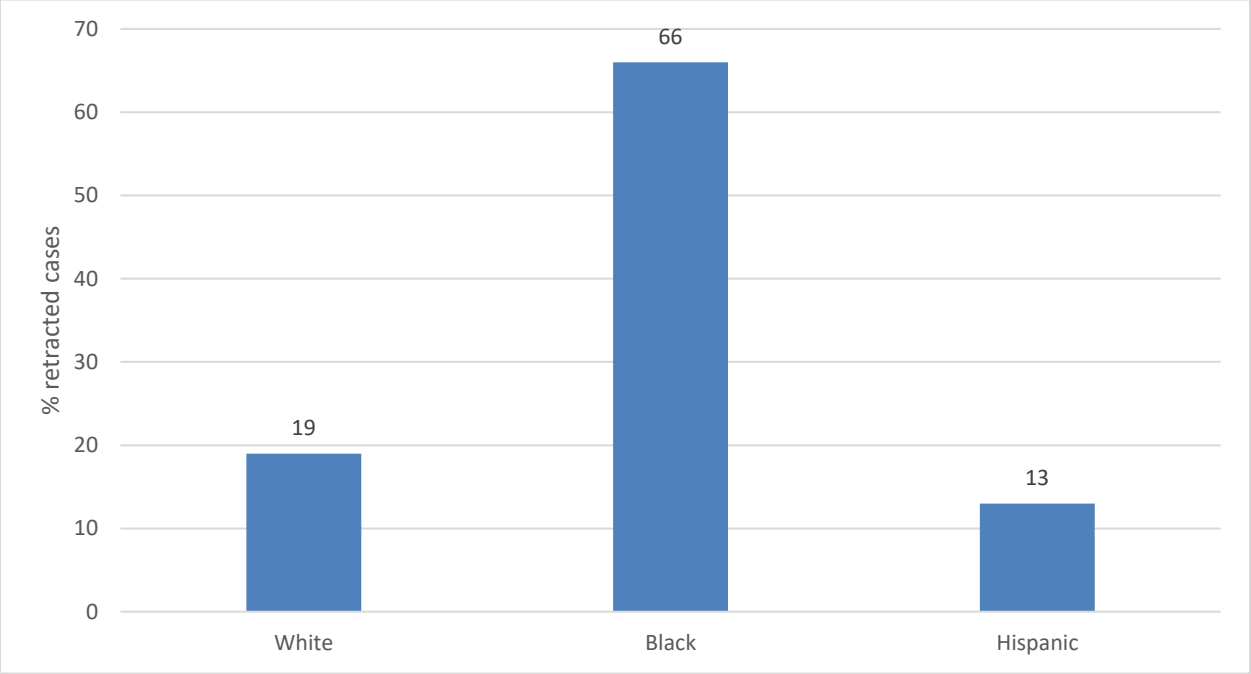
Table 14 presents several interesting features. First, of the 419 cases in which the statewide AOPC data indicated that the death penalty was sought (see Appendix C**),** we captured 313 (75%) in our field data, the majority of such cases statewide. In the field data, prosecutors filed death penalty motions against 36% of White defendants, 33% of Black defendants, and 56% of Hispanic defendants. Thus, within race/ethnic groups, nearly equal proportions of White and Black defendants had the death penalty sought against them, but a comparatively greater proportion of Hispanic defendants had the death penalty sought against them. Figure 4 shows these differences graphically.

Figure 4. Death Penalty Outcomes by Race/Ethnicity



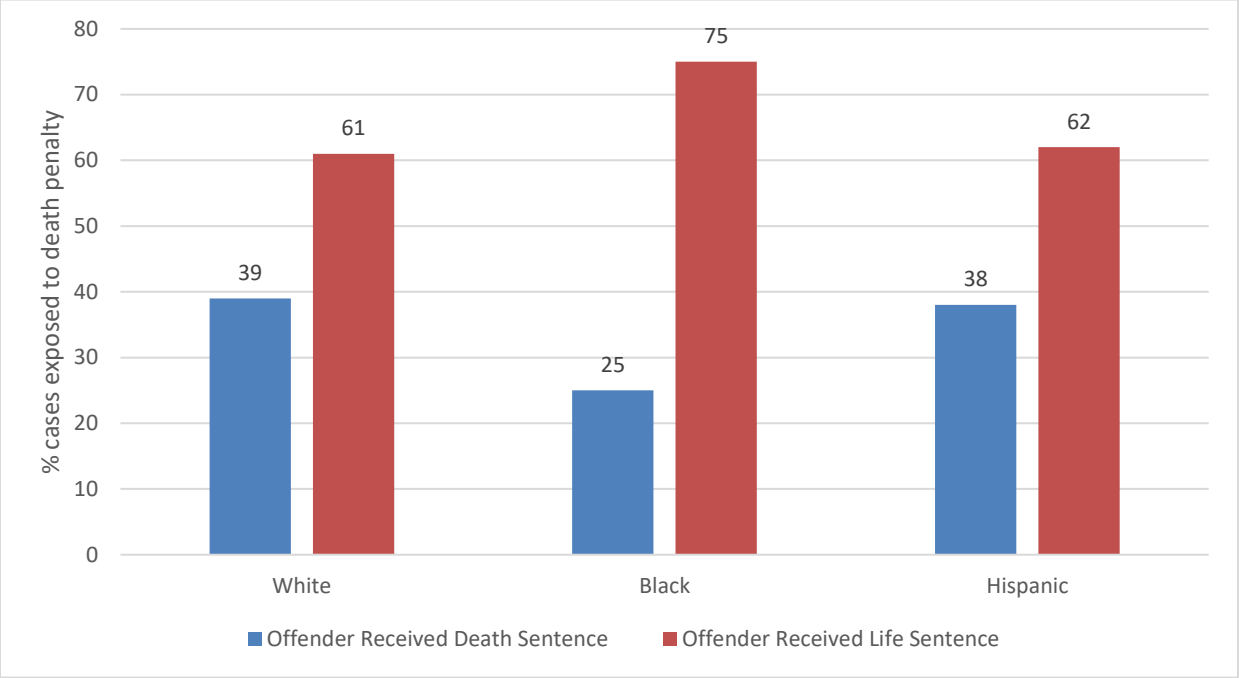
Similarly, among the cases in which prosecutors initially filed motions for the death penalty, we considered how often they retracted those filings. Within race/ethnic categories in the field data, among the 313 cases in which prosecutors initially filed death penalty motions, prosecutors retracted those filings in 36% (27/76) of cases with White defendants, 49% (97/197) of cases with Black defendants, and 54% (19/35) of cases with Hispanic defendants. Thus, a greater proportion of the cases in which the death penalty was retracted involved Black or Hispanic defendants, as opposed to White defendants. Figure 5 also shows these differences.

Figure 5. D.A. Sought and Later Retracted Death Penalty



Finally, we examined racial and ethnic disparities within the death sentencing decision. Within racial/ethnic categories in the field data, 39% of White defendants, 25% of Black defendants, and 38% of Hispanic defendants who faced the death penalty received it. It should also be recalled from our earlier descriptive statistics (in Chapter II and in Table 8) that greater absolute numbers and proportions of Black defendants are charged with and convicted of first-degree murder, and ultimately exposed to the death sentencing decision. This is true in the overall AOPC docket data (Appendix C) and in the field data. As mentioned earlier, our case sample at the start contained an already very racially disproportionate population of first-degree murder charges and convictions. Therefore, the numbers and percentages of those who receive the death penalty *overall* will also be racially disproportionate. But, the proportions of defendants *within race/ethnicity categories* reveal that proportionally more White defendants are exposed to and receive the death penalty, compared to the percentages of Black defendants exposed to and receiving the death penalty. Figure 6 shows these differences as a graph.

Figure 6. Cases Ultimately Exposed to the Death Penalty



We next examine the breakdown by race/ethnicity of the statutory aggravating circumstances filed by prosecutors and found by judges and juries. These data are set forth in Table 15. Several race/ethnic differences in this examination of aggravating circumstances are evident. 82% of those defendants for whom prosecutors found the aggravating circumstance, "victim was a firefighter or peace officer," to be present were Black. Black defendants accounted for 63% of cases in which the aggravating circumstance, "committed in perpetration of felony," was found to be present by prosecutors. Black defendants accounted for 69% of cases in which the aggravating circumstances, "knowingly created grave risk of death" or "defendant convicted of another murder," were found to be present by prosecutors. Finally, Black defendants accounted for 79% of cases in which the aggravating circumstance "significant history of violent felonies" was found to be present by prosecutors. White and Hispanic defendants were in the majority of cases where no aggravating circumstances were found by

prosecutors to be present. In addition, Black defendants had greater numbers of aggravating circumstances found to be present by prosecutors per case. For example, prosecutors filed notice of four or more aggravating circumstances against 37 Black defendants, compared to seven White defendants and three Hispanic defendants.

These patterns do not hold up at the penalty trial phase, when either a judge or a jury must find any aggravating circumstance beyond a reasonable doubt. As previously mentioned, aggravating circumstances are found far less often than they are filed. When they are, Black defendants do not dominate the percentages for the aggravating circumstances found by the judge or jury, as much as they do for those filed by the prosecutor. For example, 43% of those defendants for whom the aggravating circumstance, "committed in perpetration of felony", was found by a judge or jury were Black, whereas Black defendants comprised 63% of those defendants against whom prosecutors filed notices of that aggravating circumstance. Black defendants comprised 48% of defendants for whom the aggravating circumstance, "knowingly created grave risk of death", was found by a judge or jury to be present, as opposed to 69% of defendants against whom prosecutors filed notices of that aggravating circumstance. However, a substantial majority (63%) of the defendants for whom the aggravating circumstance, "significant history of violent felonies", was found by a judge or jury to be present were Black (although it should be noted they comprised 79% of the defendants against whom prosecutors had filed notices of that aggravating circumstance). When one examines the within-race proportions of defendants against whom prosecutors filed notices of any aggravating circumstance, however, 37% were Black and 43% were White.

Table 15: Statutory Aggravating Circumstances: Found Present by Prosecutors and Found at Trial by Jury/Judge. (Other race/ethnicity not shown).			
Presented by Prosecutors			
Aggravating Circumstances	**White**	**Black**	**Hispanic**
Victim was firefighter, peace officer	2	9	1
Defendant paid for killing	0	3	0
Victim held for ransom, reward, or shield	0	3	0
Hijacking aircraft	0	0	0
Victim was prosecution witness	5	21	3
Committed in perpetration of felony	30	83	19
Knowingly created grave risk of death	25	93	17
Offense committed by means of torture	18	25	2
Significant history of violent felonies	12	64	5
Defendant convicted of offense carrying life/death	12	25	2
Defendant convicted of another murder	20	59	6
Defendant convicted of voluntary manslaughter	0	10	1
Defendant committed killing during drug felony	3	8	2
Victim was associated with defendant in drug trafficking	1	19	3
Victim was a nongovernment informant	0	4	0
Victim was under 12	7	17	3

Victim was in third trimester or def. knew of pregnancy	1	7	0
Defendant was under PFA from victim	4	6	1
Number of Aggravating Circumstances	**White**	**Black**	**Hispanic**
1	39	86	18
2	26	56	8
3	11	37	8
4	6	17	3
5	1	14	0
6	0	0	0
7	0	2	0
8	0	4	0
Found by Judge/Jury			
Aggravating Circumstances	**White**	**Black**	**Hispanic**
Victim was firefighter, peace officer	2	1	1
Defendant paid for killing	0	1	0
Victim held for ransom, reward, or shield	0	1	0
Hijacking aircraft	0	0	0
Victim was prosecution witness	1	3	1
Committed in perpetration of felony	9	10	4
Knowingly created grave risk of death	7	10	4
Offense committed by means of torture	6	5	0
Significant history of violent felonies	5	10	1
Defendant convicted of offense carrying	4	3	1

life/death			
Defendant convicted of another murder	9	12	2
Defendant convicted of voluntary manslaughter	0	0	0
Defendant committed killing during drug felony	1	0	1
Victim was associated with defendant in drug trafficking	0	1	0
Victim was a nongovernment informant	0	3	0
Victim was under 12	3	2	1
Victim was in third trimester or def. knew of pregnancy	1	3	0
Defendant was under PFA from victim	1	0	0
Number of Aggravating Circumstances	**White**	**Black**	**Hispanic**
1	8	17	5
2	13	15	3
3	1	6	2
4	3	0	0
5	0	0	0
6	0	0	0
7	0	0	0
8	0	0	0

We next examine the breakdown of the statutorily-listed mitigating circumstances presented by defense attorneys and found at the penalty trial by the judge or jury, by defendant race/ethnicity. The non-specific mitigating circumstances, along with the statutorily-listed ones, are reflected in the "number of mitigating circumstances" variable. These are shown in Table

16. The statutory mitigating circumstances that were filed tended to be distributed between White, Black, and, to a lesser extent, Hispanic defendants, more equally than the aggravating circumstances filed by prosecutors. Furthermore, Black defendants tend to have greater numbers of mitigating circumstances presented per case.

Table 16: Statutory Mitigating Circumstances: Presented by Defense and Found by Jury/Judge. (Other race/ethnicity not shown).

Presented by Defense

Mitigating Circumstances	**White**	**Black**	**Hispanic**
No significant history of prior crime	21	24	6
Extreme mental or emotional disturbance	15	15	5
Subst. impaired capacity to appreciate criminality	14	14	7
Age of defendant at time of crime	15	37	12
Acted under extreme duress or domination	7	4	2
Victim was participant in defendant's conduct	0	0	0
Participation was relatively minor	4	2	0
Defendant act not sole proximate cause of death	0	1	0
Number of Mitigating Circumstances (Statutory)	**White**	**Black**	**Hispanic**
1	3	10	1
2	6	23	3
3	6	13	7
4	5	11	0
5	3	2	2

6	3	4	0
7	2	3	1
8 or more	8	8	3
Found by Judge/Jury			
Mitigating Circumstances	**White**	**Black**	**Hispanic**
No significant history of prior crime	12	8	2
Extreme mental or emotional disturbance	7	4	0
Subst. impaired capacity to appreciate criminality	0	5	2
Age of defendant at time of crime	4	9	3
Acted under extreme duress or domination	1	2	0
Victim was participant in defendant's conduct	0	0	0
Participation was relatively minor	1	0	0
Defendant act not sole proximate cause of death	0	0	0
Number of Mitigating Circumstances (Statutory)	**White**	**Black**	**Hispanic**
1	7	11	5
2	5	5	0
3	2	0	0
4	1	1	0
5	0	1	0
6	0	0	0
7	0	0	0
8 or more	0	0	0

A further potentially important pattern to examine is the type of defense counsel representing White, Black, and Hispanic defendants. This is shown in Table 17. In the field data, 35% of Black defendants were represented by privately-retained attorneys, and about 65% of them were represented by either public defenders or court-appointed attorneys. Among White defendants, 45% were represented by privately-retained attorneys, while 55% were represented by public defenders or court-appointed attorneys. Approximately 34% of Hispanic defendants were represented by privately-retained attorneys while 66% were represented by public defenders or court-appointed attorneys. In cases exposed to the death penalty, approximately 38% of White defendants were represented by privately-retained attorneys, compared to 30% of Black defendants and 29% of Hispanic defendants.

Table 17: Types of Defense Counsel by Race/Ethnicity

All Field Cases			
Defense	**White**	**Black**	**Hispanic**
Privately-Retained	97	205	21
Public Defender	77	175	29
Court-Appointed	40	211	12
Cases Where Death is Sought (not retracted)			
Defense	**White**	**Black**	**Hispanic**
Privately-Retained	23	38	5
Public Defender	13	32	8
Court-Appointed	13	30	3

Table 18 indicates the number of defendants who were sentenced by a judge or a jury, by race/ethnicity. Focusing specifically on those cases exposed to the death penalty, 55% of White defendants were sentenced by juries, compared to 62% of Black and 71% of Hispanic

defendants. Thus, proportionally more White defendants (45%) facing the death penalty were sentenced by judges, compared to their Black (38%) and Hispanic (29%) counterparts.

Table 18: Sentenced by Judge or Jury by Race/Ethnicity			
Cases Where Death is Sought (not retracted)			
	White	**Black**	**Hispanic**
Judge	19	26	4
Jury	30	74	12

The final cross-tabulations we examine involve the race of defendants and the race of victims. The victim/defendant dyad has been found to be a consequential factor in death penalty disparity in previous research in Pennsylvania and other states (Baldus, 1997-98; Paternoster and Brame, 2008). First, Table 19 shows the race and gender of victims. The majority of defendants and the majority of victims (57% of first victims, 56% of second victims, and 54% of third victims) are Black. Most victims are also male, but the gender balance grows more equal among cases with second and third victims (this may be due to multiple victim murder cases involving domestic violence and related situations).

Table 19: Race/Ethnicity and Gender of Victims		
First Victim		
Race/Ethnicity	**Frequency**	**Percent**
White	273	31.0
Black	509	57.8
Hispanic	76	8.6

Other	15	1.7
Unreported/Indeterminate	7	.8
Gender	**Frequency**	**Percent**
Male	619	70.3
Female	257	29.2
Unreported/unclassified	4	.5
Second Victim (no second victim in 758 cases)		
Race/Ethnicity	**Frequency**	**Percent**
White	43	33.9
Black	71	55.9
Hispanic	10	7.9
Other	3	2.4
Gender	**Frequency**	**Percent**
Male	74	59.2
Female	51	40.8
Third Victim (no third victim in 856 cases)		
Race/Ethnicity	**Frequency**	**Percent**
White	11	39.3
Black	15	53.6
Hispanic	1	3.6
Other	1	3.6
Gender	**Frequency**	**Percent**
Male	14	50

Female	14	50

Table 20 shows the race of defendant by the race of victim.

Table 20: Race/Ethnicity of Defendant by Race/Ethnicity of Victim				
First Victim				
Defendant Race/Ethnicity	**Victim Race/Ethnicity**			
	White	**Black**	**Hispanic**	**Other**
White	166	31	15	2
Black	89	463	29	3
Hispanic	16	11	32	3
Other	2	4	0	7
Second Victim (no second victim in 758 cases)				
Defendant Race/Ethnicity	**Victim Race/Ethnicity**			
	White	**Black**	**Hispanic**	**Other**
White	21	3	4	0
Black	19	67	3	2
Hispanic	3	1	3	1
Other	0	0	0	0
Third Victim (no second victim in 856 cases)				
Defendant Race/Ethnicity	**Victim Race/Ethnicity**			
	White	**Black**	**Hispanic**	**Other**
White	6	1	0	1
Black	4	14	0	0
Hispanic	1	0	1	0
Other	0	0	0	0

Our final cross-tabulation, Table 21**,** shows the defendant/first victim, race/ethnicity dyads by death penalty outcomes.

Table 21: Death Penalty Outcomes by Defendant/First Victim Race/Ethnicity Dyad; Frequency (row percent)		
	Death Penalty Sought	
	Yes	**No**
White def./White victim	57 (33)	112 (66)
White def./Black victim	14 (42)	19 (58)
White def./Hisp. victim	11 (61)	7 (39)
Black def./Black victim	137 (29)	330 (71)
Black def./White victim	44 (47)	50 (53)
Black def./Hisp. victim	19 (66)	10 (33)
Hisp. def./Hisp. victim	18 (56)	14 (44)
Hisp. def./White victim	13 (76)	4 (24)
Hisp def./Black victim	5 (42)	7 58)
	Death Penalty Retracted	
	Yes	**No**
White def./White victim	21 (37)	36 (63)
White def./Black victim	3 (21)	11 (79)
White def./Hisp. victim	3 (27)	8 (73)
Black def./Black victim	77 (56)	60 (44)
Black def./White victim	17 (39)	27 (61)
Black def./Hisp. victim	5 (26)	14 (74)
Hisp. def./Hisp. victim	9 (50)	9 (50)
Hisp. def./White victim	7 (54)	6 (46)
Hisp def./Black victim	2 (40)	3 (60)
	Death Penalty Received	
	Yes	**No**
White def./White victim	16 (44)	20 (56)

White def./Black victim	3 (27)	8 (73)
White def./Hisp. victim	2 (33)	6 (66)
Black def./Black victim	12 (20)	48 (80)
Black def./White victim	10 (37)	17 (63)
Black def./Hisp. victim	3 (21)	11 (79)
Hisp. def./Hisp. victim	2 (22)	7 (78)
Hisp. def./White victim	5 (83)	1 (17)
Hisp def./Black victim	0 (0)	3 (100)

In Table 21, note that the percentages of the different death penalty outcomes do vary by race-of-victim and by race-of-defendant. For example, from the percentages in Table 21, it appears that cases involving Black defendants and White victims have a greater probability of receiving the death penalty, compared to the average overall probability of receiving the death penalty for all cases. Figures 7-9 show these differences as a set of bar graphs.

Figure 7. Death Penalty Outcomes by Defendant/First Victim Race/Ethnicity Dyad
Death Penalty Sought

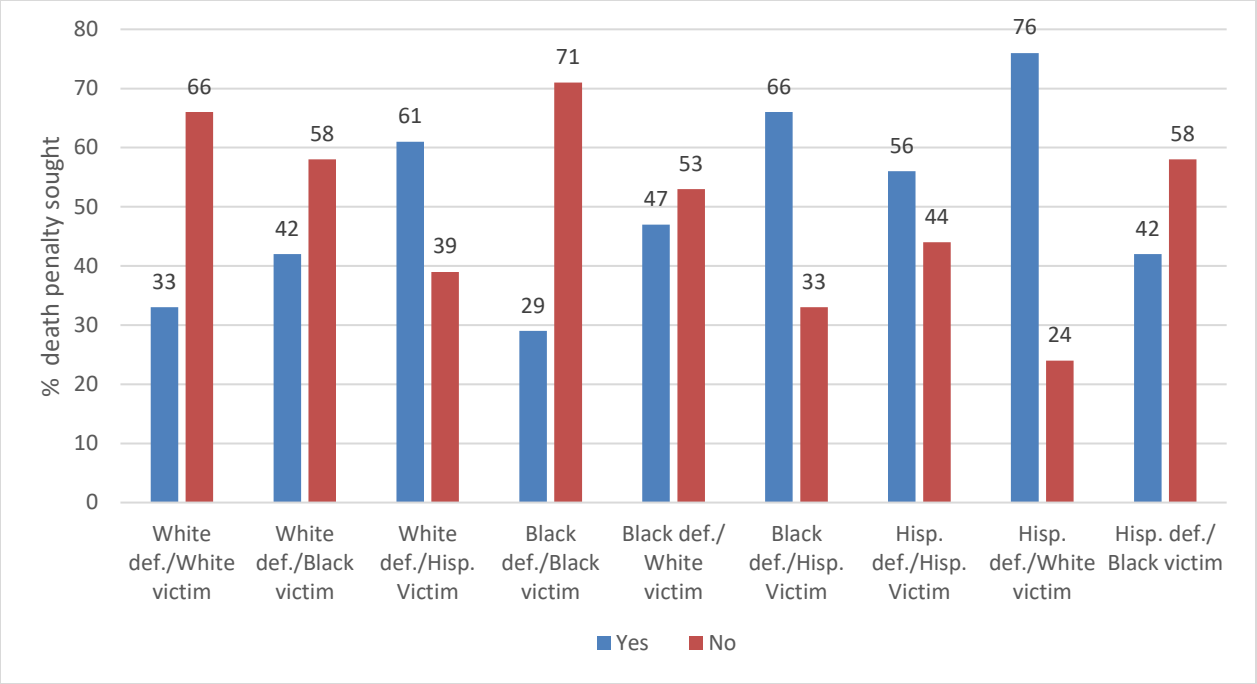


Figure 8. Death Penalty Outcomes by Defendant/First Victim Race/Ethnicity Dyad Death Penalty Retracted

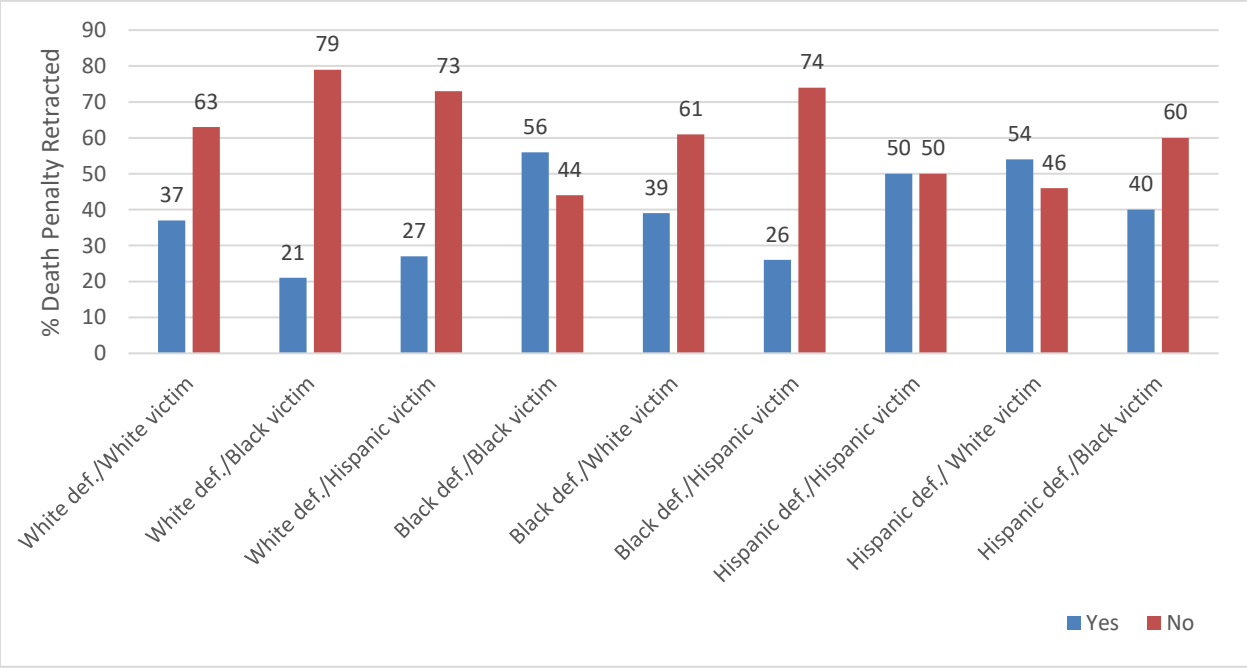
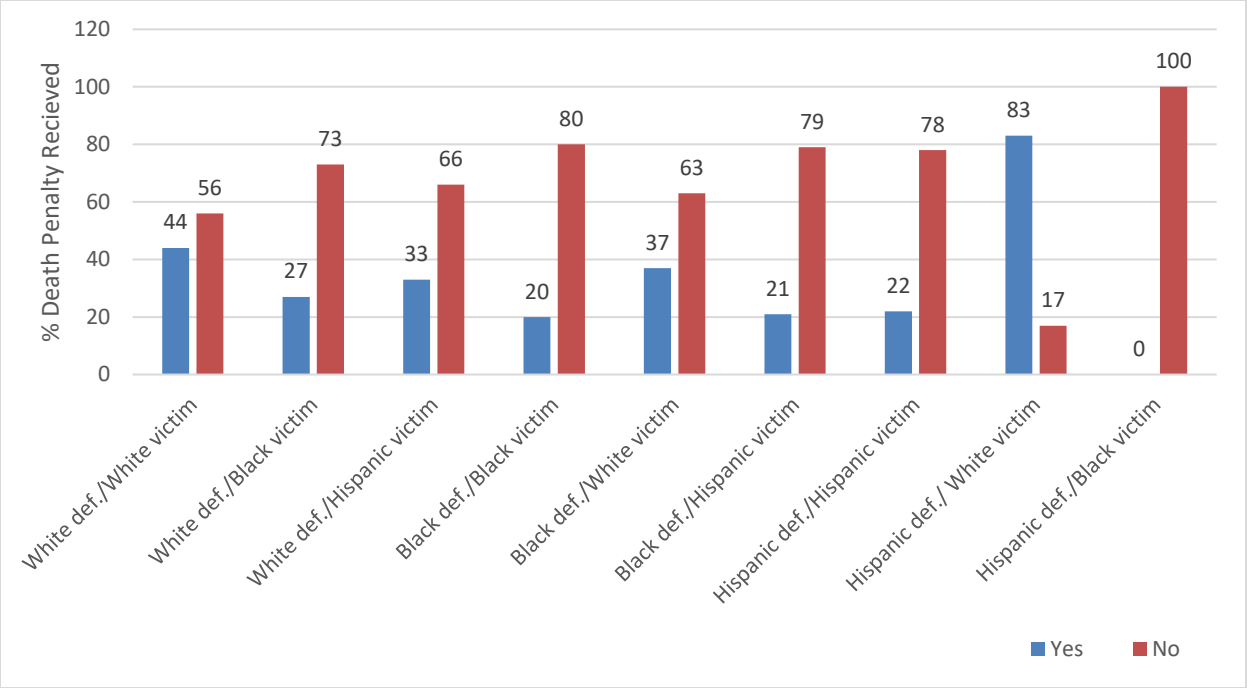


Figure 9. Death Penalty Outcomes by Defendant/First Victim Race/Ethnicity Dyad Death Penalty Received



These cross-tabulations, however, do not control for other factors that may influence the death penalty outcomes. In the next section, we examine if such race-of-victim and race-of-defendant differences persist when we control for the many legally relevant variables that influence the death penalty outcomes.

C. Multivariate Results: Propensity Score Weighting Comparisons

We next present the major results from our analyses using propensity score weighting models. Our dependent variables, or outcomes of interest, are: (1) whether prosecutors filed motions for the death penalty; (2) whether, if a motion for the death penalty was filed, that filing was later retracted by a prosecutor; and (3) whether defendants were sentenced to death. We also performed multivariate logistic regression analyses with our death penalty outcome variables. Logistic regression was used in the well-known Baldus studies (see review in Baldus, 1997-98). Our logistic regression analyses are shown in Appendix B.

Application of "Statistical Significance" to Findings

The concept of "statistical significance" is an issue to keep in mind throughout the discussion of our multivariate analyses. Typically, studies report statistical significance based on p-values (typically of .05 or less). This p-value corresponds to the probability that the size of effect observed in a model could be due to sampling error. Thus, with a conventionally accepted p-value of .05 (a value commonly employed in the sciences), an effect size that is "significant" at that level means that there is only a 5% probability that the observed relationship is a result of chance or random error. Thus, the relationship is said to be "significant", in that it is statistically robust (i.e. not a product of sampling error), although it may or may not be meaningful in terms of its policy relevance. In this study, statistical significance is not relevant in a strict sense, because our data are not a random sample, and in fact, are not really a sample at all. Instead, our field data comprise the *entire* number of first-degree murder convictions for our 18 sampled field counties for the years we examined (2000-2010, but 2005-2010 in Philadelphia). Furthermore, we are not using these counties to statistically generalize to the entire state. Instead, we refer to statistical significance levels throughout the analysis, but we use them merely as a *convention,* indicating, "if this were a random sample, this effect would be big enough to have only a 5% chance of being due to sampling error." We include significance levels here to err on the side of inclusion, and only as an aid in interpreting the magnitude of effects. But again, since our models are actually a population study rather than a sample (i.e. the models include *all* cases), any between-group differences we find are the *actual differences* in our population of first-degree murder convictions in the 18 counties, not an estimate based on a sample.

Table 22 below lists our control variables, or covariates, on which we balance cases in our propensity score models (we also use these same control variables in our logistic regression analyses in Appendix B). Our goal is to make comparisons between our race/ethnicity categories

and other variables of interest, while accounting for as many legally relevant case characteristics and case processing factors as possible within our data. These models, and the control variables they contain, will be our main models for our propensity score weighting analyses.

Table 22: Control Variables
Victim was a prosecution witness
Murder committed in perpetration of felony
Defendant knowingly created grave risk of death
Victim was tortured
Defendant convicted of other offense carrying life/death
Defendant convicted of another murder
Murder committed during drug felony
Defendant was associated with victim in drug trafficking
Victim was under 12
Number of Aggravating Circumstances Note: in filing and retraction models, we include the aggravating variables as independently field coded. In death sentence models, we include the aggravating variables as filed by the prosecutor.
No significant history of prior crime
Extreme mental or emotional disturbance
Subst. impaired capacity to appreciate criminality
Youthful age of defendant at time of crime
Number of mitigating circumstances presented by defense
Multiple victims
Concurrent sex offense conviction
Concurrent robbery conviction
Concurrent burglary conviction
Defense asked for psychiatric evaluation
Victim was a family member
Victim had children
Victim killed with knife
Victim killed with bare hands (reference: killed with gun)
Victim didn't resist
Victim was killed in an especially brutal manner
Defendant tried to hide victim's body
Victim killed execution style
Defendant ambushed victim
Defendant age (years)
Privately-retained attorney

Table 22: Control Variables
Court-appointed attorney (reference category: public defender)
Defense claimed killing was an accident
Defense claimed mistaken identity
Defense claimed witnesses not credible
Defense claimed killing not first-degree murder
Defendant admitted guilt
Defense presented psychiatric expert witness
Physical evidence present
Weapon linked to defendant
Eyewitness testified
Co-defendant testified against defendant
Defendant IQ between 71-90
Sentenced by Jury (in death penalty models only)
Allegheny County (in some models) (reference category: other field data counties).
Philadelphia County (in some models) (reference category: other field data counties).

D. Propensity Score Weighting Analysis

The well-known death penalty studies by Baldus (1997-98) and other earlier studies used logistic regression methods, which we also present in Appendix B**.** However, for estimating causal comparisons between groups, for example, Black or Hispanic versus White defendants, logistic regression has limitations. Statistical literature shows that logistic regression results can be biased under certain conditions (Apel and Sweeten, 2010; Austin, 2011). These conditions include: (1) situations where the comparison groups are very dissimilar on key confounding covariates (that is, the groups to be compared differ a great deal on key control variables), and (2) situations where selection bias might exist (that is, the treatment and control groups might have unequal likelihoods of being selected into the data, and/or exposed to the outcome of interest). Both of these conditions are a risk in the present study. Regarding the first condition, for example, Black, White, and Hispanic defendants differ considerably in their averages or

proportions on many of our control variables, such as aggravating circumstances, concurrent convictions, case characteristics, etc. In other words, we know that these groups are *imbalanced* on these control variables. Regarding the second condition, it is possible that there is race or ethnicity-related selection bias affecting the likelihood of being arrested, charged, and/or convicted of first-degree murder. We cannot directly assess whether such selection bias exists, but we can try to make cases as similar, or *balanced*, as possible on known covariates in the data. That is a major advantage of propensity score methods.

Propensity score methods attempt to replicate experimental design statistically, and thus, attempt to address such limitations as covariate imbalance, selection bias, and omitted variable bias (Apel and Sweeten, 2010; Li, Zaslavsky and Landrum, 2013). Propensity score weighting provides a more effective way than traditional logistic regression to make cases comparable, to "compare apples with apples and oranges with oranges," so to speak. Propensity score methods attempt to make "treatment" (the comparison category of interest, for example, Black defendants) and "control" groups (the group with which the treatment group is compared) similar or "balanced" on known covariates (control variables), and have similar error variance.[11] Typically, propensity score methods are also thought to be more effective than logistic regression at addressing omitted variable bias (when some unmeasured variable might bias or confound results). No statistical method can perfectly solve the problem of omitted variable bias, but

[11] For documentation and a fuller explanations of propensity score analysis, see https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3144483/ For details on propensity score methods procedures in STATA, see http://blog.stata.com/2015/07/07/introduction-to-treatment-effects-in-stata-part-1/ and http://www.stata.com/manuals13/te.pdf (under "effects intro"). For a simple primer on propensity score weighting, see https://sociology.arizona.edu/sites/sociology.arizona.edu/files/u233/soc561_psa%20with%20teffects%20final.pdf

propensity score methods have the advantage of making the treatment and control groups balanced on known and measured control variables, and also in their error variance (that is, the degree of prediction error). Propensity score methods may be the best approach to correct for these problems, short of an actual randomized control trial, which clearly would be impossible and, indeed, unethical, in the context of death penalty research.

Our analyses below were conducted with propensity score weighting.[12] This is the same method used in the study of disparity in Maryland's death penalty by Paternoster and Brame, (2008), and the study of the application of the federal death penalty by Schonlau (2006). Propensity score models estimate a logistic regression model to obtain a conditional probability (or propensity score) of a defendant being in a "treatment group" or category of comparison interest (being a Black or Hispanic defendant, for example), and then weighting cases which are not in this "treatment" category of interest by the inverse of their propensity scores. This effectively weights the "non-treatment" cases according to their similarity to the treated cases on the propensity score.

For example, if we were examining differences between Black defendants and defendants of other races in being sentenced to death, we would estimate a logistic regression model "predicting" the probability that a defendant is Black, using predictors of interest that we want to

[12] In our initial analyses, we also examined propensity score *matching* models. In propensity score matching, treatment and control cases are matched (rather than weighted) based on the degree of similarity of their propensity scores. This sometimes resulted in the loss of cases that did not match in a given analysis, and thus, resulted in not fully exploiting the dataset. Matching methods also often produced a problematic "balance", due to small numbers of matching cases. Our analyses actually produced superior balancing, and fully used all cases in the data, using propensity score weighting rather than matching. In our later supplemental analyses, we replicated all of the statistically significant effects presented below in propensity score matching analyses, and obtained substantively the same—or similar—effects.

control for, or *balance*, in comparing the Black and non-Black defendants in their likelihood of receiving the death penalty. This logistic regression would give us a propensity score for each case, and we would use that propensity score to weight the non-Black cases. This weighting makes non-Black defendant cases "count" a greater or lesser amount according to their similarity to Black defendant cases on the propensity score. Non-Black defendant cases that are more similar to Black defendant cases count more, while cases that are less similar count to a lesser degree. This weighting on the propensity score is a way to balance the comparison groups, or render them more similar and comparable, on the control variables.

The weighted cases are then used in a second model, which compares the Black and non-Black cases in their likelihood of receiving the death penalty. Since our study is not an experiment, and race/ethnicity (and other comparisons of interest) are not manipulable experimental conditions, this second model gives us an average controlled difference (ACD), rather than an average treatment effect (ATE) (see Li, et al., 2013 for this distinction). This ACD is the difference between comparable Black and non-Black defendants (for example) in their conditional probability of receiving the death penalty, net of any influence of confounding predictors accounted for by the propensity model (i.e., the control variables listed in Table 22 and included in the first model) (Li, et al., 2013). In other words, the ACD tells us the probability difference between the comparison groups when they are balanced, or made similar, on the confounding/control variables in the propensity score model. Balance statistics for each of our comparisons in our tables appear in Appendix D**.**[13] It is this average controlled difference (ACD) on which we mainly focus in the findings below.[14]

[13] "Covariate balance" signifies that the means of the control variables, or covariates, for the comparison (or "treatment") and control groups are roughly the same. Rosenbaum and Rubin (1985) suggest the use
(…continued)

Our propensity score models included all of the control variables listed above in Table 18. As before, our dependent variables, or outcomes of interest, are: (1) whether prosecutors filed motions for the death penalty; (2) whether, if a motion for the death penalty was filed, that filing was later retracted by a prosecutor; and (3) whether defendants were sentenced to death. In the tables below, each line represents a separate, different propensity score weighting model.

The first column in the tables, marked "Overall Model," shows the overall ACD for the group comparisons for all counties pooled together. These comparisons do not control for, or account for, county differences in any way. However, theory and prior research on the death penalty in particular, and sentencing in general, suggest that the probability of different outcomes likely varies among counties, and that the effects of race/ethnicity of defendant and victim might even differ among counties.[15] Therefore, we also include comparisons from logistic regression models of the death penalty outcomes--with dummy variables for Philadelphia and Allegheny County versus the other field counties as predictors--that are adjusted by the propensity score

(continued…)

of the standardized difference statistic to assess balance (see also, Paternoster and Brame, 2008: 984-985). A general rule of thumb for assessing this standardized difference statistic is that values between -.20 and .20 for covariates indicate acceptable balance.

[14] We conducted all propensity score weighting analyses using the "TEFFECTS" and "IPW" procedures in STATA statistical software, version 14.

[15] Since we have data on individual cases nested within counties, our data have a multilevel structure. The statistics literature does not provide definitive guidance on how to address multilevel data with propensity score methods, but various options exist (see Li, et al., 2013). According to Li, et al. (2013), researchers can either control for the nesting of cases within larger groupings (like counties) in producing the propensity score (i.e., as a variable in the propensity model), or incorporate the nested groupings (i.e., counties) in the second stage of a logistic regression model adjusted for the propensity score weighting. We chose the latter strategy in order to highlight, rather than simply control for, differences among counties. In supplemental models, we controlled for the county variables by including them in the propensity score model. Results were substantively the same as those in the propensity weighting adjusted regressions that control for county in the tables we present.

weighting from the models in the first column. In other words, to address differences among counties in the race/ethnic group comparisons, we estimate propensity weighting-adjusted logistic regressions that: (1) weight the cases according to their propensity scores that attempt to balance the race/ethnic groups on the covariates in Table 18, and (2) include the county variables as predictors of the odds of the various death penalty outcomes after propensity score weighting.

Thus, the second, third, and fourth columns of the tables that follow show the results from these propensity adjusted logistic regression models that take into account county differences. The ACDs are the differences between the race/ethnic groups when controlling for county differences between Allegheny County and Philadelphia on the one hand, and the other 16 counties in the field study on the other. The third and fourth columns again show the differences between Allegheny County and Philadelphia on the one hand, and the other 16 counties in the field study of a specific comparison group's odds of receiving an outcome, on the other. In other words, the county comparisons show how the death penalty outcomes for a given comparison group (say, White defendants or Black defendants) differ for Allegheny County versus the other 17 counties in the field study, and Philadelphia versus the other 17 counties in the field study. The county effects are expressed as *odds*, *rather than ACD*, because the county effects are entered as predictors in the logistic regression models that are first adjusted by propensity score weighting.

In addition, in the "Overall Models" and in the "Controlling for County" models below, the p-value denotes whether that coefficient is significantly different from cases in the reference category, that is, the cases not in the category examined. In the county models, p-values denote whether the coefficient in question is significantly different from that effect in the reference set of counties, that is, the counties in the field study other than Philadelphia and Allegheny County.

Defendant and Victim Race/Ethnicity Comparisons

Table 23 below presents the results from a variety of propensity score weighting models of the decision to file a motion to seek the death penalty that make comparisons between the race/ethnicity of defendants, the race/ethnicity of victims,[16] and different combinations of race/ethnicity of defendant and race/ethnicity of victim. Some spaces in the table are blank because we did not have enough cases to conduct a viable analysis.[17]

Table 23: Death Penalty Filed (N = 880)

	Overall Model		Controlling for County		Allegheny		Philadelphia	
	Avg. Controlled Difference	**p**	**Avg. Controlled Difference**	**p**	**Odds**	**p**	**Odds**	**p**
White Defendant	-.05	.36	-.07	.19	.20	.002	.39	.16
Black Defendant	.02	.61	.05	.08	.35	.001	.76	.17

[16] In the case of multiple murder victims, the victim race/ethnicity variable indicates whether any of the victims were White, Black, or Hispanic.

[17] In addition, the propensity weighted models for three of the comparisons were only partially successful in balancing the covariates (see Appendix D): the models for Hispanic defendants, White defendants with White victims, and Hispanic defendants with Hispanic victims had eight or more covariates that had standardized difference scores of greater than |.20|, meaning that the distribution of those covariates remained different between the comparison group. Also, in some models involving smaller numbers of cases receiving the death penalty outcome in question (i.e., death penalty retraction and especially receiving the death penalty), one or more specific covariates were omitted due to a lack of variation across the race/ethnic or other categories compared. In other words, some comparisons lacked a comparable number of cases on one or more specific variables, and these variables had to be omitted. Appendix D, which shows the balance statistics of the covariates for all models, also shows the specific variables included for each model.

Table 23: Death Penalty Filed (N = 880)								
	Overall Model		**Controlling for County**		**Allegheny**		**Philadelphia**	
	Avg. Controlled Difference	**p**	**Avg. Controlled Difference**	**p**	**Odds**	**p**	**Odds**	**p**
Hispanic Defendant	-.06	.57	------	----	--------	-----	------	----
White Victim	-.02	.52	-.04	.28	.20	.000	.58	.22
Black Victim	.01	.78	.06	.14	.29	.003	.57	.09
Hispanic Victim	.21	.001	-----	----	--------	-----	------	-----
White Def./White Vic.	.08	.39	.08	.38	.26	.03	2.36	.37
White Def./Black Vic.	------	-----	------	----	--------	-----	------	-----
White Def./Hispanic Vic.	------	-----	------	-----	--------	-----	------	------
Black Def./White Vic.	-.10	.06	-.07	.17	.21	.04	.77	.63
Black Def./Black Vic.	.02	.64	.07	.13	.30	.02	.57	.14
Black Def./Hispanic Vic.	------	-----	------	----	--------	-----	------	-----
Hispanic Def./White Vic.	------	-----	------	----	--------	-----	------	-----
Hispanic Def./Black Vic.	------	-----	------	----	--------	-----	------	-----
Hispanic Def./Hisp. Vic.	-.09	.47	------	----	--------	-----	------	-----

In general, the different comparison groups show relatively small differences in the likelihood a motion for the death penalty will be filed in those cases. For example, in the first line of the table, White defendants are 5% less likely (ACD = -.05) to have a motion for the death penalty filed against them, a difference that would not be statistically significant if this was

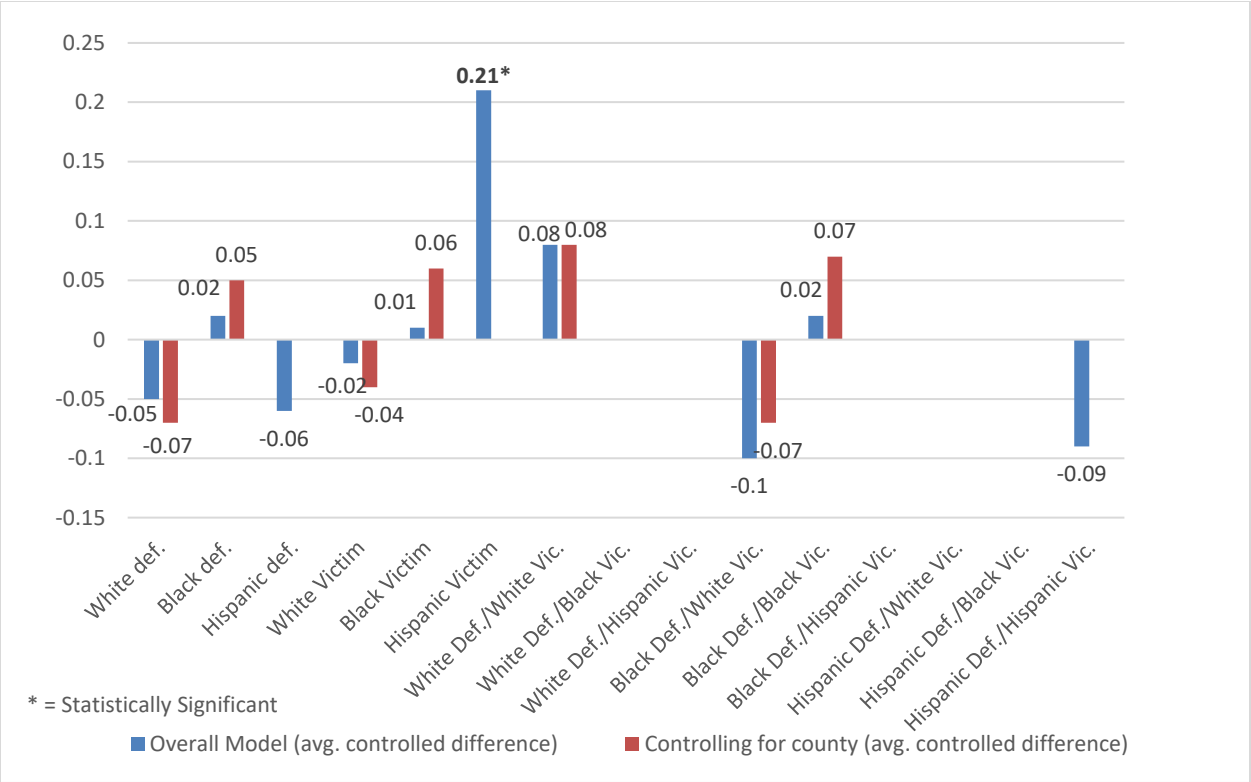
a random sample. Controlling for county differences, White defendants have a 7% smaller probability of having a motion for the death penalty filed against them. However, White defendants are significantly less likely to have a motion for the death penalty filed against them in Allegheny County, compared to the other 17 counties in the field study (Whites' odds of receiving a death penalty filing in Allegheny County are .20). In fact, each type of defendant, victim, and defendant/victim combination is significantly less likely to have a motion for the death penalty filed against them in Allegheny County, than in the other 17 counties. This coincides with the logistic regression results presented in Appendix B, where Allegheny County cases had considerably lower odds of having the death penalty filed than the other 17 counties in the field study.

The only comparison in the overall models of death penalty filing that is statistically significant was for cases with Hispanic victims. These cases had a 21% greater probability of having the death penalty filed.[18] Interestingly, Hispanic defendants had a 6% smaller probability of having the death penalty filed against them, and cases with Hispanic defendants and Hispanic victims have a 9% smaller probability. Thus, the Hispanic victim effect may be due to a greater likelihood of filing in cases where a non-Hispanic defendant killed a Hispanic victim. County-adjusted comparisons were not possible for any of the Hispanic defendant or victim comparisons, because there were insufficient numbers of such cases in many of the counties for analysis (in fact, the Hispanic victim and defendant cases were clustered in Philadelphia and Allegheny County). Another notable effect was found in cases with Black defendants and White victims.

[18] When this comparison is examined with an identical propensity score *matching* model, the average controlled difference is .16, p-value < .0001. Substantively, this is a similar result, in that cases with Hispanic victims are 16% more likely to have the death penalty filed, and the effect would be highly statistically significant.

These cases had a 10% smaller probability of death penalty filing than other cases, and the effect would almost reach statistical significance (.06 rather than .05), if such statistical significance was applicable to the cases in our analysis.[19] Figure 10 shows these between group differences graphically. In the graph, note that many of the differences (discussed above) are not statistically significant.

Figure 10. Death Penalty Filed



- No bars where there were not enough viable cases for comparison

The next table (Table 24) shows the results of propensity score weighting models for whether a motion for the death penalty was retracted. These models only include the 313 cases

[19] When this comparison is examined with an identical propensity score *matching* model, the average controlled difference is -.14, p-value < .0001. Substantively, this means that in the matching model, Black defendant/White victim cases are 14% less likely to have the death penalty filed, and the effect would be highly statistically significant.

in which motions for the death penalty were filed (i.e., the death penalty filing cannot be retracted if it is not filed in the first place).

Table 24: Death Penalty Retracted (N = 313)								
	Overall Model		**Controlling for County**		**Allegheny**		**Philadelphia**	
	Average Controlled Difference	**p**	**Average Controlled Difference**	**p**	**Odds**	**p**	**Odds**	**p**
White Def.	-.17	.16	-.16	.03	.54	.56	.19	.20
Black Def.	.05	.43	.05	.52	.82	.75	3.52	.0001
Hispanic Def.	.20	.49	------	-----	-------	-------	-------	-------
Any White Vic.	-.10	.37	-.13	.09	.79	.82	.22	.05
Any Black Vic.	.10	.14	.08	.25	.92	.90	4.39	.004
Any Hispanic Vic.	.06	.69	------	-----		-------	-------	-------
White Def./White Vic.	-.06	.80	.13	.06	.28	.23	< .01	.0001
White Def./Black Vic.	------	----	------	-----	-------	-------	-------	-------
White Def./Hispanic Vic.	------	----	------	-----	-------	-------	-------	-------
Black Def./White Vic.	-.17	.08	-.08	.27	.35	.402	6.49	.03
Black Def./Black Vic.	.04	.74	.03	.74	1.55	.615	4.90	.04
Black Def./Hispanic Vic.	------	----	------	-----	-------	-------	-------	-------
Hispanic Def./White Vic.	------	----	------	-----	-------	-------	-------	-------
Hispanic Def./Black Vic.	------	----	------	-----	-------	-------	-------	-------
Hispanic Def./Hispanic Vic.	.41	.55	------	-----	-------	-------	-------	-------

In these models, there are a number of notable effect sizes, but few of them would be statistically significant in a random sample.[20] For example, the ACD for Hispanic defendants

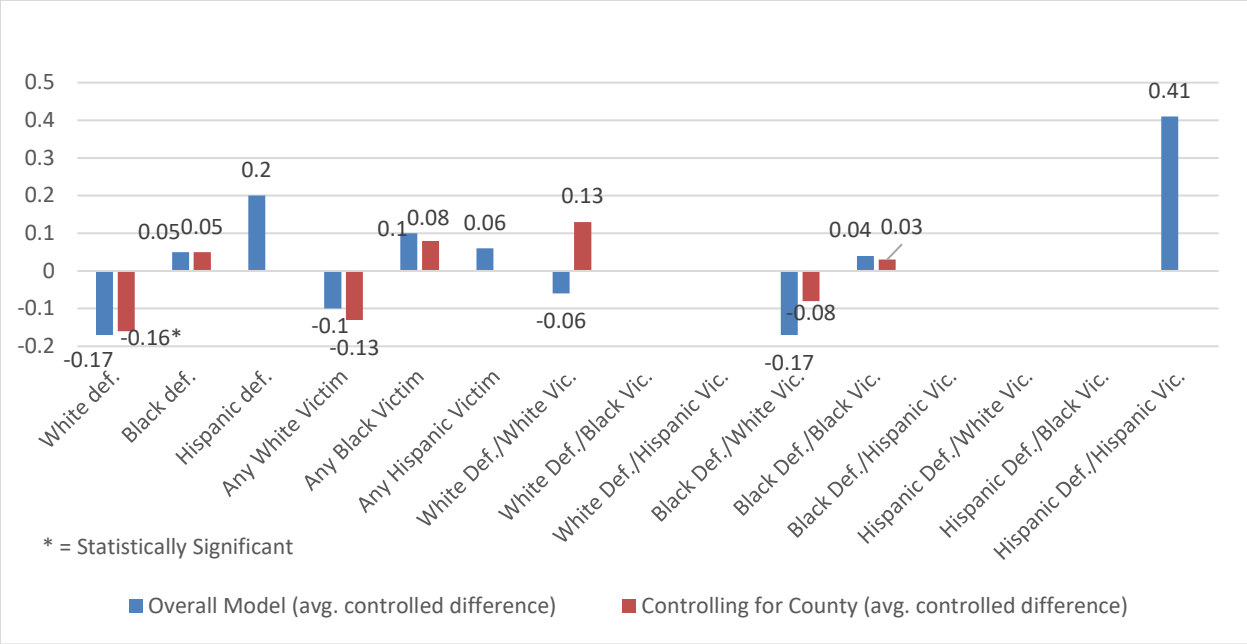
[20] The covariate balance for several of the "death penalty retracted" comparisons was less than ideal; that is, the propensity weighted models were only partially successful in balancing the covariates. Most of these models had eight or more covariates that had standardized difference scores of greater than |.20|, (…continued)

indicated that Hispanic defendants are 20% more likely to have a death filing retracted, but the effect is not statistically significant (probably due to less statistical power for this comparison, since there are only 62 Hispanic defendants). Cases with Black defendants and White victims are 17% less likely to have a death filing retracted in the overall model, and this effect approaches standard statistical significance. In the models controlling for county differences, White defendants are 16% less likely to have a death filing retracted, and this effect would be statistically significant. Cases with White victims are 13% less likely to have a death filing retracted, when controlling for county differences, and this approaches statistical significance. White defendant/White victim cases are 6% more likely to have a death filing retracted, controlling for county, and this is nearly significant. Figure 11 shows these differences as a set of bar graphs.

Figure 11. Death Penalty Retracted

(continued…)

meaning that the distribution of those covariates remained different between the groups (see Appendix D).



- No bars where there were not enough viable cases for comparison

An important pattern, distinctive to Philadelphia, emerged in comparisons among counties in Table 24. In Philadelphia, cases with Black defendants, Black victims, and any defendant/victim combination involving Black individuals are very highly likely to have a death filing retracted. In contrast, cases with White defendants are comparatively much less likely to have a death filing retracted. These patterns would indicate statistically significant differences in retracting death penalty filings between Philadelphia County and the other 17 counties in the field data.

Next, Table 25 shows the results of propensity score weighting models examining the likelihood of receiving the death penalty.[21]

[21] In our death penalty propensity score models, we include all of the 880 field data cases, rather than just the 167 cases where the death penalty was filed and not retracted. This strategy follows the logic of the Paternoster and Brame (2008) study, which examined death-eligible cases that could have gotten the death penalty. The propensity score weighting (or matching) procedure ensures that cases are comparable
(…continued)

Table 25: Sentenced to the Death Penalty (N = 880, full sample)								
	Overall Model		Controlling for County		Allegheny *		Philadelphia *	
	Average controlled difference	p	Average controlled difference	p	Odds	p	Odds	p
White Def.	.01	.54	.01	.70	.79	.72	.03	.001
Black Def.	-.03	.32	-.02	.38	1.10	.89	.19	.001
Hispanic Def.	-.02	.32	-------	-----	---------	-----	--------	-----
Any White Vic.	.08	.00001	.06	.001	.25	.01	.18	.04
Any Black Vic.	-.06	.02	-.05	.04	2.27	.32	.51	.34
Any Hispanic Vic.	-.02	.09	-------	-----	---------	-----	--------	-----
White Def./White Vic.	.03	.26	.01	.35	.73	.66	.08	.02
White Def./Black Vic.	------	-----	------	------	-------	------	--------	--------
White Def./Hispanic Vic.	------	-----	------	------	-------	------	--------	--------
Black Def./White Vic.	.004	.86	-.001	.94	.25	.12	.12	.04
Black Def./Black Vic.	-.05	.06	-.05	.06	3.42	.21	.68	.63
Black Def./Hispanic Vic.	------	-----	------	------	-------	------	--------	-----
Hispanic Def./White Vic.	------	-----	------	------	-------	------	--------	--------
Hispanic Def./Black Vic.	------	-----	------	------	-------	------	--------	--------
Hispanic Def./Hispanic Vic.	------	-----	------	------	-------	------	--------	--------

In these comparisons, cases with White victims are 8% more likely to receive a death sentence in the overall model, and 6% more likely to receive it when controlling for county

(continued…)

and covariates are balanced, whether a motion for the death penalty was filed or not. We replicated all these analyses with only the 167 cases where prosecutors filed notice to seek the death penalty and did not retract the filings. However, in these analyses, estimates become unstable/unreliable due to the low number of cases, and the comparison and control groups become difficult to balance on the covariates/control variables.

differences.[22] These effects would be highly statistically significant if this dataset were a sample. By contrast, cases in which the victims are Black are 6% less likely than other cases to receive the death penalty overall, and 5% less likely controlling for county differences.[23] Similarly, cases with Black defendants and Black victims are 5% less likely to receive the death penalty in both the overall and county-controlled model, and the effects approach conventional statistical significance (p- value = .06).[24] Thus, we see clear evidence of race-of-victim effects discussed earlier in the literature review.[25] Figure 12 shows these differences graphically.

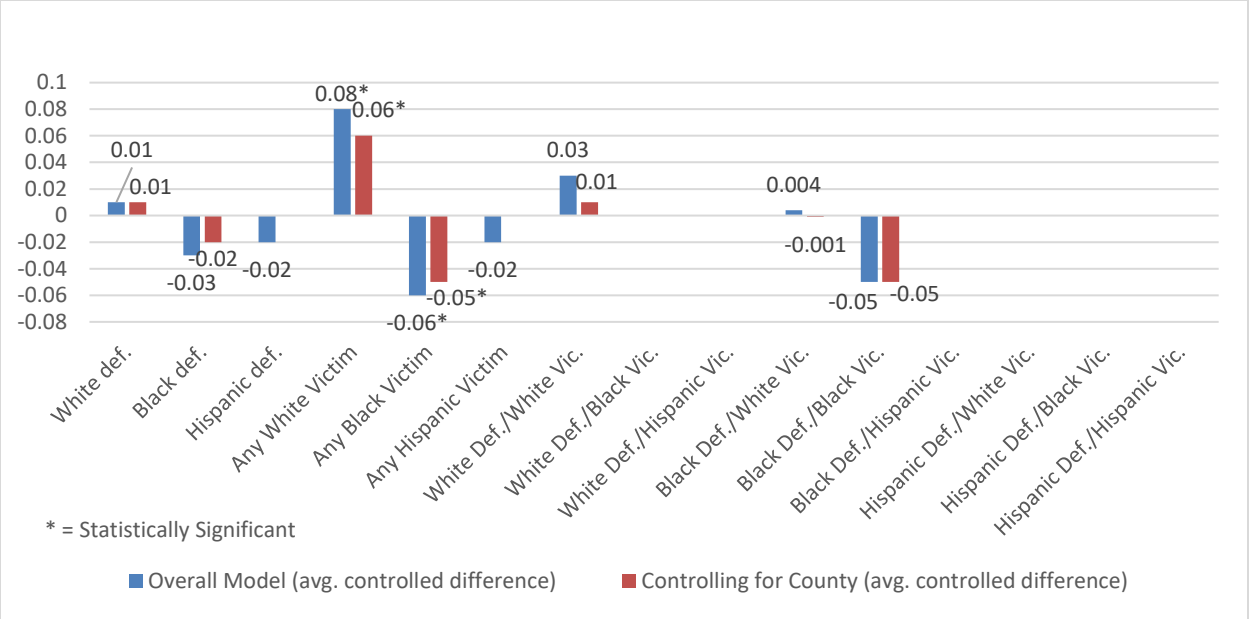
[22] When this comparison is examined with an identical propensity score *matching* model, the average controlled difference is .07, p-value < .0001. Substantively, this means that in the matching model White victim cases are 7% more likely to receive the death penalty, and the effect would be highly statistically significant.

[23] When this comparison is examined with an identical propensity score *matching* model, the average controlled difference is -.05, p-value = .02. Substantively, this means that in the matching model Black victim cases are 5% less likely to receive the death penalty, and the effect would be statistically significant.

[24] When this comparison is examined with an identical propensity score *matching* model, the average controlled difference is -.06, p-value < .0001. Substantively, this means that in the matching model Black defendant/Black victim cases are 6% less likely to receive the death penalty. Unlike in the propensity score weighting model, in the matching model, this effect would be highly statistically significant.

[25] The propensity weighted models for three of the comparisons had eight or more covariates that had standardized difference scores of greater than |.20|. These were: Hispanic defendants, Black victims, and Black defendants/Black victims. See Appendix D.

Figure 12. Sentenced to the Death Penalty



- No bars where there were not enough viable cases for comparison

Turning to the comparisons among counties, nearly all defendant types and defendant/ victim combinations are substantially less likely to receive the death penalty in Philadelphia, than in Allegheny County or the other 16 counties in the field study. This coincides with the logistic regression findings, in which defendants in Philadelphia cases had lower odds of receiving the death penalty. Additionally, the death penalty was notably less likely to be imposed in cases with White victims in Allegheny County (odds = .25) than in the other 17 counties in the field study.

Between-County Comparisons

Given the substantial county differences we have seen in the analyses so far, we examined propensity score weighting models, directly comparing Philadelphia and Allegheny County to the other 16 counties in the field study (the propensity score model contains all the

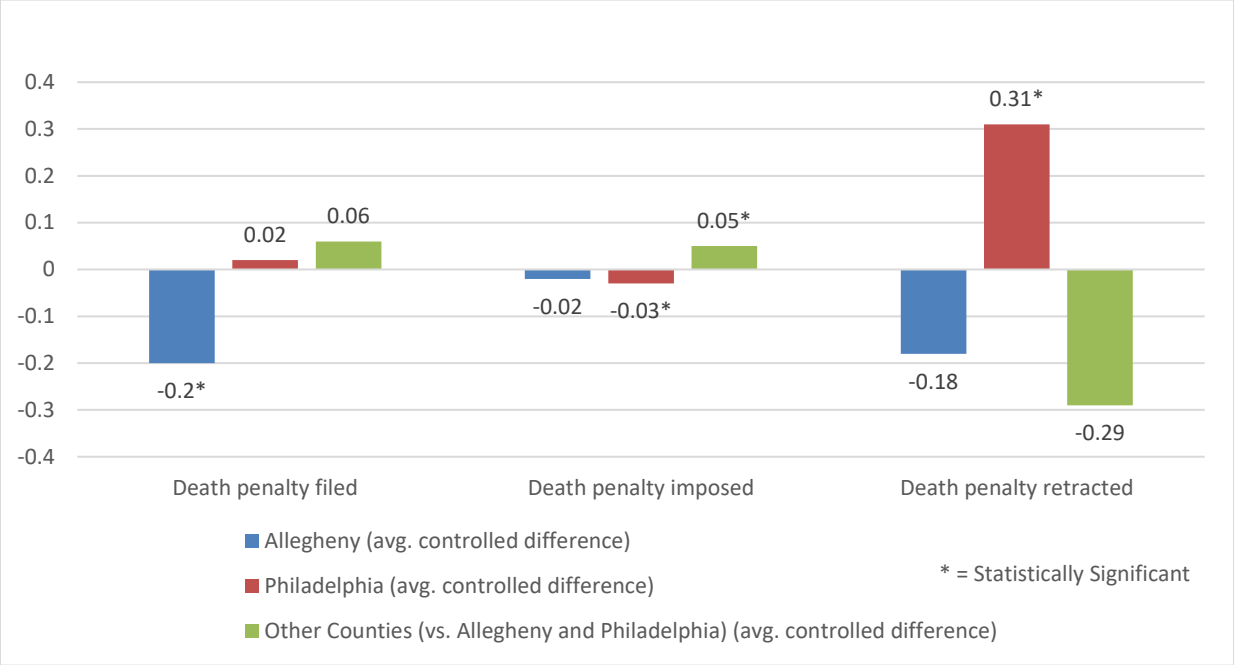
control variables from the list in Table 22, and the race-of-defendant and race-of-victim variables). Table 26 presents these models.

Table 26: County Comparisons: Philadelphia and Allegheny vs. Rest of Field Counties

	Allegheny		Philadelphia		Other Counties (vs. Allegheny and Philadelphia)	
	Average controlled difference	**p**	**Average controlled difference**	**p**	**Average controlled difference**	**p**
Death penalty filed (N=880)	-.20	.001	.02	.50	.06	.08
Death penalty imposed (N=880)	-.02	.42	-.03	.02	.05	.001
Death penalty retracted (N=313)	-.18	.59	.31	.001	-.29	.19

These models largely bear out the findings above. Prosecutors in Allegheny County are notably (20%) less likely than the rest of the counties, including Philadelphia, to file motions to seek the death penalty, even for cases that are highly similar/comparable on the variables in Table 22. In addition, Philadelphia defendants have a 3% smaller probability of being sentenced to death, an effect that seems small but would be statistically significant in a sample. By contrast, defendants in cases in the 16 counties other than Allegheny and Philadelphia have a 5% greater probability of being sentenced to death (compared to Allegheny and Philadelphia). Finally, cases in Philadelphia in which motions for the death penalty are filed are much more likely to have it retracted than in the rest of the counties: Philadelphia cases have a 31% greater probability of a death penalty filing being retracted. From Table 24, however, recall that in Philadelphia, motions filed for the death penalty in cases involving Black defendants and/or Black victims are much more likely to be retracted than in cases involving White defendants and/or White victims. The between-county differences are shown graphically in Figure 13.

Figure 13. County Comparison: Philadelphia and Allegheny vs. Rest of Field Counties



Defense Attorney, and Defense Attorney by Defendant Race/Ethnicity Comparisons

Next, we examined propensity score weighting models like the ones above, but this time, comparing death penalty outcomes by types of legal representation (the other control variables besides attorney type stay the same as in Table 22). We also investigated comparisons of type of legal representation by race/ethnicity of defendant. These comparisons are shown in Tables 27 and 28 below.

Table 27: Death Penalty Filed: Defense Attorney Comparisons (N = 880)

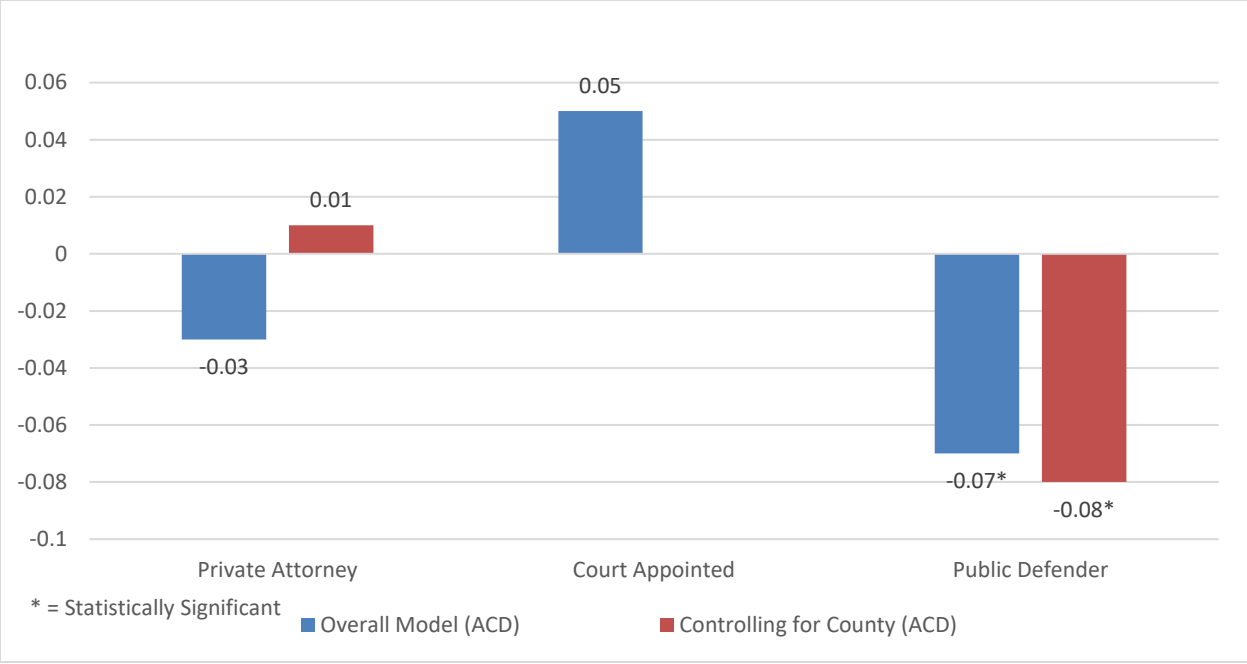
	Overall Model		Controlling for County		Allegheny		Philadelphia	
	ACD	p-value	ACD	p-value	Odds	p-value	Odds	p-value
Privately-Retained Attorney	-.03	.43	.01	.83	.49	.17	1.32	.45
Court-Appointed	.05	.18	----	----	----	----	----	----
Public Defender	-.07	.04	-.08	.02	.40	.02	.50	.04

Table 28: Death Penalty Retracted: Defense Attorney Comparisons (N = 313)								
	Overall Model		**Controlling for County**		**Allegheny**		**Philadelphia**	
	ACD	**p-value**	**ACD**	**p-value**	**Odds**	**p-value**	**Odds**	**p-value**
Privately-Retained Attorney	.07	.71	-.12	.152	21.3*	.01	.24	.10
Court-Appointed	.05	.50	----	----	----	----	----	----
Public Defender	-.02	.90	.05	.67	.27*	.18	3.86	.15
* Only 8 cases had the death penalty retracted in Allegheny County.								

In Table 27, defendants represented by public defenders are 7-8% less likely to have motions for the death penalty filed against them, depending on whether the model controls for county differences or not.[26] This is especially true in Allegheny County and Philadelphia, compared to the 16 other counties in the field study. Public defenders in these two large counties have significantly lower odds of having the death penalty filed against their clients than public defenders representing defendants in the other 16 counties in the field study. Figure 14 shows these defense attorney differences as a set of bar charts.

[26] When this comparison is examined with an identical propensity score *matching* model, the average controlled difference is -.08, p-value = .01. Substantively, this means that in the matching model, public defender cases have an 8% lesser probability of a death penalty filing, and the effect would be statistically significant.

Figure 14: Death Penalty Filed: Defense Attorney Comparisons

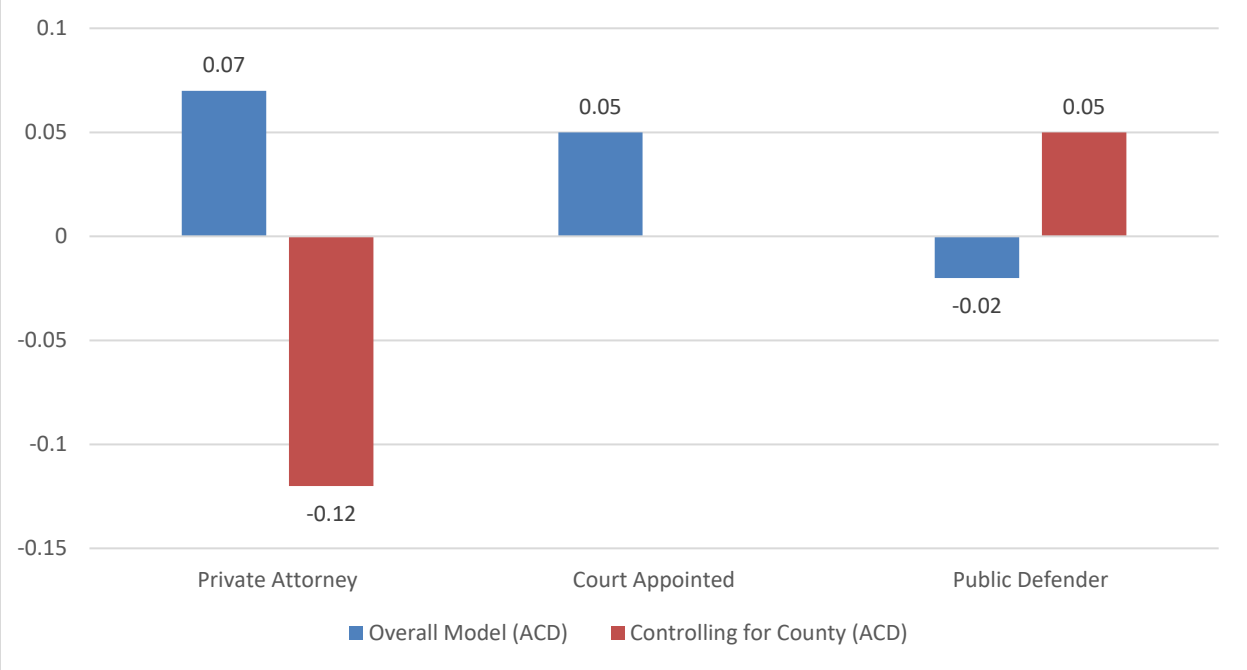


- No bars where there were not enough viable cases for comparison

In Table 28, when not controlling for differences among counties, defendants with privately-retained attorneys are 7% more likely overall to have a death penalty filing retracted than defendants with other types of legal representation,. However, when controlling for county differences, defendants with privately-retained attorneys are 12% less likely to have a death penalty filing retracted. Neither of these differences would be statistically significant in a random sample, however. Privately-retained attorneys in Allegheny County seem to have very high odds for having a death filing against their clients retracted, but this finding is unreliable due to the small number of cases (8) in Allegheny County in which a death penalty filing was retracted. By contrast, privately-retained attorneys in Philadelphia relative to the other counties have smaller odds of securing a death filing retraction for their clients (than court-appointed attorneys or public defenders), and this approaches conventional statistical significance (p-value

= .10). Thus, to extent we can conclude anything from these county difference models of retraction it is that the odds of securing the retraction of a death penalty filing relative to the type of legal representation afforded a defendant likely varies widely among counties. Figure 15 shows a bar chart of the attorney type differences in death penalty retraction.

Figure 15. Death Penalty Retracted: Defense Attorney Comparisons



- No bars where there were not enough viable cases for comparison

Table 29: Death Penalty Imposed: Defense Attorney Comparisons (N = 880)								
	Full Model		**Controlling for County**		**Allegheny**		**Philadelphia**	
	ACD	**p-value**	**ACD**	**p-value**	**Odds**	**p-value**	**Odds**	**p-value**
Privately-Retained Attorney	-.04	.01	-.05	.02	.11*	.03	.89	.91
Court-Appointed	-.02	.29	------	--------	-------	----------	------	---------
Public Defender	.07	.03	.05	.04	.50*	.29	.13	.003
* Only 7 cases received the death penalty in Allegheny County.								

Table 29 shows attorney-type comparisons for defendants receiving the death penalty. Defendants represented by privately-retained attorneys are 4% to 5% (depending on whether we control for county differences) less likely to have the death penalty imposed on them than defendants with other types of legal representation, and both effects would be statistically significant.[27] In contrast, defendants represented by public defenders are 7% more likely to receive the death penalty overall, and 5% more likely to do so when controlling for county differences.[28] The distinctiveness of these effects for particular counties is again evident. Specifically, defendants represented by Philadelphia public defenders have significantly smaller odds (.13 to 1) of receiving the death penalty, than their counterparts in other counties, a marked contrast with the other 17 counties in the field study. It is also important to remember that the large majority (81% or 214 of 263) of defendants with court-appointed attorneys are in Philadelphia, so the court-appointed attorney effects in the overall statewide models above are largely specific to Philadelphia.[29] This is why we could not include valid comparison models among counties for court-appointed attorneys in death penalty cases in Table 29 (or in Tables 27

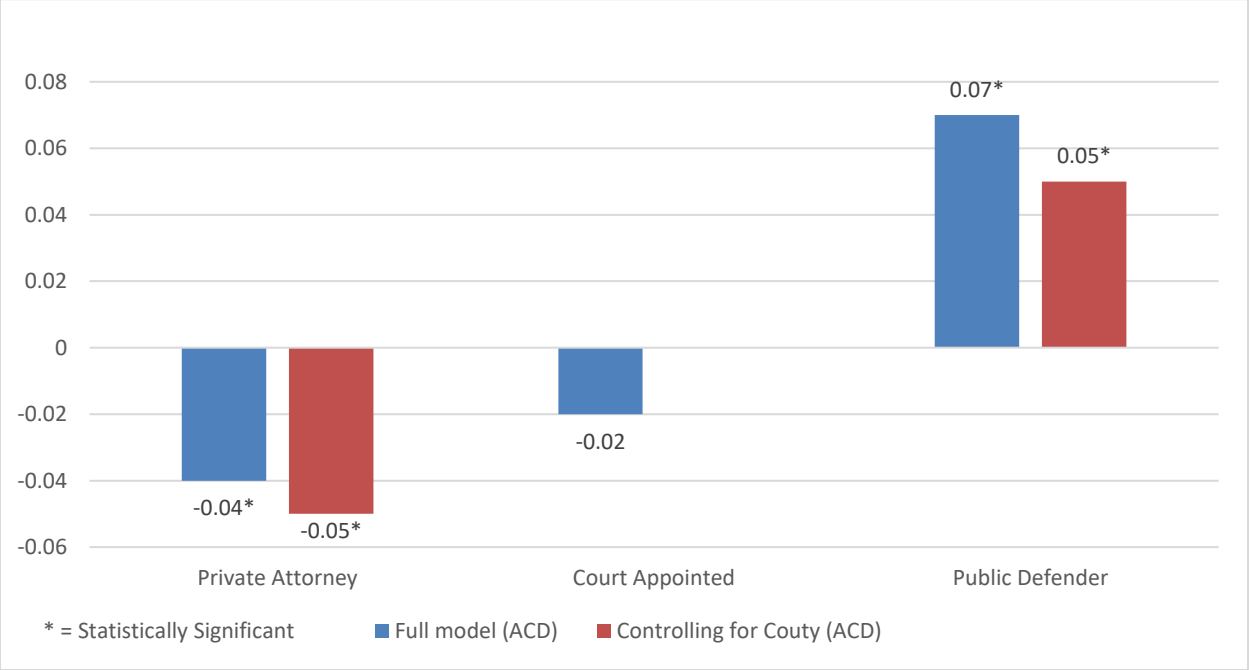
[27] When this comparison is examined with an identical propensity score *matching* model, the average controlled difference is -.03, p-value = .08. Substantively, this means that in the matching model, cases with private attorneys have a 3% lesser probability of receiving the death penalty, and the effect would only approach statistical significance (p-value of .05 or less).

[28] When this comparison is examined with an identical propensity score *matching* model, the average controlled difference is .03, p-value = .02. Substantively, this means that in the matching model, public defender cases have a 3% greater probability of receiving the death penalty, and the effect would be statistically significant.

[29] In Philadelphia, 214 of the defendants convicted of first-degree murder were represented by a court-appointed attorney. In 84 of these cases, prosecutors filed a motion to seek the death penalty, and 54 of these filings were retracted. Thirty of the defendants with court-appointed attorneys were tried before a jury and five received the death penalty.

and 28); there are too few cases with court-appointed attorneys in the other 17 counties to run the models. Figure 16 shows these differences graphically.

Figure 16. Death Penalty Imposed: Defense Attorney Comparisons



- No bars where there were not enough viable cases for comparison

We also examined propensity score weighting comparisons of the type of legal representation by race of the defendant. These models indicate the relative probabilities of the death penalty outcomes for defendants with specific attorney/race of defendant combinations. We could not perform these models with Hispanic defendants, however, due to the low numbers of death penalty cases with Hispanic defendants, per type of legal representation. As above, we cannot present any comparisons among counties for court-appointed attorneys in these cases since they are heavily concentrated in Philadelphia. In addition, we present ACD differences from the models controlling for county differences, but we do not present the county-specific

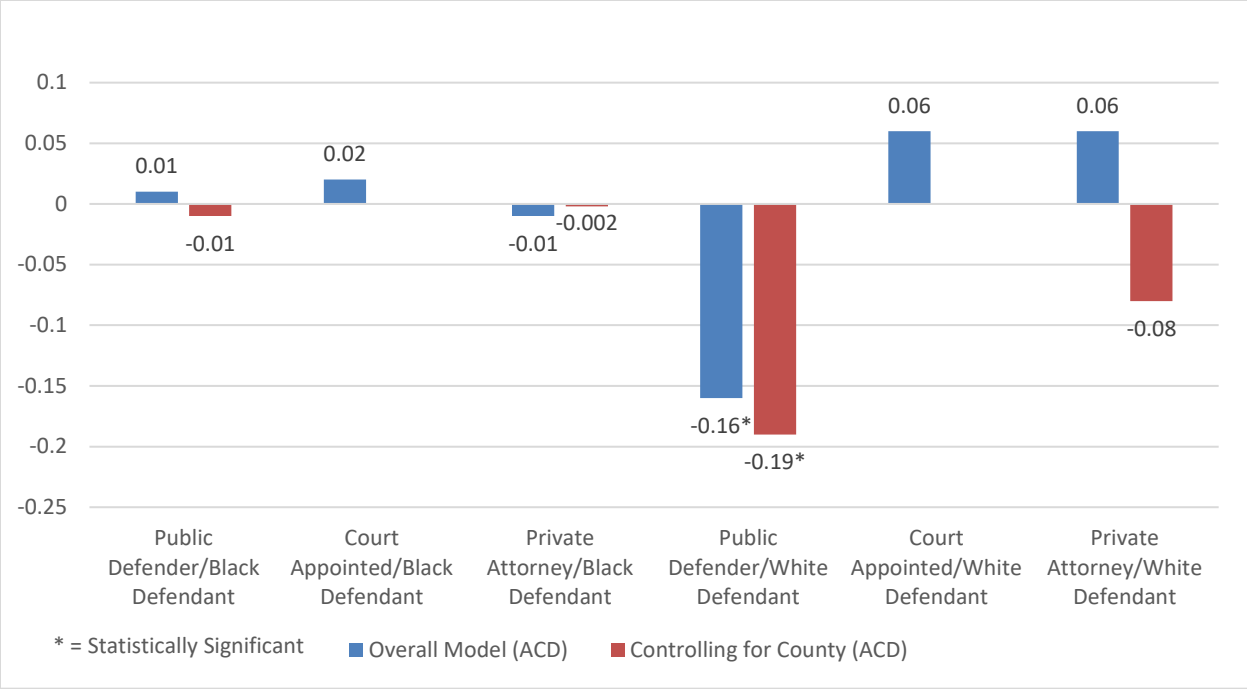
odds, because the low number of cases per specific comparison group, per county, render these county-specific odds unstable and misleading.

Table 30: Death Penalty Filed: Defense Attorney by Defendant Race/Ethnicity Comparisons (N = 880)								
	Overall Model		**Controlling for County**		**Allegheny**		**Philadelphia**	
	ACD	**p-value**	**ACD**	**p-value**	**Odds**	**p-value**	**Odds**	**p-value**
Public Defender/Black Defendant	.01	.93	-.01	.94	-----	-------	-----	--------
Court-Appointed/Black Defendant	.02	.63	------	---------	-------	---------	------	---------
Privately-Retained Attorney/Black Defendant	-.01	.91	-.002	.98	-----	-------	-----	------
Public Defender/White Defendant	-.16	.003	-.19	.000	-----	-----	-----	-----
Court-Appointed/White Defendant	.06	.48	------	---------	-------	---------	------	---------
Privately-Retained Attorney/White Defendant	.06	.53	-.08	.10	-----	----	-----	-----

One finding that is especially noteworthy in the comparisons in Table 30 is that White defendants represented by a public defender are 16% to 19% less likely to have the death penalty filed against them, depending on whether county differences are controlled.[30] Both effects would be highly statistically significant. Figure 17 shows these differences in death penalty filing for defense attorney/race combinations.

[30] When this comparison is examined with an identical propensity score *matching* model, the average controlled difference is -.15, p-value = .04. Substantively, this means that in the matching model, public defender cases with White defendants have a 15% lesser probability of a death penalty filing, and the effect would be statistically significant.

Figure 17. Death Penalty Filed: Defense Attorney by Defendant Race/Ethnicity Comparisons



- No bars where there were not enough viable cases for comparison

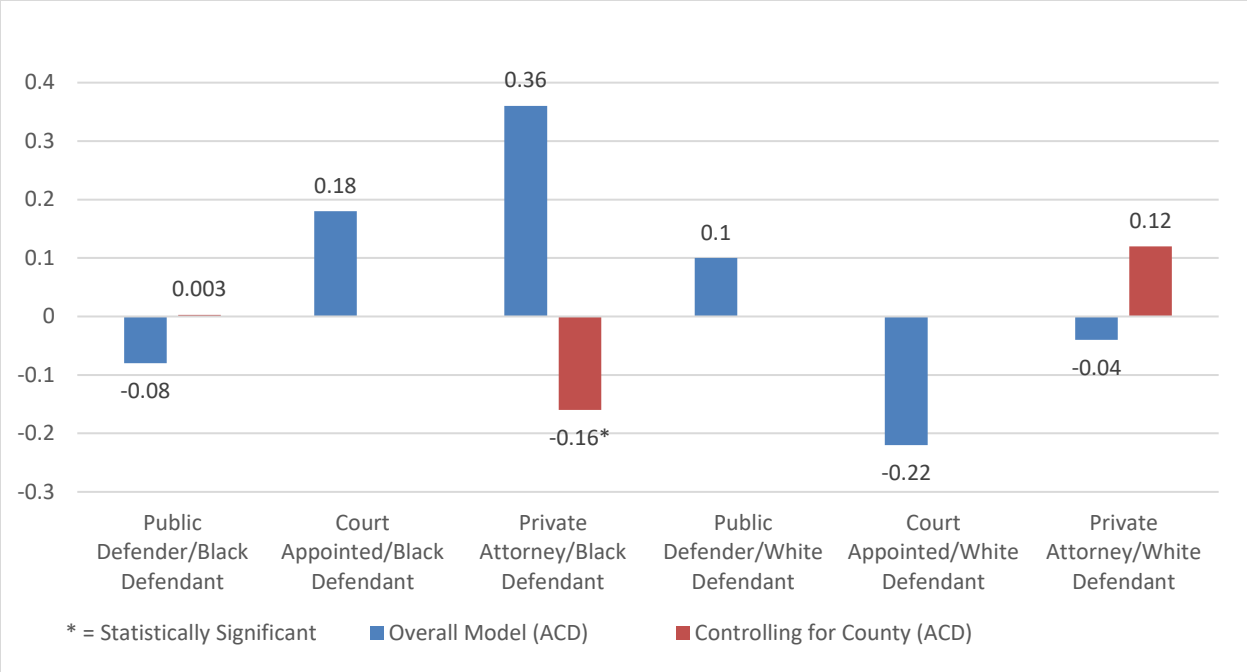
Table 31: Death Penalty Retracted: Defense Attorney by Defendant Race/Ethnicity Comparisons (N = 313)

	Overall Model		Controlling for County		Allegheny		Philadelphia	
	ACD	p-value	ACD	p-value	Odds	p-value	Odds	p-value
Public Defender/Black Defendant	-.08	.45	.003	.97	-----	------	-----	-------
Court-Appointed/Black Defendant	.18	.07	------	--------	-----	------	-----	-------
Privately-Retained Attorney/Black Defendant	.36	.14	-.16	.01	-----	------	-----	-------
Public Defender/White Defendant	.10	.89	------	--------	-----	------	-----	-------
Court-	-.22	.15	------	--------	-----	------	-----	-------

Appointed/White Defendant								
Privately-Retained Attorney/White Defendant	-.04	.78	.12	.19	-----	------	-----	-------

When we examined the retraction of death penalty filings as set forth in Table 31, Black defendants with court-appointed attorneys had an 18% greater probability of having the death penalty filing retracted, compared to defendants with other types of legal representation, which approaches statistical significance. In contrast, White defendants represented by court-appointed attorneys have a 22% lower probability of death penalty retraction, but this effect would not be statistically significant. Interestingly, Black defendants represented by privately-retained attorneys are 36% more likely to have a death filing retracted in the overall model (not statistically significant). But when we control for differences among counties, such cases have a 16% lower probability of retraction (an effect which would be statistically significant). The fact that this effect changes so significantly between the overall model and the county difference model suggests that the likelihood of the retraction of a death penalty filing in cases involving Black defendants with privately-retained attorneys varies a great deal among counties. There are also insufficient numbers of cases per county to obtain effects for White defendants with public defenders while controlling for county differences. Figure 17 shows these differences graphically.

Figure 18. Death Penalty Retracted: Defense Attorney by Defendant Race/Ethnicity



- No bars where there were not enough viable cases for comparison

We could not perform propensity score weighting models of whether receiving the death penalty was associated with the defendant race by type of attorney groupings, since there were too few cases per category, per death penalty outcome. However, we can present the following simple proportions by way of comparison:

- Court-Appointed Attorney/Black Defendant
    - Prosecutors sought the death penalty in 84 out of 211 (40%) cases involving Black defendants represented by court-appointed attorneys, and retracted it in 54 of them. In six out of the 30 (17%) remaining cases with Black defendants represented by court-appointed attorneys, the defendants who were exposed to the death penalty received it. Of the 51 death sentences imposed overall, five (9.8%)

involved Black defendants represented by court-appointed attorneys. Notably, all of these Black defendant/court-appointed attorney cases were in Philadelphia.

- Privately-Retained Attorney/Black Defendant
    - Prosecutors sought the death penalty in 57 out of 202 (28%) cases involving Black defendants represented by privately-retained attorneys, and retracted it in 20 of them. In six out of the 37 (16%) remaining cases with Black defendants represented by privately-retained attorneys, the defendants who were exposed to the death penalty received it. Of the 51 death sentences imposed overall, six (11.8%) involved Black defendants represented by privately-retained attorneys.
- Public Defender/Black Defendant
    - Prosecutors sought the death penalty in 55 out of 175 (31%) cases involving Black defendants represented by public defenders, and retracted it in 23 of those cases. In 13 out of 32 (41%) remaining cases with Black defendants represented by public defenders, the death penalty was imposed. Of the 51 death sentences imposed overall, 13 (25.5%) involved Black defendants represented by public defenders.
- Public Defender/White Defendant
    - Prosecutors sought the death penalty in 24 of 77 (31%) cases involving White defendants represented by public defenders, and retracted it in 11 of these cases. In nine of the 13 (69%) remaining cases with White defendants represented by public defenders, the death penalty was imposed. Of the 51 death sentences imposed overall, nine (17.7%) involved White defendants represented by public defenders.

- Privately-Retained Attorney/White Defendant
    - Prosecutors sought the death penalty in 31 of 96 (32%) cases involving White defendants represented by privately-retained attorneys, and retracted it in nine of these cases. Of the 22 remaining cases with White defendants represented by privately-retained attorneys, six (27%) received it. Of the 51 death sentences imposed overall, six (11.7%) involved White defendants represented by privately-retained attorneys.
- Court-Appointed Attorney/White Defendant
    - Prosecutors sought the death penalty in 20 of 40 (50%) cases involving White defendants represented by court-appointed attorneys, and retracted it in seven of these cases. In three out of the 13 (23%) remaining cases with White defendants represented by court-appointed attorneys, the defendants received it. Of the 51 death sentences imposed overall, three (5.9%) involved White defendants represented by court-appointed attorneys.

Chapter IV: Conclusion

Is the disproportionality of Black defendants sentenced to death in Pennsylvania a result of racial disparity in decision-making by prosecutors – either in their decision to file or retract a motion for the death penalty – or by juries or judges at the sentencing stage? Or, can this disproportionality be explained by legally relevant factors such as the severity of the offense, prior record, and other appropriate sentencing considerations? What role, if any, does the race or ethnicity of a victim play in predicting which defendants received the death penalty? Finally, does the type of legal representation afforded to a defendant have an impact on whether the death penalty is sought by a prosecutor or imposed by a judge or jury, and how do all these outcomes differ by county?

This study went beyond traditional death penalty research by creating a data set of first-degree murder convictions from 2000-2010, compiled in 18 of Pennsylvania's 67 counties. This data set represents 87% of all first-degree murder convictions during that time frame in the Commonwealth. We acquired general data from three statewide sources, and more accurate and detailed data from county District Attorney's offices in 14 of the 18 counties. We also obtained data from County Clerk's offices and the Defender Association of Philadelphia. From this data and other information described in this report, we have sought to determine the answers to the above questions.

A. Pennsylvania Case-Processing and Decision-Making Characteristics

Before turning our attention to the inquiries above, it might assist the reader to review some important characteristics of case-processing and decision-making in Pennsylvania's capital cases, as shown by our descriptive statistics.

- Black defendants are very disproportionately charged with and convicted of murder overall and first-degree murder particularly, relative to White defendants.

One of the important limitations of this study, however, is that we were not able to analyze the early stages of this process – the decision to detain, arrest, and charge a suspect. Consequently, we cannot comment on whether disparity, discrimination or arbitrariness played any role in the disproportionately large number of Black defendants charged with murder.

- First-degree murder victimization was largely intra-racial. The majority of Black defendants had Black victims, the majority of White defendants had White victims, and the majority of Hispanic defendant had Hispanic victims.
- Murder charges and convictions, especially for first-degree murder, overwhelmingly involve male defendants.
- The large majority of defendants in first-degree murder cases do not face the death penalty. Typically, either prosecutors do not seek the death penalty, or if it is sought, prosecutors often retract their filings.
    - Prosecutors filed notices of aggravating circumstances in 39% of first-degree murder cases, and sought the death penalty in 36% of the cases.
    - Prosecutors sought the death penalty in 92% of the cases in which they filed notices of aggravating circumstances.
    - Prosecutors retracted death penalty filings in 47% of cases in which they were filed.
    - Approximately 31% of defendants received the death penalty in cases in which the death penalty was sought and the filing was not retracted.

B. Comparisons to Baldus Study Findings

Our study's statistical analyses and measures are not the same as those used in the Baldus studies, but in comparison with their general findings, we found fewer cases overall, and fewer potentially death-eligible cases in particular, that resulted in exposure to a death penalty trial.

- The most common aggravating circumstances filed by prosecutors were "[defendant] knowingly created grave risk of death" (15.5%) and "[murder] committed in the perpetration of a felony" (15.2%). Overall, 39% of the cases had at least one aggravating circumstance filed. Far fewer aggravating circumstances were found by a judge or jury than were filed.
- Greater absolute numbers and overall percentages of defendants with aggravating circumstances filed against them were Black, due to the overall racial disproportionality of the first-degree murder cases we studied. But within racial groups, 37% of Black defendants had one or more aggravating circumstances filed, compared to 43% of White defendants.
- The most common mitigating circumstances presented by the defense were "age of defendant at time of crime" and "no significant history of prior crime." As with aggravating circumstances, mitigating circumstances were found by a judge or jury much less frequently than they were presented by defense attorneys, a finding that coincides somewhat with the Baldus, et al. (1997-1998) study. At least one mitigating circumstance was presented by the defense in 76% of death penalty sentencing trials. The fact that *no* mitigating circumstances were filed by the defense in nearly a quarter of cases raises some important questions about the effectiveness with which defense counsel pursued those cases, especially

considering that 42 Pa.C.S. §9711(e)(8) permits counsel to submit any evidence that he or she believes is mitigating. This evidence can be presented whether or not any of the statutory mitigating circumstances plausibly apply.

- Of the cases in which the death penalty was filed and not retracted, 70% of death penalty sentencing trials were decided by a jury, rather than a judge. Our descriptive and multivariate findings agree with the findings of Baldus, et al. (1997-1998): we found juries to be significantly more likely to impose the death penalty than judges (see Chapter 3 and Appendix B). Since we were not able to examine the actual jury process and dynamics in the current study, however, we cannot comment on why juries are more likely to impose a death sentence.

C. Effect of Death Penalty Filings on Guilty Pleas

In Appendix B, we described an interesting case-processing pattern. Note that in our logistic regression analyses, the variable "Defendant admitted guilt" was associated with increased odds of death penalty filing. It is very unlikely that this effect means that prosecutors are more likely to seek the death penalty against those who plead guilty. Rather, the causality in this effect is likely reversed—defendants are probably more likely to plead guilty once prosecutors seek the death penalty. When we treat pleading guilty to the first-degree murder charge as a dependent variable, a prosecutorial filing to seek the death penalty strongly increases the likelihood of a defendant pleading guilty. Pleading guilty, in turn, strongly increases the likelihood that the death penalty filing will be retracted. Specifically, a death penalty filing raises the odds of a guilty plea by 2.9; cases in which the death penalty is filed have nearly three times the odds of eventually resulting in a guilty plea to a first-degree murder charge. Pleading guilty to a first-degree murder charge is associated with 8.1 times greater odds of the death

penalty filing being retracted. This pattern is also reflected in the finding that the "Defendant admitted guilt" variable greatly increases the likelihood that the death penalty filing will be retracted. In the death penalty literature, this is commonly referenced as plea bargaining or plea negotiation; however, we have not referenced it as plea negotiation because while we assume that some, perhaps a vast majority, do represent negotiated pleas, we do not know that for a fact and are not comfortable labeling all the cases as negotiated pleas.

D. Race, Ethnicity, and the Prosecutorial Decision to Seek the Death Penalty

In Chapter I, we noted that, in general, the literature in numerous states, as well as the Baldus, et al. study in Philadelphia, has found that prosecutors are more likely to seek the death penalty in cases involving a White victim (see, for example, Baldus, et al., 1997-1998; GAO, 1990; Hindson, et al., 2006; Keil and Vito, 1995; Paternoster, et al., 1983; Paternoster, 1984; and Paternoster and Brame, 2008). Other researchers have found an interactive effect, such that Black defendants charged with killing White victims are particularly vulnerable to prosecution for the death penalty (see, for example, Keil and Vito, 1995 and Lenza, et al., 2005). But, as we noted, not all studies have found this pattern. Unah (2011) found that in North Carolina, during the same time frame that we study here, prosecutors were less likely to seek the death penalty when the defendant was a minority and the victim was White.

In contrast to the several other studies noted above, we do not find an overall pattern of disparity to the disadvantage of Black or Hispanic defendants in the decision to seek the death penalty, the decision to retract the death penalty once filed, or the decision to impose the death penalty. Furthermore, we do not find disparity in these decisions to the disadvantage of defendants in cases with Black defendants and White victims. In fact, in the overall model (Table 23), cases with Black defendants and White victims were 10% less likely than other types

of cases to see a death penalty filing, and this effect bordered on conventional statistical significance. We did uncover a Hispanic victim effect, such that cases with Hispanic victims are 21% more likely to have the prosecutor seek the death penalty. This effect was not specific to cases with Hispanic defendants and Hispanic victims, however, but characterized any cases with Hispanic victims, regardless of the race or ethnicity of the defendant.

The contrast with Baldus' study of capital case processing in Philadelphia for the period 1983-1993 is particularly important. There are several potential explanations for our differing findings. First, the data we collected are statewide, not just from Philadelphia, so direct comparisons are not applicable. Second, we used a more advanced form of data analysis (propensity score modeling), and some research has suggested that might make a substantial difference.[31] Third, our data were collected from District Attorneys' files, and access to these files may have provided us more in-depth information on prosecutors' case-processing decisions and the factors affecting them. Finally, prosecutorial and sentencing decisions may well have changed since the 1980s and 1990s, and this may be reflected in our findings.

E. Effect of Type of Legal Representation on Prosecutorial Decisions

Another important focus of our study was the impact of type of defendant legal representation on capital case-processing. As noted in Chapter I, research has generally not examined the impact the type of the defendant's legal representation may have on capital case-processing. Our analysis of this variable builds on Phillips' (2009) study of Harris County, Texas, which found that private attorney representation, compared to court-assigned counsel (no

[31] As we note later, however, our logistic regression findings are not drastically different from our propensity score modeling findings. For example, our logistic regression models find that cases with Hispanic victims have significantly greater odds of death penalty filings, and we find essentially no significant differences in death penalty filings for Black defendants or for Black defendants with White victims.

public defender system existed in Harris County at the time of Phillips' study), dramatically affected the likelihood of a negotiated plea. Specifically, the study found that defendants with privately-retained attorneys were much more likely to negotiate a plea with the prosecutor to avoid the death penalty. Another study of North Carolina case-processing by Unah (2011) found that defendants with public defenders were much more likely to be prosecuted for the death penalty. Pennsylvania has an extensive county-based public defender system which, in most counties, also includes the appointment of counsel by the court in cases involving conflicts with the public defender offices. In Philadelphia, in particular, court-appointed and privately-retained lawyers handle 80% of the death penalty caseload.

Overall, we find that defendants represented by public defenders are less likely than defendants with privately-retained or court-appointed attorneys to have the death penalty filed against them, but there is no clear indication that the type of representation affects the decision to retract the motion for the death penalty. Our findings are very different from Unah's in North Carolina, where defendants represented by public defenders were more likely to be prosecuted for the death penalty. Nor do our findings coincide with Phillips' (2009b) finding that privately-retained attorneys were more successful in negotiating pleas for their clients that did not include the death penalty.[32]

F. Effect of Type of Legal Representation on Decisions to Impose the Death Penalty

We also found notable differences in death penalty outcomes based on the type of legal representation afforded a defendant. Specifically, defendants with privately-retained attorneys

[32] As stated previously in our study, we characterize this decision as the retraction of the motion for the death penalty, rather than a negotiated plea because we believe it is inappropriate to suggest that all retractions are the result of negotiation. We assume that many are, but we certainly are aware of cases where a defendant pleads guilty without any promise from the prosecutor to retract the motion for the death penalty.

were 4% - 5% less likely to receive the death penalty, while defendants represented by public defenders were 5% - 7% more likely to receive the death penalty. There also may be differences connected to type of representation by race of defendant, but the results should be interpreted with caution, due to the small number of cases in those analyses. Notably, more White defendants than Black or Hispanic defendants had privately-retained attorneys, rather than public defenders or court-appointed attorneys. Our findings are consistent with Lenza, et al. (2005), who also found that defendants represented by public defenders were more likely to receive the death penalty, and Phillips (2009b) who found that defendants represented by privately-retained attorneys never received the death penalty. On the other hand, defendants represented by public defenders in Philadelphia were much less likely to receive the death penalty than defendants represented by public defenders in the other 17 counties in the field study. Our findings regarding the effectiveness of Philadelphia public defender's office (Defender Association of Philadelphia) as well as Anderson and Heaton's (2012) findings regarding that office suggest homicide defendants represented by that office seem to obtain relatively good outcomes.

There were substantial differences between counties in each of the death penalty outcomes we examined. Counties differed in terms of overall likelihood of a prosecutor filing or retracting a death penalty motion. For example, prosecutors in Allegheny County were much less likely to seek the death penalty than prosecutors in the other 17 counties in our field study. On the other hand, prosecutors in Philadelphia were much more likely to retract the death penalty than prosecutors in the other 17 counties in our field study (including Allegheny County). Counties also differed in the effects of defendant and victim race/ethnicity, and in the effects of type of legal representation, on prosecutor decisions. For example, prosecutors in Allegheny County and Philadelphia were less likely to seek the death penalty against defendants

represented by public defenders than prosecutors were in the other 16 counties in our field study. Indeed, differences among counties in death penalty outcomes and the effects of other variables on death penalty outcomes were the largest and most prominent differences found in our study.

Although we found that the two largest counties in the Commonwealth were relatively less likely to file for, and more likely to retract, the death penalty, compared to the other 16 counties in the data, we are skeptical that it is simply the size of the county that drives these differences. Furthermore, our selection of counties for our field study (only those with ten or more first-degree murder convictions) eliminated most counties that would be classified as rural. Therefore, we do not have data to contrast with the findings of Songer and Unah (2006), who found that rural judicial districts in South Carolina were much more likely to file for the death penalty, or with Poveda (2006) in Virginia who found that smaller (i.e., generally rural jurisdictions) were least likely to seek the death penalty, or with Paternoster and Brame (2008) who found that prosecutors in Maryland were much more likely to seek the death penalty in suburban counties than in large urban counties with inner cities.

G. Multivariate Analysis of the Race, Ethnicity and the Sentencing Decision

We did not find a pattern of disparity to the disadvantage of Black defendants or Hispanic defendants in the decisions of judges and juries to sentence these defendants – regardless of the race or ethnicity of their victims. That said, there were some notable differences in some death penalty sentences based on the race of the victim, though *not* in combination with the race/ethnicity of defendant. Cases with White victims were more likely (8%) to receive the death penalty, while cases with Black victims were less likely (-6%) to receive the death penalty, regardless of the race or ethnicity of the defendant.

Our finding of a race-of-victim effect at sentencing is consistent with much of the literature, but our finding that Black defendants with White victims were not at greater risk to receive the death penalty contrasts with this literature, including the Baldus, et al. (1997-1998) study of Philadelphia. Our findings are consistent with the research of Jennings, et al. (2014) on North Carolina that used propensity scoring as well, which did not find that Black defendants with White victims were more likely to receive the death penalty.

H. Summary

In Chapter I, we discussed the focal concerns perspective on criminal justice decision-making. This theory posits, for example, that prosecutors and judges assess the blameworthiness (culpability) and dangerousness of defendants (protection of the community), as well as the practical implications of their decisions. Further, both legal and extralegal considerations can affect the assessment of defendants and cases in terms of these three focal concerns, though legally relevant factors are generally more influential. Additionally, factors that affect considerations of blameworthiness, dangerousness/community protection, and practical considerations likely vary by social context and can be influenced by implicit bias against Black and Hispanic Defendants.

Our findings are largely consistent with the notion that legally relevant factors are likely the primary factors that shape interpretations of blameworthiness and dangerousness that theoretically drive the punishment decisions we examined. These legally relevant factors were represented by our study's many control variables (see Table 22), which measured aggravating and mitigating circumstances, characteristics of the offense, victim behavior and relationship to defendant, issues raised by the defense, and evidence strength. However, there is evidence consistent with the notion that the race of the victim might shape definitions of blameworthiness

or community protection in some death penalty decisions, or perhaps might influence decision-makers' considerations of practical constraints connected to cases.

We cannot assess definitively if this notion is true, nor can we assess exactly how race-of-victim might influence these focal concerns; qualitative evidence about prosecutors', judges', and juries' decision-making processes and considerations would be needed to do that. But the fact remains that we find the same significant race-of-victim effects across multiple analysis methods, even after accounting for a host of control variables.

Prosecutors were more likely to seek the death penalty for cases with Hispanic victims. Defendants of any race or ethnicity with Black victims, and Black defendants with Black victims, were less likely to receive the death penalty than defendants of any race or ethnicity with White victims and White defendants with White victims. These differences cannot be attributed to the many factors measures by our control variables listed in Table 22.

Furthermore, there is evidence that the type of legal representation afforded a defendant shaped death penalty outcomes. These differences might be related to the focal concern of practical implications and considerations. A number of practical factors might be at work behind these differences, such as: (1) a defendant's financial resources and his or her ability to afford a privately-retained attorney; (2) a privately-retained attorney's time and resources; (3) differing time and resources available to devote to capital cases among public defenders, court-appointed attorneys, and privately-retained attorneys; and (4) differences among privately-retained attorneys, public defenders, and court-appointed attorneys in experience, knowledge, skill set, and the ability of an attorney to spend the time it takes to build a rapport with the defendant that is vital to successful plea bargaining when the evidence may be overwhelming against the

defendant. These are speculations, however, and more research with different kinds of data would be necessary to investigate them.

Overall, our multivariate results were fairly robust in terms of the different modeling methods used. We observed many similarities between our logistic regression findings in Appendix B and our propensity score modeling findings, though there are some differences.[33] Furthermore, we also obtained highly similar results whether we used propensity score weighting or propensity score matching.

As mentioned, differences among counties in death penalty outcomes, and the effects of other variables on death penalty outcomes, were the largest and most prominent differences found in our study. In fact, this finding is consistent with a major theme in the social science

[33] In terms of specific examples of effects that would be statistically significant, our logistic regression analyses and propensity score models both show: (1) defendants with Hispanic victims are more likely to have the death penalty filed against them; (2) Black defendants with Black victims and Black defendants with White victims are less likely to receive the death penalty than any defendants with White victims, and White defendants with White victims. In addition, our logistic regression models and propensity score models show very similar differences among counties in the death penalty outcomes. The general pattern of findings for the type of legal representation afforded a defendant is similar between methods, too. Both the logistic regression and propensity score models show defendants represented by public defenders to be less likely to have the death penalty filed against them than other defendants (this difference is especially pronounced between court-appointed attorneys and public defenders in the logistic regression models). Both the logistic regression and propensity score models show no clear, notable differences between types of legal representation in terms of death penalty filing retractions. Both the logistic regression and the propensity score models show that defendants represented by privately-retained attorneys are significantly less likely to receive the death penalty, compared to defendants represented by public defenders.

There are some differences between the logistic and propensity score models. The logistic models show Hispanic defendants to be marginally significantly more likely to have a death penalty filing against them, where the propensity score models shows a non-significant effect in which Hispanics are less likely to have a death penalty filing. The logistic models show Hispanic defendants to be significantly more likely to have a death penalty filing retracted, while the propensity score models show an effect in the same direction, but smaller and non-significant. Finally, the logistic regression models showed that Hispanic defendants with Hispanic victims were less likely to get the death penalty, but this comparison was not possible with the propensity score methods.

literature on sentencing in general, which documents important differences among local courts in sentencing severity and in the effects of different variables like race and ethnicity (see the review by Ulmer, 2012). Our findings of county differences also are consistent with theories that view courts as communities with distinctive norms and practices, and distinctive interpretations of focal concerns of punishment. Just as the likelihood of the various death penalty outcomes are locally variable, so too are the effects of other important variables, such as race of defendant and victim, and defense attorney. *In a very real sense, a given defendant's chance of having the death penalty sought, retracted, or imposed depends on where that defendant is prosecuted and tried.* In many counties of Pennsylvania, the death penalty is simply not utilized at all. In others, it is sought frequently. If uniform prosecution and application of the death penalty under a common statewide framework of criminal law is a goal of Pennsylvania's criminal justice system, these findings raise questions about the administration of the death penalty in the Commonwealth.

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Appendix A: Data Collection Strategy and Instruments

Diagram of Tracking Schematic for Potential Death Eligible Offenders in Pennsylvania

Coding Tables For AOPC Docket Data

1. **#_ho_cts**: Number of homicide counts in indictment: Record number

2. **#_con_cts**: Number of homicides defendant convicted of. Record number

3. **conviction**: First Homicide
    1. Yes-1st degree murder
    2. Yes-2nd degree murder
    3. Yes-3rd degree murder*
    4. Yes-lesser homicide
    5. No homicide conviction

    If not 1 or 2 above do not code further

4. **conviction2:** Second Homicide
    1. Yes-1st degree murder
    2. Yes-2nd degree murder
    3. Yes-3rd degree murder
    4. Yes-Lesser homicide

5. **conviction3:** Third homicide
    1. Yes-1st degree murder
    2. Yes-2nd degree murder
    3. Yes-3rd degree murder
    4. Yes-Lesser homicide

6. **felony:** Was the defendant charged with a non-homicide felony in addition to homicide?
    0. No
    1. Yes

7. **felon_c:** Was defendant convicted of non-homicide felony? (Leave blank if no felony charge)
    0. No
    1. Yes
    9. Not applicable

8. **sex_off**: Was D charged with rape/sex off?

0. No
1. Yes

9. sex_con: D convicted of rape/sex offense? (Leave blank if no rape/sex offense charged)
0. No
1. Yes
9. Not applicable

10. **robbery:** Was D charged with robbery?
0. No
1. Yes

11. **rob_convict:** Was D convicted of robbery? (Leave blank if no robbery charged)
0. No
1. Yes
9. Not applicable

12. **burglary:** Was D charged with burglary?
0. No
1. Yes

13. burg_convict: Was D convicted of burglary? (Leave
0. No
1. Yes
9. Not applicable

14. **dp_filed**: Did the prosecution file a motion for aggravation or death penalty notice?
0. No (no indication in docket motion filed)
1. Yes

15. **dp_retracted**: Was motion for DP retracted?
0. No
1. Yes
9. Not applicable

16. v**enue**: Was there a motion for a change of venue?
0. No
1. Yes

17. **venuech**: Was the motion granted? (No motion filed-leave blank)
0. No
1. Yes
9. Not applicable

18. **compet**: Did defense request competency to stand trial assessment?
    0. No
    1. Yes

19. **compet**_g: Was request for competency testing granted?
    0. No
    1. Yes
    9. Not applicable

20. **psych**: Defense ask for psychological testing?
    0. No
    1. Yes

21. **psych_g:** Request for psych testing granted?
    0. No
    1. Yes
    9. Not applicable

22. dp_dp: Did D file motion to drop DP?
    0. No
    1. Yes

23. **dp_sust**: Was motion by defense to drop DP sustained? (No motion, leave blank)
    0. No
    1. Yes
    9. Not applicable

24. **tr_date**: Date trial started or plea accepted (yymmdd)
    1. _____

25. **p_trial**: Was there a penalty trial?
    0. No
    1. Yes

26. **sent_by**: D sentenced by?
    1. Judge
    2. Jury

27. **senthear**: Was there a sentencing hearing?
    1. no
    2. yes

28. **sentence**:
    1. Life
    2. Death

29. **appeal:** Does the record indicate that the defendant appealed?
    1. no
    2. yes

Field Data Codebook

IDENTIFICATION VARIABLES

#	VARIABLE	Var Label	Source	Code
1	Docket Number	Docket	AOPC	
2	OTN (Offender Tracking Number)	otn	AOPC	
3	SID (State Identification Number)	sid	AOPC	
4	Inmate Number	Inmate_no	DOC	

DEFENDANT CHARACTERISTICS

4	Defendant's last name	name_l	AOPC	
5	Defendant's First Name	name_f	AOPC	
6	Defendant's Middle Name	name_m	AOPC	
7	Defendant's date of birth	dob	AOPC	
	Defendant's age	age	AOPC	
	Defendant's gender (Table 13)	gender	AOPC	
	Defendant's race (Table 14)	race	AOPC	
	Defendant's marital status at arrest (Table 18)	marital_st		
	Did the defendant have any children? (Table20)	children		
	Defendant's employment status at offense? (Table 21)	emp		
	Did the defendant have a history of substance abuse?	substance		
	Did defendant have history of mental illness or emotional problems? (Table 27)	m_illness		
	Any evidence that D was physically or sexually abused as child? (Table 27)	sex_abuse		
	D's IQ	iq	DOC	

PROCESSING DECISIONS

	Trial Judge (PCS Code-Table __)	judgenm		
	Date of Offense (yymmdd)	Off-date	AOPC	
	Date Sentence Imposed	Sentence-date	AOPC	
	On original homicide charge, def. (Table 02)	mcharge1		

	On the second homicide charge, D. (Table 02)	mcharge2		
	On the third homicide charge, D. (Table 02)	mcharge3		
	Was def charged w/felony in addition to homicide?	felony		
	Was D convicted of felony?	felony_c		
	D charged with rape/sex off	sex_off		
	D convicted of rape/sex off	sex_convict		
	D charged with robbery?	robbery		
	D convicted of robbery?	rob_convict		
	D charged with burglary?	burglary		
	D convicted of burglary?	burg_convict		
	Trial County	tr_county		
	Did D request change of venue?	v_change		
	If venue request, granted?	v_granted		
	Notice of aggravating factors filed?	agg_filed		
	Motion for death penalty filed?	dp_filed		
	Was DP motion retracted?	dp_retracted		
	Did defense request competency to stand trial assessment?	compet		
	Was request for competency testing granted?	compet_g		
	Defense ask for psychological testing?	psych		
	Request for psych testing granted?	psych_g		
	Penalty trial	p_trial		
	Date penalty trial started (yymmdd)	pt_date		
	D sentenced by (Table 6)	sent_by		
	Status of defense counsel (Table 8)	counsel		
	Defendant's sentence (Table 9)	sentence		
	Direct appeal of case?	appeal		

AGGRAVATING FACTORS PRESENTED BY PROSECUTION

	Variable	Var Label	Source	Code
	V firefighter, peace officer etc.	p_v_officer		
	D paid or was paid for killing	p_v_paid		
	V was held for ransom or reward or as shield	P_v_ransom		

	Death occurred while engaged in hijacking aircraft	p_hijack		
	V was prosecution witness to felony or was killed to prevent testimony	p_v_witness		
	Crime committed while in perpetration of felony	p_felony		
	D knowingly created grave risk of death to another	P_d_risk		
	Offense committed by means of torture	p_torture		
	D has significant history felony convictions involving violence	p_d_felony		
	D convicted currently or before for offense punishable by life or death	p_death		
	D convicted of another murder	p_murder		
	D convicted of vol. manslaughter before or during offense	p_mansl		
	V was associated with D in drug trafficking	p_v_drug		
	V was or had been a nongovernment informant	p_v_inform		
	V was under 12	p_v_12		
	V was in 3rd trimester or D had knowledge of pregnancy	p_v_preg		
	At time of killing D was under PFA from V.	p_pfa		
	Number of aggravating factors	p_agg		

AGGRAVATING FACTORS FOUND BY JURY OR JUDGE

	Variable	Var Label	Source	Code
	V firefighter, peace officer etc.	sf_v_officer		
	D paid or was paid for killing	sf_d_paid		
	V was held for ransom or reward or as shield	sf_v_ransom		
	Death occurred while engaged in hijacking aircraft	sf_hijack		
	V was prosecution witness to felony or was killed to prevent testimony	sf_v_witness		
	Crime committed while in perpetration of felony	sf_felony		
	D knowingly created grave risk of	sf_d_risk		

	death to another			
	Offense committed by means of torture	Sf_torture		
	D has significant history felony convictions involving violence	sf_d_felony		
	D convicted currently or before for offense punishable by life or death	sf_death		
	D convicted of another murder	sf_murder		
	D convicted of vol. manslaughter before or during offense	sf_mansl		
	V was associated with D in drug trafficking	sf_dfelony		
	V was or had been a nongovernment informant	Sf_v_inform		
	V was under 12	Sf_v_12		
	V was in 3rd trimester or D had knowledge of pregnancy	sf_v_preg		
	At time of killing D was under PFA from V.	sf_fpa		
	Number of aggravating factors	sf_agg		

STATUTORY MITIGATING FACTORS OFFERED BY DEFENSE

	Variable	Var Label	Source	Code
	D has no significant history of prior criminal convictions	d_noconvict		
	D was under influence of extreme mental or emotional disturbance	d_disturbed		
	Capacity of D to appreciate the criminality was substantially impaired	d_impaired		
	Age of D at time of offense	d_age		
	D acted under extreme duress or substantial domination of another	d_duress		
	V was participant in D's homicidal conduct or consented to homicidal acts	d_v_consent		
	D participation in homicide was relatively minor	d_minor		
	Act of D was not sole proximate cause of victim's death	d_notcause		

ADDITIONAL MITIGATING FACTORS OFFERED BY DEFENSE

	Other mitigating factors offered?	D_other		
	How many mitigating factors present			

	by defense?	D_mit		

MITIGATING FACTORS FOUND BY JURY OR JUDGE

	Variable	Var Label	Source	Code
	D has no significant history of prior criminal convictions	j_noconvict		
	D was under influence of extreme mental or emotional disturbance	j_disturbed		
	Capacity of D to appreciate the criminality was substantially impaired	j_impaired		
	Age of D at time of offense	j_age		
	D acted under extreme duress or substantial domination of another	j_duress		
	V was participant in D's homicidal conduct or consented to homicidal acts	j_v_consent		
	D participation in homicide was relatively minor	j_minor		
	Act of D was not sole proximate cause of victim's death	j_notcause		

OTHER MITIGATING FACTORS FOUND BY JURY OR JUDGE

	Unlikely D will engage in further crime	j_future		
	D was under 21 at time of offense	j_u21		
	D is elderly (over 60)	j_old		
	D was unable to control his/her conduct because of alcohol or drugs	j_drugs		
	D was unable to control conduct because of mental or emotional illness	j_mental		
	D was under control or influence of another	j_influence		
	D's participation in crime was minor	j_minorp		
	D claims killing was accident	j_accident		
	D was physically abused as child	j_abuse		
	D was sexually abused as child	j_sexab		
	D's generally good character (a good father, son etc.)	j_character		
	D had trouble in school	j_school		
	D had trouble holding a job	j_work		
	Is there an indication of PTSD?	j_ptsd		
	D has a spouse or family	j_fam		

	D admitted crime	j_admit		
	D expressed remorse for crime	j_remorse		
	D has history of mental illness or emotional problems	j_mhist		
	D has history of drug or alcohol use/abuse	j_dhist		
	D has organic brain disorder causing violence or unable to control conduct	j_brain		
	D maintains innocence	j_innocent		
	D has no major criminal history	j_nohist		
	D has shown that can behave well in prison	j_behave		
	D aided or assisted victim	j_assist		
	D surrendered within 24 hours	j_surrend		
	D was not actual killer	j_notkiller		
	Other mitigating factors offered?	j_other		
	How many statutory mitigating factors found by jury or judge?	j_smit		
	How many additional mitigating factors were found?	J_addmit		
	If penalty trial, was sentence of death based on (Table 10)	pt_death		
	If penalty trial, was sentence of life based on: Table 12)	pt_life		
	If sentence as DP and no mitigating factors were found was this because (Table 11)	dp_nomit		

FIRST VICTIM'S INFORMATION

	Variable	Var Label	Source	Code
	1st Victims last name			
	1st Victims middle name			
	1st victims first name			
	1st victims age			
	1st victims gender (Table 12)			
	1st victims race (Table 13)			
	1st victim's relationship with defendant (Table 28)			
	1st victims marital status at time of crime (Table 18)			
	Did 1st victim have any children lived with, supported or saw regularly?			
	Did 1st victim have minor child (18 or under)			

	1st victim primary occupation at time of offense.			
	1st victim's occupational status score (Appendix)			
	Did 1st victim have a felony criminal record?			

CHARACTERISTIS OF HOMICIDE-FIRST VICTIM

	Variable	Var Label	Source	Code
	Where did the homicide occur? Table 29			
	County of 1st victim's homicide			
	Did D force his way into place of homicide?			
	What circumstances best describes D's role in killing. Table 30			
	How was 1st victim killed? Primary method Table 36			
	Other method, if any: Table 36			
	1st V suffered multiple trauma (shot & stabbed etc.)			
	1st V was tortured or mutilated before killing.			
	1st V was brutally clubbed, beaten, etc.			
	1st V was shot more than once.			
	1st V was killed "execution" style.			
	D tried to hide, conceal, dispose of body			
	D was lying in wait for 1st V			
	V was stabbed many times, had throat slashed.			
	Did D come to crime scene armed with weapon used to fill 1st V?			
	Other V was injured, but not killed by D.			
	V killed in front of family member or other person not involved in killing.			

DEFENDANT'S DEFENSE AND TESTIMONY

#	Variable	Var Label	Source	Code
	Had 'accident' as defense at the guilt	gp_acc		

	phase or the plea			
	D had ‘mistaken identity’ as defense	mst_id		
	The defendant had ‘insanity’ at the guilt phase or the plea	gp_insane		
	The defendant argued that witnesses were not credible at the guilt phase or the plea	gp_nc		
	The defendant argued that the ‘offense did not constitute1st degree murder at the guilt phase or the plea	gp_not1st		
	The defendant admitted guilt without defense at the guilt phase or the plea			
	Defense psychiatrist/psychologist/ social worker or expert witnesses presented testimony at the **guilt phase of the trial.**	gp_d_psyiat		
	Prosecution psychiatrist/psychologist or other expert witnesses presented testimony at **guilt phase of the trial.**	gp_p_psyiat		
	Defense psychiatrist/psychologist or other expert witnesses presented testimony at **penalty phase of the trial.**	pp_d_psyiat		

STRENGTH OF EVIDENCE

	There was physical evidence linking the defendant to the crime (forensic evidence – blood, semen, fingerprints, hairs…)	p_evi		
	Was there physical evidence linking the weapon to the defendant?	ev_weapon		
	There was one or more eyewitnesses to the event who testified	witness1		
	A co-defendant testified against the defendant	co_def		

Appendix B: Logistic Regression Models

This Appendix presents the results from our logistic regression analyses of our death penalty outcome dependent variables. Logistic regression models predict the log-odds of dichotomous outcomes (such as the decisions to seek/file or retract the death penalty, or sentence a defendant to the death penalty) with a set of predictor variables. These logistic regression models take the form:

$$Y_i = \alpha \cdot Demographics_i + \beta X_i + \varepsilon_i \qquad (1)$$

Here Y_i represents a 0-1 indicator variable (eg., measuring whether defendant *i* was sentenced to death, whether the death penalty was sought, or whether the death penalty was retracted) which is modeled as a function of indicators capturing his or her demographic characteristics, such as race and gender, ($Demographics_i$) and a set of other individual or case-level characteristics (X_i). X_i include variables measuring factors such as the number, age, or other characteristics of victims; defendant's prior criminal history; the number of aggravating/mitigating circumstances; the jurisdiction in which the defendant was prosecuted, and other factors (see below). Given that our data collection process provided information on a wider array of factors than can be reasonably included in one regression model such as (1), we will select covariates for inclusion in X_i based upon prior research and the ability of particular factors to predict case outcomes.

We first estimated logistic models that included statutory aggravators, statutorily named mitigating factors, select case characteristics, defense attorney type, and many defendant and victim social status characteristics. We call this the *status characteristics models*. The purpose of these models was to examine the effects of defendant status characteristics other than race or ethnicity, such as marital and parental status, employment, education, and military service, net of the influence of the control variables. In these models, marital status, whether defendants had

children or not, employment status, level of education, or prior military service did not significantly or substantively predict death penalty filing, retraction, or receiving a death sentence. Tables showing the results for the status characteristics models are shown at the end of this Appendix. We then estimated a second set of models with the *comparable case model* variables (See Table 18), which include a more detailed set of case characteristics and fewer defendant social status characteristics.

In all of the logistic regression models, we first included all predictor variables of interest that had adequate numbers of case for analysis, in what we call a "full model." Next, we removed predictor variables that were not statistically significant at a p. value of .20 (meaning that there would be a 20% chance of the effect being due to sampling error, if this dataset were a random population sample). These latter we refer to as "reduced models." We estimate these more parsimonious reduced models in order to examine the effects of statistically significant predictors in models that are not cluttered by extraneous variables.

Comparable Case Logistic Regression Models

The following tables present full and reduced logistic regression models of whether the death penalty was filed/sought by prosecutors, whether the death penalty filing was retracted if filed/sought, and whether defendants received the death penalty. The models also examine three sets of race/ethnicity comparison variables: 1) race/ethnicity of the defendant (Black, Hispanic, and White as the reference category to which the others are compared), 2) the race/ethnicity of the victim; and 3) race/ethnicity of the defendant by race/ethnicity of the victim. The first model, Table B1, below shows whether the death penalty was filed by race/ethnicity of defendant, and this model shows the effects of all the control variables. The second model, Table B2, shows the race/ethnicity of victim, and the third, Table B3, shows the race/ethnicity of the defendant by

race ethnicity of victim comparisons; the control variables are included in the model, but not shown in the table for the sake of parsimony.

Table B1: Death Penalty Filed—Logistic Regression				
	Full Model		**Reduced Model**	
(*White defendant is the reference category*)	**Odds**	**p-value**	**Odds**	**p-value**
Black Defendant	**1.30**	**.32**	**1.20**	**.45**
Hispanic Defendant	**2.11**	**.07**	**1.96**	**.09**
Victim was prosecution witness	2.07	.20	2.66	.04
Murder committed in perpetration of felony	1.31	.43	--	--
Defendant knowingly created grave risk of death	0.83	.56	--	--
Victim was tortured	.90	.82	--	--
Defendant convicted of other offense carrying life/death	0.35	.05	0.39	.05
Defendant convicted of another murder	1.53	.35	--	--
Murder committed during drug felony	0.50	.23	--	--
Defendant was associated with victim in drug trafficking	0.75	.45	--	--
Victim was under 12	3.72	.07	5.63	.004
Number of Aggravating Factors	1.99	.001	2.01	.0001
No significant history of prior crime	2.02	.30	--	--
Extreme mental or emotional disturbance	22.44	.01	24.16	.004
Subst. impaired capacity to appreciate criminality	0.65	.70	--	--
Youthful age of defendant at time of crime	12.02	.0001	17.56	.0001
Number of mitigating factors presented by defense	1.13	.48	--	--
Multiple victims	5.56	.0001	5.88	.0001
Concurrent sex offense conviction	2.01	.28	--	--
Concurrent robbery conviction	1.21	.54	--	--
Concurrent burglary conviction	1.35	.50	--	--
Defense asked for psychiatric evaluation	2.48	.0001	2.68	.0001
Victim was a family member	0.64	.32	--	--
Victim had children	0.81	.40	--	--
Victim killed with knife	1.32	.45	--	--
Victim killed with bare hands (reference: killed with gun)	1.51	.34	--	--
Victim didn't resist	.95	.85	--	--
Victim was killed in an especially brutal manner	1.50	.23	--	--
Defendant tried to hide victim's body	1.51	.21	--	--
Victim killed execution style	1.02	.92	--	--
Defendant ambushed victim	.99	.98	--	--
Defendant age (years)	1.02	.04	1.01	.08
Private attorney	1.29	.34	--	--
Court appointed attorney (reference: public defender)	2.23	.01	1.79	.02
Defendant claimed killing was an accident	.83	.76	--	--
Defendant claimed mistaken identity	0.75	.33	--	--

Table B1: Death Penalty Filed—Logistic Regression				
	Full Model		**Reduced Model**	
(*White defendant is the reference category*)	**Odds**	**p-value**	**Odds**	**p-value**
Defendant claimed witnesses not credible	1.23	.43	--	--
Defendant claimed killing not first-degree murder	0.90	.67	--	--
Defendant admitted guilt	2.04	.03	2.24	.004
Defendant presented psychiatric expert witness	0.64	.16	0.69	.20
Physical evidence present	0.66	.11	0.90	.62
Weapon linked to defendant	0.91	.70	--	--
Eye-witness testified	1.04	.88	--	--
Co-defendant testified against defendant	1.18	.62	--	--
Defendant IQ between 71-90	1.01	.95	--	--
Allegheny County	0.16	.000	0.18	.0001
Philadelphia County	0.62	.09	0.66	.11
-- Blank rows indicate that insufficient numbers of cases for analysis exist in these categories.				

Table B2: Death Penalty Filed—Logistic Regression: Race/Ethnicity of Victim (all control variables in above table included but not shown)				
	Full Model		**Reduced Model ***	
(*White victim is the reference category*)	**Odds**	**p-value**	**Odds**	**p-value**
Black Victim	1.05	.84	.85	.49
Hispanic Victim	2.19	.03	1.94	.06

Table B3: Death Penalty Filed—Logistic Regression: Defendant/Victim combinations (all control variables in above table included but not shown)				
	Full Model		**Reduced Model ***	
(*White defendant/White victim is the reference category*)	**Odds**	**p-value**	**Odds**	**p-value**
White Def./Black Vic.	.87	.80	.79	.67
White Def./Hispanic Vic.	--	--	--	--
Black Def./White Vic.	.89	.75	1.04	.91
Black Def./Black Vic.	.98	.96	.83	.43
Black Def./Hispanic Vic.	--	--	--	--
Hispanic Def./White Vic.	--	--	--	--
Hispanic Def./Black Vic.	--	--	--	--
Hispanic Def./Hispanic Vic.	2.11	.15	1.75	.24
-- Blank rows indicate that insufficient numbers of cases for analysis exist in these categories.				

In the first table, Hispanic defendants have greater odds of having the death penalty filed against them (Whites are the reference category). Hispanic defendants' death penalty filing odds are about double those of Whites', and the effect is marginally statistically significant. In the second table, Hispanic victim cases are also more likely to receive a death penalty filing, with these cases having nearly twice the odds of White victim cases of death penalty filing. In the third table, none of the defendant/victim categories' effects would be statistically significant. To the extent that notable differences exist here, Hispanic defendants with Hispanic victims show increased odds for death penalty filing (though not statistically significant). In other effects of interest in Table B1, there is a slight tendency for older defendants to have increased odds of death penalty filing. Also, cases with court appointed attorneys are more likely to see a death penalty filing relative to cases with public defenders, the reference category (odds = 2.23 in full model, 1.79 in reduced model). Notably, 80% of court appointed attorney cases are in Philadelphia. In addition, Allegheny County is much less likely to file the death penalty than the rest of the state, including Philadelphia (which is also less likely to file than the rest of the state, but not significantly so).

The next tables present models of the decision to retract the death penalty if it is filed. This model only includes those whom the death penalty was filed against (N = 313). The first table lists all control variables, and the second includes them in the model but does not show them for parsimony.

Table B4: Death Penalty Retracted—Logistic Regression				
	Full Model		**Reduced Model**	
(*White defendant is reference category*)	**Odds**	**P-Value**	**Odds**	**P-Value**
Black Defendant	**1.39**	**.49**	**1.16**	**.71**
Hispanic Defendant	**6.83**	**.02**	**5.14**	**.01**
Victim was prosecution witness	0.22	.06	0.29	.03

Table B4: Death Penalty Retracted—Logistic Regression				
	Full Model		**Reduced Model**	
(*White defendant is reference category*)	**Odds**	**P-Value**	**Odds**	**P-Value**
Murder committed in perpetration of felony	3.43	.03	2.73	.01
Defendant knowingly created grave risk of death	2.17	.13	1.29	.45
Victim was tortured	1.05	.94		
Defendant convicted of other offense carrying life/death	1.01	.99		
Defendant convicted of another murder	4.39	.03	2.55	.02
Murder committed during drug felony	1.24	.79		
Defendant was associated with victim in drug trafficking	0.82	.73		
Victim was under 12	1.25	.79		
Number of Aggravating Factors	0.77	.42		
No significant history of prior crime	--	--		
Extreme mental or emotional disturbance	0.16	.02	0.12	.002
Subst. impaired capacity to appreciate criminality	0.32	.30		
Youthful age of defendant at time of crime	0.02	.0001	0.01	.0001
Number of mitigating factors presented by defense	0.88	.47		
Multiple victims	1.05	.94		
Concurrent sex offense conviction	0.63	.61		
Concurrent robbery conviction	0.25	.01	0.27	.002
Concurrent burglary conviction	1.47	.58		
Defense asked for psychiatric evaluation	1.36	.45		
Victim was a family member	0.75	.69		
Victim had children	0.66	.34		
Victim killed with knife	2.23	.23		
Victim killed with bare hands (reference: killed with gun)	1.27	.73		
Victim didn't resist	1.16	.76		
Victim was killed in an especially brutal manner	1.72	.33		
Defendant tried to hide victim's body	1.18	.77		
Victim killed execution style	1.55	.31		
Defendant ambushed victim	0.47	.14	0.46	.07
Defendant age (years)	0.99	.93		
Private attorney	1.38	.54		
Court appointed attorney (reference: public defender)	1.52	.40		
Defendant claimed killing was an accident	0.43	.39		
Defendant claimed mistaken identity	0.74	.56		
Defendant claimed witnesses not credible	0.88	.76		
Defendant claimed killing not first-degree murder	0.92	.86		
Defendant admitted guilt	12.91	.0001	13.24	.0001
Defendant presented psychiatric expert witness	0.96	.93		

Table B4: Death Penalty Retracted—Logistic Regression				
	Full Model		**Reduced Model**	
(*White defendant is reference category*)	**Odds**	**P-Value**	**Odds**	**P-Value**
Physical evidence present	0.31	.01	0.32	.002
Weapon linked to defendant	1.20	.67		
Eye-witness testified	0.86	.75		
Co-defendant testified against defendant	1.75	.30		
Defendant IQ between 71-90	0.85	.68		
Allegheny County	1.70	.50		
Philadelphia County	5.48	.02	4.14	.0001

Table B5: Death Penalty Retracted—Logistic Regression: Race/Ethnicity of Victim (all control variables in above table included but not shown)				
	Full Model		**Reduced Model ***	
(*White victim is the reference category*)	**Odds**	**p-value**	**Odds**	**p-value**
Black Victim	1.56	.33	1.42	.34
Hispanic Victim	0.58	.30	0.56	.20

Table B6: Death Penalty Retracted—Logistic Regression, defendant/victim combinations (all control variables in above table included but not shown)				
	Full Model		**Reduced Model**	
(*White defendant/white victim is the reference category*)	**Odds**	**P-Value**	**Odds**	**P-Value**
White Def./Black Vic.	0.94	.95	0.96	.96
White Def./Hispanic Vic.	--	--	--	--
Black Def./White Vic.	1.14	.83	0.78	.60
Black Def./Black Vic.	2.36	.07	1.76	.13
Black Def./Hispanic Vic.	--	--	--	--
Hispanic Def./White Vic.	--	--	--	--
Hispanic Def./Black Vic.	--	--	--	--
Hispanic Def./Hispanic Vic.	5.31	.06	2.75	.17

As shown in the Table B4, in focusing on the effects that would be statistically significant, Hispanic defendants have much higher odds than other defendants of having a death

penalty filing retracted by prosecutors. In the Table B6, two defendant/victim combinations have marginally significant (in the full model) and notably higher odds of having the death penalty retracted: Black defendants with Black victims and Hispanic offenders with Hispanic victims. Thus, Hispanic defendants and cases with Hispanic defendants and victims are more likely to have the death penalty filed against them, but these cases also appear to be more likely to have the death penalty retracted if it is filed. Notably, Philadelphia is much more likely than the rest of the state (including Allegheny) to retract the death penalty once it is filed.

In supplemental models, an interesting case processing pattern emerges. Note that in Table B1, the variable "Defendant admitted guilt" results in increased odds of death penalty filing. It is very unlikely that this effect means that prosecutors are more likely to seek the death penalty against those who plead guilty. Rather, the causality in this effect is likely reversed—defendants are probably more likely to plead guilty once prosecutors seek the death penalty. When we treat pleading guilty to the first-degree murder charge as a dependent variable, a prosecutorial filing to seek the death penalty strongly increases the likelihood of a defendant pleading guilty. Pleading guilty, in turn, strongly increases the likelihood that the death penalty filing will be retracted. Specifically, a death penalty filing raises the odds of a guilty plea by 2.9; cases where the death penalty is filed have nearly three times of the odds of eventually pleading guilty to a first-degree murder charge. Then, pleading guilty to a first-degree murder charge is associated with 8.1 times greater odds of the death penalty filing being retracted. This pattern is also seen in the effects of the "Defendant admitted guilt" variable in Table B4, where it greatly increases the likelihood of retracting the death penalty (the bivariate correlation between the defendant admitted guilt variable and the guilty plea variable is .78).

The next tables present models of the decision to sentence a defendant to the death penalty. As with the propensity score models in the main report, the death penalty models below contain all 880 cases. The Table B7 lists all control variables, and the second includes them in the model but does not show them for parsimony.

Table B7: Sentenced to Death Penalty—Logistic Regression				
	Full Model		**Reduced Model**	
	Odds	**p-Value**	**Odds**	**p-Value**
Black Defendant	**0.29**	**.06**	**0.32**	**.02**
Hispanic Defendant	**0.35**	**.26**	**0.38**	**.21**
Victim was prosecution witness	0.94	.95		
Murder committed in perpetration of felony	0.67	.65		
Defendant knowingly created grave risk of death	3.18	.18	4.00	.01
Victim was tortured	3.26	.20	3.40	.07
Defendant convicted of other offense carrying life/death	0.84	.86		
Defendant convicted of another murder	13.71	.01	7.56	.0001
Murder committed during drug felony	0.11	.17	0.20	.22
Defendant was associated with victim in drug trafficking	0.15	.15	0.39	.37
Victim was under 12	0.39	.43		
Number of Aggravating Factors	1.45	.38		
No significant history of prior crime	0.69	.61		
Extreme mental or emotional disturbance	2.06	.35		
Subst. impaired capacity to appreciate criminality	0.70	.64		
Youthful age of defendant at time of crime	1.33	.67		
Number of mitigating factors presented by defense	0.94	.72		
Multiple victims	0.38	.34		
Concurrent sex offense conviction	7.00	.11	4.65	.10
Concurrent robbery conviction	1.01	.99		
Concurrent burglary conviction	1.27	.77		
Defense asked for psychiatric evaluation	0.70	.52		
Victim was a family member	2.83	.24		
Victim had children	0.48	.20	0.67	.41
Victim killed with knife	1.19	.83		
Victim killed with bare hands (reference: killed with gun)	1.33	.76		
Victim didn't resist	1.04	.94		
Victim was killed in an especially brutal manner	0.31	.11	0.32	.08
Defendant tried to hide victim's body	0.43	.25		
Victim killed execution style	0.41	.16	0.36	.05
Defendant ambushed victim	3.23	.08		
Defendant age (years)	1.01	.71		

Table B7: Sentenced to Death Penalty—Logistic Regression				
	Full Model		Reduced Model	
	Odds	p-Value	Odds	p-Value
Private attorney	0.16	.002	0.16	.0001
Court appointed attorney (reference: public defender)	0.71	.63		
Defendant claimed killing was an accident	0.74	.78		
Defendant claimed mistaken identity	0.59	.47		
Defendant claimed witnesses not credible	0.92	.90		
Defendant claimed killing not first-degree murder	2.48	.18	2.98	.01
Defendant admitted guilt	0.63	.60		
Defendant presented psychiatric expert witness	0.87	.85		
Physical evidence present	1.97	.24		
Weapon linked to defendant	0.93	.88		
Eye-witness testified	0.47	.20	0.42	.08
Co-defendant testified against defendant	2.35	.19	1.83	.26
Defendant IQ between 71-90	5.68	.002	3.89	.003
Sentenced by Jury	73.60	.0001	56.35	.0001
Allegheny County	0.40	.32		
Philadelphia County	0.17	.04	0.19	.01

Table B8: Sentenced to Death Penalty —Logistic Regression: Race/Ethnicity of Victim (all control variables in above table included but not shown)				
	Full Model		Reduced Model *	
(*White victim is the reference category*)	Odds	p-value	Odds	p-value
Black Victim	0.22	.002	0.25	.004
Hispanic Victim	0.63	.46	0.49	.24

Table B9: Sentenced to Death Penalty—Logistic Regression: Defendant/Victim combinations (all control variables in above table included but not shown)				
	Full Model		Reduced Model *	
(*White defendant/White victim is the reference category*)	Odds	p-value	Odds	p-value
White Def./Black Vic.	0.60	.67	0.50	.47
White Def./Hispanic Vic.	--	--	--	--
Black Def./White Vic.	0.73	.68	0.60	.42
Black Def./Black Vic.	0.20	.02	0.21	.004
Black Def./Hispanic Vic.	--	--	--	--
Hispanic Def./White Vic.	--	--	--	--

Table B9: Sentenced to Death Penalty—Logistic Regression: Defendant/Victim combinations (all control variables in above table included but not shown)				
	Full Model		**Reduced Model ***	
(*White defendant/White victim is the reference category*)	**Odds**	**p-value**	**Odds**	**p-value**
Hispanic Def./Black Vic.	--	--	--	--
Hispanic Def./Hispanic Vic.	0.09	.05	0.10	.03

Interestingly, in the Table B7, black and Hispanic defendants have lesser odds of receiving the death penalty relative to Whites. In the reduced model, black defendants have 68% lesser odds of receiving the death penalty than Whites (which would be statistically significant), and Hispanic defendants have 62% lesser odds. In addition, in Table B8, cases with Black victims are substantially less likely to receive the death penalty. In Table B9, cases with Black defendants and Black victims are much less likely to receive the death penalty, as are cases with Hispanic defendants and Hispanic victims, compared to cases with White defendants and White victims.

In other interesting findings in Table B7, cases with private attorneys are highly unlikely to receive the death penalty (odds .16 in both models). In addition, defendants with IQs between 71 and 90 have substantially increased odds of receiving the death penalty (5.68 in the full model, 3.89 in reduced model). Also, juries are very much more likely to give the death penalty than judges. Finally, Philadelphia is much less likely to give the death penalty than the rest of the counties in the field data.

Appendix C: State-Wide AOPC Data

First-degree Murder Convictions, Statewide

Our main focus here is on the 1,115 cases statewide with at least one first-degree murder conviction listed in the AOPC dockets, because these are the cases that are potentially exposed to the death penalty. The remainder of our discussion here of the descriptive statistics and later crosstabulations will concern these 1,115 cases.

Many of these first-degree murder convictions also have concurrent convictions for other serious offenses. Table C1 lists the frequency and type of concurrent convictions that accompany these docket cases. Note that the conviction types do not sum to 1,115, (the total number of AOPC docket first-degree murder convictions) because the convictions are not mutually exclusive. That is, defendants may have more than one concurrent conviction type.

Table C1: Type and Frequency of Convictions Accompanying First-degree Murder Convictions

Type of Conviction	Frequency	Percent
Sex Offenses	28	2.5
Robbery	131	12.0
Burglary	70	6.3
Any Felony	601	54.0
No Other Felony Convictions	514	46.1

* Note: Percentages do not sum to 100 due to overlap between the conviction categories, which are not mutually exclusive.

One of the case outcomes of key interest is whether prosecutors filed notice to seek the death penalty. Among the 1,115 first-degree murder cases in our statewide AOPC docket data, prosecutors sought the death penalty in 416 (or 37%) of them, and did not seek it in 699 (or 63 %) of the cases. Thus, in a little more than a third of these first-degree murder cases, prosecutors seek the death penalty. But, in 94 (or 23%) of the cases where District Attorney's Offices sought the death penalty, they later retracted this death notice. Furthermore, in 126 cases (29%),

defense attorneys moved that the death notice be dropped, and in 17 (4%) of these cases, the court upheld such defense motions. Thus, 305 docket cases eventually were exposed to/faced the death penalty at sentencing.[34] Then, of the 305 cases ultimately exposed to death at sentencing, 60 (19.7%) of the cases received a death sentence, while 245 did not. Cases not exposed to the death penalty at sentencing received life sentences, thus there were 1,073 life sentences in our AOPC docket data statewide. Table C2 lists the frequencies and percentages for these various outcomes relative to seeking and imposing the death penalty. This process is illustrated in Chart 5 below.

Table C2: Death Penalty Exposure and Sentences: a) Prosecutors Seeking and Retracting Notice for the Death Penalty, b) Defense Moving to Drop Death Penalty Notice, c) Defense Motion to Drop Death Penalty Sustained, d) Death Penalty Imposed.

Death Penalty Sought	Frequency	Percent
Yes	416	37
No	699	63
Of 416 Cases Where Death Was Sought		
D.A. sought and later retracted	94	23
Defense moved to drop	126	28.6
Court sustained defense move to drop	17	4
Of 305 Cases Ultimately Exposed to Death Penalty		
Offender Received Death Sentence	60	19.6
Offender Received Life Sentence	245	80.3

Finally, we give some descriptive statistics on the race/ethnicity and gender of the offenders in the 1,115 first-degree murder cases. Table C3 presents this race/ethnicity and gender breakdown. The majority of the docket cases involve black offenders, while about a third

[34] Note: our field data actually uncovered 313 cases where prosecutors sought the death penalty, and 146 cases where they retracted that filing. Apparent errors in the AOPC docket data account for these differences.

are White. About 6% of the cases involve Hispanic offenders, a category not mutually exclusive with being of Black or White race. The cases also overwhelmingly consist of male offenders.

Table C3: Race/Ethnicity and Gender of First-degree Murder Convicted Offenders		
Race/Ethnicity	**Frequency**	**Percent**
Black	686	61.5
White	379	34.0
Hispanic *	68	6.0
Asian/Other	25	2.2
Unreported/Indeterminate	25	2.2
Gender	**Frequency**	**Percent**
Male	1,029	92.3
Female	50	4.5
Unreported/unclassified	14	1.3
* Not mutually exclusive with other categories, thus, percent will not sum to 100.		

Table C4 shows the concurrent felony convictions by race/ethnicity for the statewide AOPC data. Note that the conviction types do not sum to 1,115, (the total number of AOPC docket first-degree murder convictions) because the convictions are not mutually exclusive. That is, defendants may have more than one concurrent conviction type. As Table C4 shows, greater percentages of African American and Hispanic defendants (and Other defendants) had concurrent felony convictions of some type compared to White defendants. African American defendants also had more concurrent robbery convictions than Whites, both in absolute numbers and proportionally.

Table C4: Types of Concurrent Convictions by Race/Ethnicity: Frequency (percent). Race/Ethnicity *					
Convictions	**White**	**African American**	**Hispanic ****	**Other**	**Total**
Sex offenses	15 (4)	12 (1.7)	1 (1.5)	1 (3.6)	28 (2.6)
Robbery	38 (10)	87 (12.7)	8 (11.8)	3 (12.0)	128 (12)
Burglary	28 (7.4)	37 (5.4)	6 (8.8)	3 (12)	68 (6.2)
Any Felony †	173 (45.6)	402 (58.6)	35 (51.5)	13 (52)	521 (46.1)
None	206 (54)	284 (57)	21 (31)	12 (48)	502 (100)

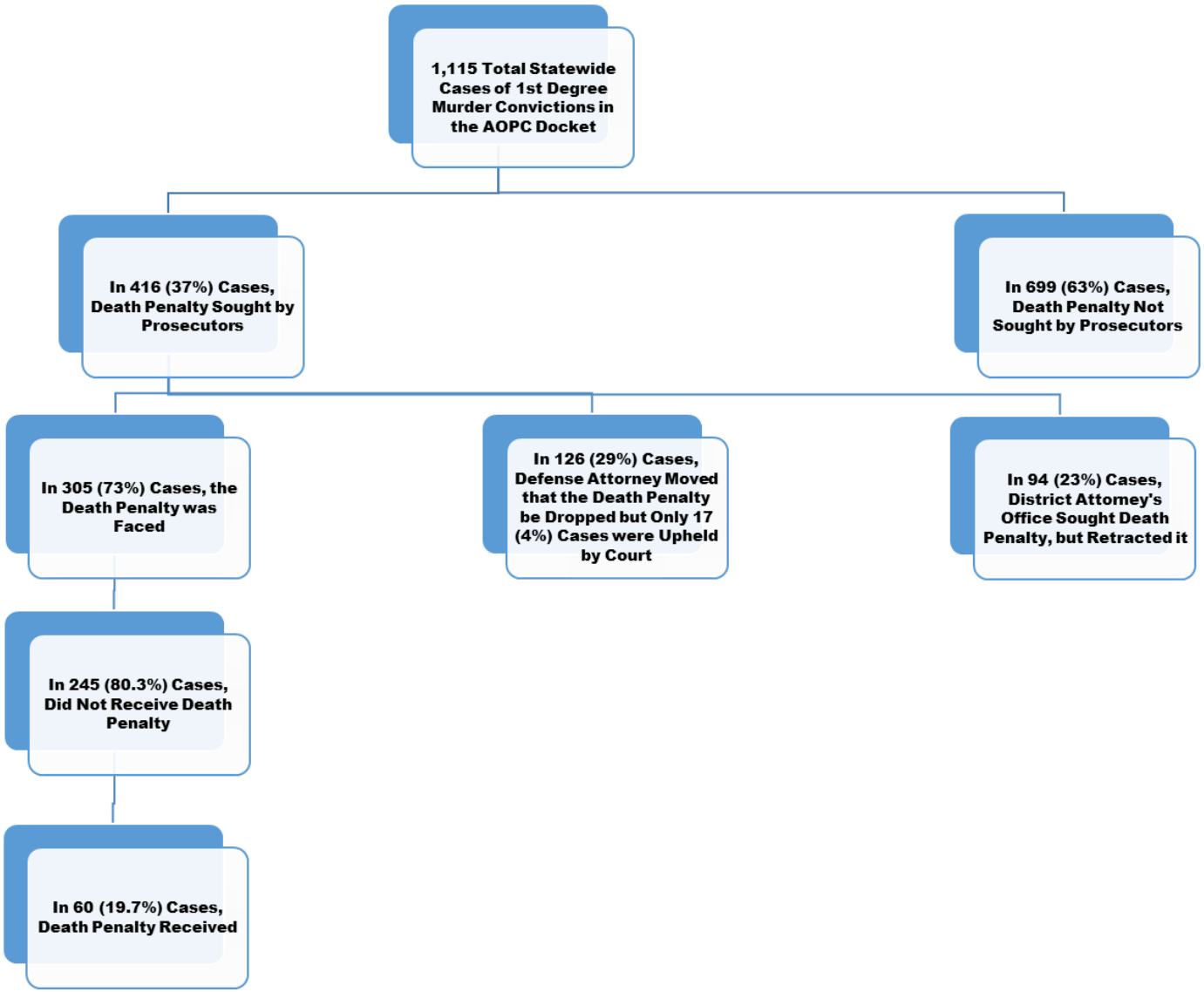
Total	379 (100)	686 (100)	68 (100)	25 (100)	
*25 unknown or indeterminate race **Not mutually exclusive with White or African American † Conviction categories are not mutually exclusive					

Finally, Table C5 shows the race/ethnic breakdown for the death penalty outcomes in the AOPC docket data. The death penalty was sought for 162 (43%) of the white defendants, 234 (34%) of the Black defendants, and 35 (51%) of the Hispanic defendants in the AOPC data. Of those, 31 White defendants had the death filing retracted or else the court sustained a move to drop the filing, compared to 75 Black defendants and 9 Hispanic defendants. Of the White defendants ultimately exposed to the death penalty, 32 (24%) received it, compared to 26 (16%) of the Black defendants exposed to the death penalty and 7 (26%) of the Hispanic defendants.

Table C5: Statewide AOPC Data—Death Penalty Outcomes by Race/Ethnicity.†

Death Penalty Sought	**White**	**Black**	**Hisp**
Yes	162	234	35
No	217	452	33
Of 416 Cases Where Death Was Sought			
D.A. sought and later retracted	27	63	7
Defense moved to drop	58	61	12
Court sustained defense move to drop	4	12	2
Of 305 Cases Ultimately Exposed to Death Penalty			
Offender Received Death Sentence	32	26	7
Offender Received Life Sentence	99	133	20
† Other race/ethnicity and unknown/indeterminate race not included. In these groups, the death penalty was sought in 23 cases, retracted in 2 cases, the court sustained a motion to drop in 1 case, and death sentence was given in 0 cases.			

Chart 5: AOPC Docket Death Penalty Case Flow



Appendix D: Balance Statistics for Propensity Score Weighting Models

Variable Names Key
p_v_witness3: Victim was a prosecution witness, as determined by field coders (the death penalty given analysis used the variable p_v_witness, indicating that prosecutors filed this aggravator)
p_v_felony3: Murder committed in perpetration of felony, as determined by field coders (the death penalty given analysis used the variable p_v_felony, indicating that prosecutors filed this aggravator)
p_d_risk3: Defendant knowingly created grave risk of death, as determined by field coders (the death penalty given analysis used the variable p_d_risk, indicating that prosecutors filed this aggravator)
p_torture3: Victim was tortured, as determined by field coders (the death penalty given analysis used the variable p_torture, indicating that prosecutors filed this aggravator)
p_death3: Defendant convicted of other offense carrying life/death, as determined by field coders (the death penalty given analysis used the variable p_death, indicating that prosecutors filed this aggravator)
p_murder3: Defendant convicted of another murder, as determined by field coders (the death penalty given analysis used the variable p_murder, indicating that prosecutors filed this aggravator)
p_drug3: Murder committed during drug felony, as determined by field coders (the death penalty given analysis used the variable p_drug, indicating that prosecutors filed this aggravator)
p_v_drug3: Defendant was associated with victim in drug trafficking, as determined by field coders (the death penalty given analysis used the variable p_v_drug, indicating that prosecutors filed this aggravator)
p_v_12_3: Victim was under 12, as determined by field coders (the death penalty given analysis used the variable p_v_12, indicating that prosecutors filed this aggravator)
p_agg3: Number of Aggravating Factors, as determined by field coders (the death penalty given analysis used the variable p_agg, indicating that prosecutors filed this number of aggravators)
d_noconvict: No significant history of prior crime
d_disturbed: Extreme mental or emotional disturbance
d_impaired: Subst. impaired capacity to appreciate criminality
d_age: Youthful age of defendant at time of crime
sum_other_mit: Number of mitigating factors presented by defense
MultiVictims: Multiple victims
sex_convict: Concurrent sex offense conviction
rob_convict0: Concurrent robbery conviction
burg_convict0: Concurrent burglary conviction
psych0: Defense asked for psychiatric evaluation
v1family: Victim was a family member
v1hadkids: Victim had children
v1knife: Victim killed with knife
v1barehands: Victim killed with bare hands (reference: killed with gun)
v_1h_resis: Victim didn't resist

v_1h_brutal: Victim was killed in an especially brutal manner
v_1h_hide: Defendant tried to hide victim's body
v_1h_execution: Victim killed execution style
v_1h_ambush: Defendant ambushed victim
age_mean: Defendant age (years)
private: Private attorney
courtappt: Court appointed attorney (reference category: public defender)
gp_acc: Defense claimed killing was an accident
mst_id: Defense claimed mistaken identity
gp_nc: Defense claimed witnesses not credible
gp_not1st: Defense claimed killing not first-degree murder
ad_guilt: Defendant admitted guilt
gp_d_psyiat: Defense presented psychiatric expert witness
p_evi: Physical evidence present
ev_weapon: Weapon linked to defendant
witness1: Eye-witness testified
co_def: Co-defendant testified against defendant
IQ71_90: Defendant IQ between 71-90
jurydum: Sentenced by Jury (in death penalty models only)
Allegheny: Allegheny County (in some models) (reference catetgory: other field data counties).
Phila: Philadelphia County (in some models) (reference catetgory: other field data counties).

Death Penalty Filed

Black Defendant

	Raw	Weighted
Number of obs =	880	880.0
Treated obs =	591	438.8
Control obs =	289	441.2

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness3	.0664755	.0481242	1.322324	1.241902
p_felony3	-.1238752	-.0850581	.8877891	.9268378
p_d_risk3	.2291952	-.0151327	1.2421	.9881193
p_torture3	-.1832379	-.0393642	.5917805	.9009259
p_death3	.0126817	.0558598	1.038995	1.213112
p_murder3	.1416699	.0501348	1.408372	1.125861
p_drug3	-.0390309	-.0117529	.8327859	.9445184
p_v_drug3	.132196	-.0795828	1.475853	.8095496
p_v_12_3	-.0320914	-.0747157	.8483264	.714934
p_agg3	.1032666	-.0553809	1.296933	1.010478
d_noconvict	-.2121011	-.0201559	.459177	.9233826
d_disturbed	-.207258	-.0087741	.3833384	.9602164
d_impaired	-.2298734	-.0018974	.3426104	.9905712
d_age	-.1266213	-.0253066	.6695204	.9217416
sum_other_mit	-.1689048	-.000114	.5271019	1.244001
MultiVictims	.0735593	.0222305	1.15906	1.046254
sex_convict	-.0347236	-.0642817	.818397	.7270522
rob_convict0	.0446726	-.0230519	1.093805	.9549959
burg_convict0	-.0685731	-.0786344	.7809889	.7647381
psych0	-.4820977	.0862686	.5999604	1.107646
v1family	-.4205996	.0691189	.2807934	1.225287
v1hadkids	-.3326324	.0423547	.7398354	1.042609
v1knife	-.3248484	.0263042	.4858501	1.059747
v1barehands	-.3193283	-.0025984	.3826041	.9922192
v_1h_resis	-.2645551	.0128673	.7443873	1.014696
v_1h_brutal	-.3270441	-.0062483	.5262178	.988003
v_1h_hide	-.2937962	.0640643	.5629029	1.138263
v_1h_execution	.136382	-.0043428	1.148309	.9955058
v_1h_ambush	.1930589	-.1006583	1.396006	.8638426
age_mean	-.474503	-.0212777	.5097537	.9545811
private	-.1516374	.0809795	.9248767	1.061906
courtappt	.3536017	-.0659697	1.428489	.9506346
gp_acc	-.1588063	-.0245723	.4363954	.8707951
mst_id	.5191287	-.0110811	1.396953	.9950634
gp_nc	.4354039	.0111966	.99653	.9993268
gp_not1st	-.2206824	.0499733	.8788083	1.034662
ad_guilt	-.3221352	-.0585868	.4834075	.8796391
gp_d_psyiat	-.3332907	.0321235	.5520586	1.063413
p_evi	-.3881651	.0450821	.9094012	1.019363
ev_weapon	-.264796	.0554979	.800011	1.048535
witness1	.5044653	-.0636877	.804708	1.041686
co_def	-.1146061	.0035631	.7773886	1.008532
IQ71_90	.3059414	-.0239473	1.358086	.9804403

Hispanic Defendant

	Raw	Weighted
Number of obs =	880	880.0
Treated obs =	62	504.4
Control obs =	818	375.6

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness3	-.100549	-.2504682	.6363044	.1774764
p_felony3	.3970399	.1024187	1.293721	1.092937
p_d_risk3	.1511086	-.0816569	1.129082	.9240939
p_torture3	-.0840032	-.044262	.7729704	.8710351
p_death3	-.1312722	-.1446938	.630181	.5813912
p_murder3	-.0923796	-.1268224	.8062131	.7171902
p_drug3	.1868712	-.0459048	2.130351	.7886495
p_v_drug3	.2177934	-.0451772	1.689577	.8739757
p_v_12_3	.077503	.0382116	1.464491	1.201147
p_agg3	.2342919	-.1601201	1.036946	.9718923
d_noconvict	.1573453	-.2207194	1.706873	.2914981
d_disturbed	.1868712	-.1574178	2.130351	.3678794
d_impaired	.3029301	-.1456614	3.075597	.4031298
d_age	.3888208	-.1767483	2.614976	.4756625
sum_other_mit	.1837172	-.1198293	1.417329	.3590223
MultiVictims	-.0613148	-.1247714	.8929922	.7556527
sex_convict	-.0812985	-.1264843	.5895066	.380457
rob_convict0	.1381566	.1428828	1.301997	1.281779
burg_convict0	.3020334	.1020492	2.423149	1.398115
psych0	.3835018	-.2247257	1.390483	.7011273
v1family	-.144362	.4805496	.6051962	2.531226
v1hadkids	.2997992	-.3745735	1.260781	.5488803
v1knife	.1302739	-.1742054	1.337813	.6059421
v1barehands	.1220269	-.1905018	1.4303	.4670127
v_1h_resis	.2332746	-.2781131	1.270446	.6287133
v_1h_brutal	-.2622205	-.4313022	.49632	.1928118
v_1h_hide	.1109171	-.1439746	1.253701	.7055127
v_1h_execution	.2747099	.2067209	1.22846	1.163202
v_1h_ambush	-.0738862	.558814	.8941532	1.609969
age_mean	-.3966596	-.0644728	.3027364	.3056816
private	-.0609796	-.2298515	.9776872	.8289967
courtappt	-.2788191	.577606	.7353754	1.142424
gp_acc	.1659544	-.1013219	2.151345	.5226051
mst_id	-.2333076	.4784434	.8707813	.9773765
gp_nc	-.1151105	.1376617	1.021151	.9595239
gp_not1st	.2368123	-.3865759	1.12657	.6446277
ad_guilt	.1843427	-.1512612	1.484199	.6492537
gp_d_psyiat	.0660084	.3349515	1.144388	1.582149
p_evi	.0572739	-.0335322	1.03395	.9857097
ev_weapon	.0790693	.1196379	1.086187	1.099967
witness1	-.100073	-.206084	1.06749	1.078684
co_def	.2853837	-.1963618	1.697916	.5740761
IQ71_90	.1202584	-.2233296	1.110286	.7731659

White Defendant

	Raw	Weighted
Number of obs =	880	880.0
Treated obs =	214	458.2
Control obs =	666	421.8

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness3	-.026774	-.0126919	.8975017	.947638
p_felony3	-.004635	.1253612	.998549	1.117382
p_d_risk3	-.3421306	.3002732	.6915795	1.153252
p_torture3	.2202053	-.06016	1.827775	.8446616
p_death3	.0276809	-.0675646	1.092913	.790977
p_murder3	-.1267078	.024975	.7341223	1.056611
p_drug3	-.0162926	.0711188	.9281007	1.369743
p_v_drug3	-.2615736	.2290013	.4092092	1.68184
p_v_12_3	.0235669	-.0493341	1.130189	.7579287
p_agg3	-.2124115	.2381849	.7160786	.9518425
d_noconvict	.2066383	-.0338154	2.063957	.8616744
d_disturbed	.184155	-.0198327	2.244834	.9046035
d_impaired	.157999	-.0430089	2.008545	.7928382
d_age	-.0191722	.1516073	.9416643	1.534451
sum_other_mit	.147386	.1080585	1.927745	1.123313
MultiVictims	-.0324306	.0506002	.9398786	1.100263
sex_convict	.0426712	.188383	1.276078	2.388739
rob_convict0	-.1104638	-.0129031	.7916964	.9733626
burg_convict0	-.0562602	.0439946	.8099062	1.170265
psych0	.4131729	-.090348	1.502211	.8906523
v1family	.5115982	-.1226079	4.068416	.6928277
v1hadkids	.2922242	.0474008	1.28655	1.040905
v1knife	.3406729	.0137795	2.032253	1.031253
v1barehands	.3068471	-.0504587	2.371268	.8613072
v_1h_resis	.1892796	.0366471	1.233438	1.043494
v_1h_brutal	.447417	.019645	2.225816	1.035475
v_1h_hide	.3012578	-.0530466	1.746639	.894284
v_1h_execution	-.25019	.105215	.7539491	1.099394
v_1h_ambush	-.2008414	.2528901	.698228	1.378331
age_mean	.6328382	.0295397	2.160951	.9551027
private	.2246572	-.2110141	1.106865	.8232355
courtappt	-.3606604	.1529211	.6757636	1.09524
gp_acc	.1346157	-.0214705	1.966517	.874719
mst_id	-.5458673	.0124546	.6611436	1.00567
gp_nc	-.4161234	.0836715	.9780945	.9886784
gp_not1st	.2222403	-.0002029	1.129945	.9996778
ad_guilt	.2673638	.0124405	1.780139	1.029425
gp_d_psyiat	.3502459	-.0460018	1.79317	.9124614
p_evi	.4756586	-.1068029	1.067228	.9505577
ev_weapon	.2828369	-.1472397	1.248103	.8697515
witness1	-.5482316	.1752967	1.192392	.8764531
co_def	.0185956	-.0821092	1.045747	.8093045
IQ71_90	-.4455915	.0650162	.5905766	1.053797

Any White Victim

	Raw	Weighted
Number of obs =	880	880.0
Treated obs =	282	401.9
Control obs =	598	478.1

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness3	.0368751	.0730889	1.162014	1.349328
p_felony3	.3653127	.0679412	1.37094	1.05671
p_d_risk3	-.2792524	-.0294505	.7609939	.9763038
p_torture3	.3130023	-.0226057	2.435669	.9453062
p_death3	.1471748	.0413344	1.562304	1.144904
p_murder3	.0325409	.0528734	1.078375	1.129376
p_drug3	.0720633	-.0355418	1.395044	.8536546
p_v_drug3	-.2611468	-.0838593	.426269	.7575402
p_v_12_3	-.0177697	.0428857	.9135454	1.240762
p_agg3	.1394075	.0411484	1.582281	1.259203
d_noconvict	.2220236	-.0069588	2.25165	.9765947
d_disturbed	.0969783	.0284717	1.560863	1.121621
d_impaired	.2153414	.0095722	2.699551	1.047254
d_age	.1376009	.0573853	1.543644	1.203118
sum_other_mit	.1811957	-.0127716	2.184286	.8864977
MultiVictims	.1574614	.0441624	1.348135	1.088119
sex_convict	.184306	.0590798	2.874786	1.368303
rob_convict0	.1724101	.0774603	1.394018	1.14513
burg_convict0	.349127	.0710753	3.540405	1.287393
psych0	.4351365	.012235	1.58748	1.012594
v1family	.433199	-.0162818	3.67328	.9559779
v1hadkids	.4990835	.0480082	1.526888	1.037382
v1knife	.4134134	.0452809	2.491608	1.092153
v1barehands	.3314571	.0312099	2.697806	1.094035
v_1h_resis	.4067002	.0591684	1.540921	1.062224
v_1h_brutal	.3298856	.054707	1.903711	1.10254
v_1h_hide	.3662673	.024898	2.02895	1.04865
v_1h_execution	-.1265398	-.0000657	.8800351	1.000325
v_1h_ambush	-.0794184	.0267138	.8785421	1.042768
age_mean	.5195403	.0092965	1.936853	1.069603
private	.2350817	.0840542	1.11923	1.048628
courtappt	-.3697987	-.0986663	.6844845	.9149658
gp_acc	.1659489	.0054707	2.372594	1.028072
mst_id	-.5302362	-.0585455	.7053755	.9661352
gp_nc	-.4890921	-.0483123	.9914266	1.000318
gp_not1st	.2497288	.0067086	1.153233	1.004494
ad_guilt	.3373312	.0840437	2.130614	1.187411
gp_d_psyiat	.3242805	.095527	1.777987	1.197732
p_evi	.7171222	.0705956	1.09937	1.013449
ev_weapon	.3250014	.0200778	1.303836	1.015351
witness1	-.5629571	-.0841205	1.255539	1.040077
co_def	.053277	.0335965	1.127386	1.079411
IQ71_90	-.4102859	-.1104326	.6445625	.8887893

Any Black Victim

	Raw	Weighted
Number of obs =	880	880.0
Treated obs =	516	454.1
Control obs =	364	425.9

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness3	.0344964	-.0695239	1.15173	.7526739
p_felony3	-.3993234	.0315802	.686096	1.027588
p_d_risk3	.194028	.0376273	1.189011	1.033827
p_torture3	-.3738879	.1506737	.3087594	1.442132
p_death3	-.0768798	-.0460441	.7865981	.8600933
p_murder3	.0872965	-.0111537	1.224718	.9739077
p_drug3	.011456	.0113441	1.054823	1.053281
p_v_drug3	.2033944	-.1055679	1.834187	.7539801
p_v_12_3	-.0406671	-.0914919	.8117924	.6490382
p_agg3	-.154498	-.0084579	.7344466	.8502807
d_noconvict	-.2501489	-.0555054	.3759306	.8091417
d_disturbed	-.1061401	-.080113	.6068319	.7400126
d_impaired	-.1970653	-.0340546	.3834252	.8483636
d_age	-.1426585	-.0649233	.6295709	.7946286
sum_other_mit	-.2279899	.0302379	.4041754	1.122452
MultiVictims	.0288182	.0026293	1.058039	1.005708
sex_convict	-.1678998	-.0329697	.3629155	.823061
rob_convict0	-.1974227	-.0495627	.6758753	.9059865
burg_convict0	-.2210372	-.073279	.4396124	.7533172
psych0	-.3912059	.1157926	.6317647	1.127269
v1family	-.3842674	.0142578	.2848556	1.043142
v1hadkids	-.4408541	.0526198	.6528274	1.046857
v1knife	-.376082	.0000397	.4067418	.9999343
v1barehands	-.402521	.0580502	.2558965	1.17921
v_1h_resis	-.453254	-.0089344	.589467	.9896002
v_1h_brutal	-.3804993	.0919293	.4491679	1.177866
v_1h_hide	-.4272593	.0994409	.4059136	1.202354
v_1h_execution	.1573175	-.046894	1.170075	.9512518
v_1h_ambush	.1364921	.0019949	1.25205	1.003243
age_mean	-.4929381	.0159009	.5325831	.9955434
private	-.1632254	-.0249283	.916501	.9836004
courtappt	.3365957	.1001524	1.367887	1.089917
gp_acc	-.2149099	-.0289825	.2937084	.8520011
mst_id	.576203	-.0090067	1.384271	.9951037
gp_nc	.4679615	-.0318447	.9654843	1.003688
gp_not1st	-.2332015	.0269586	.865278	1.013641
ad_guilt	-.390811	-.0702834	.385094	.8520225
gp_d_psyiat	-.3545882	-.0345344	.5100762	.9361487
p_evi	-.6025143	.0528291	.8440796	1.016706
ev_weapon	-.3091214	.111199	.759835	1.085451
witness1	.5361789	-.0313469	.7571689	1.013928
co_def	-.1129195	-.0205781	.7771112	.9538137
IQ71_90	.3351666	.0250045	1.374428	1.023168

Any Hispanic Victim

	Raw	Weighted
Number of obs =	880	880.0
Treated obs =	79	441.8
Control obs =	801	438.2

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness3	-.1456544	-.1930074	.491342	.3306582
p_felony3	.2706181	.1662375	1.235512	1.14052
p_d_risk3	.2034753	.0095903	1.157647	1.008078
p_torture3	.1900427	-.0849011	1.64913	.7570175
p_death3	.0404707	-.0782304	1.143919	.7640543
p_murder3	.0894649	.0129545	1.224369	1.029611
p_drug3	.0575593	-.0200882	1.306982	.9068997
p_v_drug3	.2331455	-.0482354	1.743704	.8679186
p_v_12_3	.0907934	-.0732723	1.548271	.6516264
p_agg3	.3177936	.0238127	.9747122	.900199
d_noconvict	.3073094	-.0021489	2.555393	.9918608
d_disturbed	.1178471	-.089122	1.663516	.614431
d_impaired	.1726246	-.0691814	2.034509	.6941066
d_age	.2764498	-.0451702	2.109014	.8567498
sum_other_mit	.2841835	-.0226098	2.011026	.6333007
MultiVictims	.1204572	.2104018	1.256387	1.401899
sex_convict	-.0133627	-.0832151	.9344615	.5656876
rob_convict0	.0949848	.0925254	1.208316	1.184962
burg_convict0	-.1912332	-.0807	.4111842	.7206484
psych0	.1585983	.0184231	1.195542	1.022225
v1family	-.2711144	.1725399	.3129725	1.557359
v1hadkids	.0752616	-.1059417	1.086338	.8840315
v1knife	-.1096663	.1153492	.760764	1.27428
v1barehands	.1285372	-.1190995	1.451376	.6512463
v_1h_resis	-.0010314	-.028747	1.010287	.9646014
v_1h_brutal	.1165521	-.1030267	1.264402	.7865111
v_1h_hide	.0376802	.0908461	1.091653	1.188981
v_1h_execution	.0501805	-.1341594	1.05918	.8583945
v_1h_ambush	-.0658332	.010188	.9044818	1.016224
age_mean	-.0812349	-.0837313	.6272526	.5270291
private	-.1141998	-.2119644	.9378807	.8441058
courtappt	-.0347782	.0715594	.9810442	1.055894
gp_acc	.1048119	.1812155	1.672976	2.164364
mst_id	-.2059031	-.0987149	.8899864	.9479604
gp_nc	.1270476	-.0807961	.9790566	1.005733
gp_not1st	.1663386	.0371585	1.101068	1.023106
ad_guilt	.1882672	-.1145117	1.493386	.7331834
gp_d_psyiat	.1381821	-.0331944	1.282723	.9365368
p_evi	-.0657296	-.1237694	.9835202	.9395572
ev_weapon	.0961853	-.0126944	1.096884	.9879759
witness1	.1260207	-.1095435	.9249358	1.053355
co_def	.1936844	.0438088	1.475067	1.099151
IQ71_90	.0036325	-.0324769	1.014723	.9709673

Black Def./White Vic.

	Raw	Weighted
Number of obs =	880	880.0
Treated obs =	94	429.0
Control obs =	786	451.0

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness3	.0612659	.364278	1.279175	2.783208
p_felony3	.5570429	.2548953	1.347635	1.191661
p_d_risk3	-.0423042	-.1477872	.9720899	.8577088
p_torture3	.3556253	.0142867	2.32362	1.04238
p_death3	.1470407	-.0385038	1.526134	.8827297
p_murder3	.1793115	.188069	1.447017	1.435505
p_drug3	.1702945	-.0547053	2.025216	.7522141
p_v_drug3	-.1251107	-.1816386	.682619	.5259929
p_v_12_3	-.0861659	-.0660613	.6118881	.6867257
p_agg3	.443293	-.1007266	2.319596	1.158158
d_noconvict	.1190148	-.0879733	1.519891	.6824064
d_disturbed	-.0469135	-.0630409	.7985879	.7192155
d_impaired	.1702945	-.012416	2.025216	.9414671
d_age	.1664678	-.1127498	1.630224	.6493246
sum_other_mit	.1755556	-.0282487	1.683238	.6952288
MultiVictims	.2744928	-.0762794	1.574034	.8484061
sex_convict	.2011517	-.029372	2.695762	.8362217
rob_convict0	.4522718	.0592718	1.956144	1.118781
burg_convict0	.3966146	.3303588	3.098923	2.39375
psych0	.1472596	-.0109287	1.181993	.9866055
v1family	-.1792375	-.0477078	.5204159	.8571355
v1hadkids	.2908645	.073512	1.257747	1.069782
v1knife	.1633722	.0044129	1.41995	1.010366
v1barehands	.2146617	-.0399658	1.788576	.8759901
v_1h_resis	.2991469	.0516508	1.330418	1.061218
v_1h_brutal	.09813	.0214211	1.222028	1.044838
v_1h_hide	.3042917	-.0054787	1.680132	.9889045
v_1h_execution	.088336	.3021499	1.091328	1.198276
v_1h_ambush	.1564214	-.0161244	1.260356	.9742533
age_mean	.0520012	-.1007671	.9252624	.8675959
private	.0638121	.255088	1.042498	1.073396
courtappt	-.0713944	-.1144331	.9457091	.8930819
gp_acc	.0638703	-.0186783	1.389369	.9014617
mst_id	-.2243139	-.0966276	.8764162	.9490058
gp_nc	-.1794411	.0738587	1.011117	.9834048
gp_not1st	.0158156	.0923158	1.019792	1.053274
ad_guilt	.2649227	-.0048001	1.705611	.9887775
gp_d_psyiat	.1097178	-.1341752	1.224924	.7382295
p_evi	.4516179	.0619612	1.017111	1.019047
ev_weapon	.0997239	.008433	1.097919	1.007928
witness1	-.2037417	.0689526	1.100662	.9549026
co_def	.171503	.0369953	1.420323	1.083538
IQ71_90	-.1717755	-.1089166	.8453712	.8961199

Black Def./Black Vic.

	Raw	Weighted
Number of obs =	880	880.0
Treated obs =	467	447.6
Control obs =	413	432.4

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness3	.0231936	-.079989	1.099219	.7190858
p_felony3	-.3864888	.0404323	.6799539	1.038575
p_d_risk3	.1570447	.0289563	1.145314	1.024962
p_torture3	-.3723088	.1721361	.2905023	1.51949
p_death3	-.0273815	-.0590669	.917441	.8281954
p_murder3	.0715516	-.0104963	1.178806	.976186
p_drug3	-.0597914	-.0252873	.7536873	.8847262
p_v_drug3	.1249258	-.0716343	1.424856	.8154957
p_v_12_3	-.0230766	-.0957888	.8879731	.6435768
p_agg3	-.1526735	-.0085048	.7649859	.8280009
d_noconvict	-.3115057	-.0968326	.2628652	.6698605
d_disturbed	-.1750788	-.1043377	.4200889	.6518205
d_impaired	-.2902141	-.0863575	.1942081	.6238604
d_age	-.2340051	-.0918027	.4510447	.7129051
sum_other_mit	-.2560266	.0870805	.363819	1.538861
MultiVictims	.0317959	-.0179627	1.064679	.9627547
sex_convict	-.1312687	-.0337699	.4519981	.8217073
rob_convict0	-.179765	-.0796531	.6951153	.8406183
burg_convict0	-.1822724	-.0619286	.5030559	.7801232
psych0	-.4557912	.125172	.5665588	1.142825
v1family	-.3187098	.0322731	.3488171	1.098851
v1hadkids	-.3978713	.0872315	.6648873	1.079265
v1knife	-.3341492	-.0367024	.4385125	.9240162
v1barehands	-.3900507	.1258109	.2480359	1.402906
v_1h_resis	-.3825934	-.0263961	.6256353	.9686098
v_1h_brutal	-.3542189	.1520745	.4612222	1.297048
v_1h_hide	-.4417951	.129062	.3714381	1.270343
v_1h_execution	.089857	-.064901	1.091082	.9303197
v_1h_ambush	.1461383	-.020568	1.26858	.9652506
age_mean	-.4343802	.0477277	.5427579	.9783808
private	-.169531	-.0208589	.9109384	.9848182
courtappt	.3453507	.0942843	1.359011	1.075446
gp_acc	-.1762378	-.0399247	.3652789	.7979647
mst_id	.5685388	-.0138328	1.324801	.9932644
gp_nc	.4101067	-.0310057	.9484339	1.001777
gp_not1st	-.2585051	.0948462	.8460908	1.055042
ad_guilt	-.3504937	-.1019666	.4129956	.7852871
gp_d_psyiat	-.396153	-.0391053	.4520508	.9246785
p_evi	-.5058599	.0649214	.8372075	1.022843
ev_weapon	-.2709071	.1475473	.7776758	1.114443
witness1	.4581896	-.0460182	.7658859	1.021823
co_def	-.2042382	-.0456533	.6277498	.8932731
IQ71_90	.342245	.0224418	1.363541	1.020868

White Def./White Vic.

	Raw	Weighted
Number of obs =	880	880.0
Treated obs =	169	433.5
Control obs =	711	446.5

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness3	-.0216014	.0343584	.9183034	1.146842
p_felony3	.0023002	.0959407	1.00684	1.089129
p_d_risk3	-.3844089	.1775728	.6399088	1.115248
p_torture3	.1379993	.0927637	1.468526	1.248114
p_death3	.0974062	-.0139126	1.340713	.9563042
p_murder3	-.0666871	.2929031	.8565414	1.654998
p_drug3	-.0677083	-.0938285	.7136371	.5994877
p_v_drug3	-.353826	.2213937	.2350346	1.653205
p_v_12_3	.0095409	-.0156328	1.054637	.9200535
p_agg3	-.2149491	.2520587	.7545408	.8420573
d_noconvict	.1761802	-.0551773	1.839622	.7909994
d_disturbed	.1131993	.0008492	1.648409	1.00409
d_impaired	.1446258	-.0307728	1.874191	.8533977
d_age	-.0423561	.3746207	.8710089	2.35745
sum_other_mit	.1422143	.2689664	2.101176	1.391358
MultiVictims	.0374093	.3628453	1.079847	1.642143
sex_convict	.098415	.2062984	1.708979	2.529437
rob_convict0	-.1431758	.0771842	.7309948	1.152197
burg_convict0	.0189721	.0551205	1.075813	1.215516
psych0	.4161936	-.024614	1.472749	.9720812
v1family	.6493615	-.0732027	5.113472	.8104833
v1hadkids	.4266098	.3299997	1.371547	1.196056
v1knife	.4177261	.1735243	2.253417	1.390149
v1barehands	.2990802	.0511184	2.25249	1.152412
v_1h_resis	.2359891	.1139528	1.281711	1.128655
v_1h_brutal	.4125619	.1437825	2.032292	1.262292
v_1h_hide	.2625647	.0729819	1.615583	1.144863
v_1h_execution	-.3074619	.1323479	.6881115	1.122393
v_1h_ambush	-.2558524	.2858431	.6142929	1.415727
age_mean	.7092225	.0094982	2.160248	1.059045
private	.2577063	-.1882048	1.111602	.8532485
courtappt	-.4650641	.107859	.5617302	1.075491
gp_acc	.2002351	-.008887	2.619228	.9487313
mst_id	-.6012984	-.07531	.5939964	.9581974
gp_nc	-.5287092	-.1070111	.9177303	.9953576
gp_not1st	.3003661	-.0371943	1.154115	.9749818
ad_guilt	.2559862	.2033278	1.715395	1.47782
gp_d_psyiat	.3698445	.02218	1.799951	1.043262
p_evi	.6430512	.0260155	.9950425	1.008696
ev_weapon	.3795347	.0004182	1.298888	1.000409
witness1	-.6402409	.0795895	1.145508	.9482171
co_def	-.1224839	-.0210826	.7437707	.9515199
IQ71_90	-.4759255	-.2094672	.5451588	.7861825

Hispanic Def./Hispanic Vic.

	Raw	Weighted
Number of obs =	880	880.0
Treated obs =	32	513.7
Control obs =	848	366.3

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_felony3	.0091244	.5626277	1.040422	1.234575
p_d_risk3	.2201855	-.3828175	1.182687	.5904439
p_torture3	-.2377742	-.1437557	.3918832	.6013088
p_death3	-.2134888	-.3956635	.4231806	.0271033
p_murder3	-.0995188	-.4600675	.8008977	.1010284
p_drug3	.2249072	-.2257162	2.412385	.1477463
p_v_drug3	.2791943	-.0228182	1.902598	.9359333
p_v_12_3	.1371214	-.0294169	1.892113	.8548662
p_agg3	.1346252	-.2521926	.9328806	.3983523
d_noconvict	.1398193	-.2913573	1.640422	.1223763
d_disturbed	.1065845	-.2299939	1.615278	.1449339
d_impaired	.3249433	-.1995914	3.201856	.227245
d_age	.2690748	-.2640718	2.067397	.2663443
sum_other_mit	.2778906	-.0038654	1.865035	.4643746
MultiVictims	.0211478	-.3894359	1.074468	.2841813
rob_convict0	-.0615459	-.0777387	.9032862	.8436964
psych0	.3733753	-.4078308	1.389588	.4533481
v1family	-.0767909	-.2163511	.797703	.413273
v1hadkids	.3605819	-.6101091	1.297984	.2633603
v1knife	.0178614	.064313	1.07484	1.151378
v1barehands	.2474529	-.18129	1.920553	.4883883
v_1h_resis	.0217446	-.0305827	1.058164	.9615388
v_1h_brutal	-.2618333	-.4161016	.497286	.2166059
v_1h_hide	.1332451	-.1376483	1.320654	.718242
v_1h_execution	-.0038981	-.5463215	1.027125	.3588525
v_1h_ambush	-.1775456	.4489484	.7331672	1.552412
age_mean	-.265151	-.2189173	.3601349	.187842
private	-.5055386	-.1063348	.5806943	.9302597
courtappt	-.128114	.3184299	.9073821	1.16834
gp_acc	.2664633	-.0914324	3.06159	.5587198
mst_id	-.1743378	.5798412	.9259361	.9227734
gp_nc	-.1418763	.375497	1.03366	.8168087
gp_not1st	.1975997	-.3994092	1.129428	.6293336
ad_guilt	.117833	-.1223627	1.329885	.7163242
gp_d_psyiat	.0902435	-.4172935	1.210109	.2575793
p_evi	-.0719007	-.5153129	.9986874	.6130744
ev_weapon	.1897624	-.6511358	1.184925	.248956
witness1	-.1679287	.1486141	1.10819	.8928104
co_def	-.0035293	-.3595248	1.022783	.2682976
IQ71_90	.42499	-.1560049	1.239842	.8466935

Death Penalty Retracted
Black Defendant

	Raw	Weighted
Number of obs =	313	313.0
Treated obs =	197	161.7
Control obs =	116	151.3

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness3	.022426	.0348875	1.0589	1.111587
p_felony3	-.1725524	-.0504106	.9964222	.9946661
p_d_risk3	.289924	-.015864	1.179717	.9906856
p_torture3	-.2210308	.0475242	.6751831	1.085661
p_death3	.0709044	.0837358	1.137669	1.1989
p_murder3	.2356048	.1330044	1.298085	1.165752
p_drug3	-.0247735	-.0473914	.91915	.8545614
p_v_drug3	.245356	.0278174	1.763947	1.067832
p_v_12_3	-.0367313	.0564204	.8897957	1.206425
p_agg3	.2787147	.1528074	1.424557	1.477121
d_noconvict	-.2824919	-.0792553	.5846728	.8436706
d_disturbed	-.2712344	.0327868	.5117653	1.083272
d_impaired	-.3317032	-.0711415	.430421	.817338
d_age	-.1495703	-.1804432	.7967944	.7782495
sum_other_mit	-.2249082	-.0262372	.8075682	1.402057
MultiVictims	.1904722	.0879585	1.165614	1.090799
sex_convict	-.0999105	-.2467924	.6765815	.458305
rob_convict0	-.0056322	.0513817	.9886285	1.089766
burg_convict0	-.1941907	-.0471773	.5842518	.8587913
psych0	-.5427968	.040157	.8170041	1.019106
v1family	-.2162342	.0811195	.4522758	1.320347
v1hadkids	-.264786	-.0015027	.7804107	.9982929
v1knife	-.2756356	.0600153	.5211117	1.143992
v1barehands	-.1603391	-.0770319	.6933272	.8752437
v_1h_resis	-.1067629	.1238526	.8957108	1.142757
v_1h_brutal	-.2230899	-.1280511	.7247223	.8611428
v_1h_hide	-.1290862	.166496	.8182466	1.276126
v_1h_execution	.0767012	-.0479044	1.064846	.9564438
v_1h_ambush	.1486669	-.037698	1.289167	.9378149
age_mean	-.2675957	.0821769	.6145134	.9947941
private	-.244257	-.0301808	.8501381	.9742624
courtappt	.4195821	-.0624485	1.364701	.9728136
gp_acc	.0321237	.0227253	1.166024	1.122524
mst_id	.4738602	-.1260646	1.517629	.928246
gp_nc	.4412207	-.0702396	1.003701	1.003777
gp_not1st	-.0889572	.1546682	.9384213	1.132629
ad_guilt	-.3036522	.0036694	.6439349	1.005235
gp_d_psyiat	-.1839487	-.0017402	.7396996	.9966872
p_evi	-.2975526	-.0158462	.9906096	.9998115
ev_weapon	-.2837684	.0899119	.8090009	1.069317
witness1	.3958481	.0854615	.8752374	.982737
co_def	-.1561792	-.0056411	.7795637	.9895466
IQ71_90	.2690984	.0019131	1.313008	1.001086

White Defendant

	Raw	Weighted
Number of obs =	313	313.0
Treated obs =	76	168.5
Control obs =	237	144.5

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness3	.0829603	-.0904767	1.250955	.7534919
p_felony3	-.0051974	-.3147638	1.008808	.8629617
p_d_risk3	-.449893	.3665449	.7147472	1.037544
p_torture3	.2933339	-.0530764	1.619982	.8984578
p_death3	.0286945	-.1393943	1.062754	.7467075
p_murder3	-.1448005	.3444467	.8564279	1.238264
p_drug3	.0272257	-.17871	1.101953	.4610466
p_v_drug3	-.3008884	.4502023	.4606565	1.856956
p_v_12_3	.0579934	.003564	1.202309	1.010125
p_agg3	-.3175863	.0801277	.6961051	.622804
d_noconvict	.386699	-.1057113	1.938298	.7745872
d_disturbed	.2944401	-.1266257	1.962526	.7081366
d_impaired	.2605472	-.1320114	1.851739	.6912208
d_age	.0082197	.4913067	1.021916	1.474035
sum_other_mit	.2514591	.2583936	1.3599	.6678738
MultiVictims	-.0567454	.2987659	.9644894	1.145455
sex_convict	.1338655	.0441105	1.657806	1.192182
rob_convict0	-.0540548	-.3090899	.933322	.5238207
burg_convict0	-.127982	-.2491973	.6814327	.352141
psych0	.4323378	-.1917447	1.135392	.8675203
v1family	.2225219	-.0544053	2.147253	.7924838
v1hadkids	-.0048151	.421383	1.004217	1.234991
v1knife	.2174379	-.0629574	1.63278	.8466725
v1barehands	.0914984	.0259846	1.237395	1.057141
v_1h_resis	-.1448005	-.2650003	.8564279	.6861257
v_1h_brutal	.4783545	.0060064	1.794101	1.008131
v_1h_hide	.1047906	-.1026613	1.179821	.8334538
v_1h_execution	-.1262276	.4152608	.8981814	1.157376
v_1h_ambush	-.17982	.4151736	.7252337	1.59178
age_mean	.4723188	-.0147306	1.952555	1.247945
private	.2085359	-.1017053	1.143386	.9182937
courtappt	-.2593297	.2770754	.8271976	1.076804
gp_acc	-.0870453	-.1019622	.6397663	.5606603
mst_id	-.3170043	.3492423	.7541816	1.109196
gp_nc	-.2377276	.1771112	1.002746	.9485464
gp_not1st	-.0550916	-.3805325	.9691488	.6305081
ad_guilt	.2888081	.0267959	1.479366	1.041054
gp_d_psyiat	.1492177	-.0668959	1.274549	.8864384
p_evi	.3090441	-.2897921	.9896343	.8891583
ev_weapon	.2279147	-.1165992	1.178336	.9022465
witness1	-.3862175	.1220038	1.101637	.9274279
co_def	.0404934	-.2266931	1.076308	.6261234
IQ71_90	-.4147237	-.2862177	.6037575	.6908503

Hispanic Defendant

	Raw	Weighted
Number of obs =	313	313.0
Treated obs =	35	125.0
Control obs =	278	188.0

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness3	-.1726954	-.3033086	.5914584	.283558
p_felony3	.3861332	.0385771	.9282856	1.003642
p_d_risk3	.1751209	-.253476	1.09138	.8150556
p_torture3	-.1564507	.0454416	.7390766	1.083345
p_death3	-.2597837	-.1605192	.5627037	.7128129
p_murder3	-.269367	-.2598474	.7162204	.7000585
p_drug3	.0506811	-.1462698	1.203924	.5543584
p_v_drug3	.0176372	.0175276	1.064324	1.04152
p_v_12_3	.0237187	.1320372	1.103027	1.415696
p_agg3	-.0368604	-.2624167	.8674528	.8441221
d_noconvict	-.0230367	.0024289	.9792815	1.007491
d_disturbed	.1162512	.1087259	1.344224	1.286695
d_impaired	.3012827	-.0539523	1.935797	.8620589
d_age	.3125893	.0689126	1.498569	1.107374
sum_other_mit	.1100681	-.029661	1.034237	.6098008
MultiVictims	-.2354872	-.244014	.8124127	.7774916
sex_convict	-.1422621	-.2383199	.5248501	.2247981
rob_convict0	.1139688	.4171089	1.186705	1.406266
burg_convict0	.5100891	.110139	2.934565	1.338905
psych0	.3712941	.4956733	1.105175	1.00042
v1family	-.0168567	-.0303611	.9625695	.8939049
v1hadkids	.5644693	.046228	1.373105	1.049209
v1knife	.1822786	.1148965	1.513401	1.294622
v1barehands	.0710599	.0691868	1.200574	1.15965
v_1h_resis	.3763779	.1244501	1.333329	1.12083
v_1h_brutal	-.4813149	-.2835348	.3226502	.5668246
v_1h_hide	.0233972	.1974803	1.063593	1.284152
v_1h_execution	.0864221	-.0904289	1.095988	.9198927
v_1h_ambush	-.1183946	-.0776201	.8259563	.8725606
age_mean	-.3975965	-.3952824	.4088395	.3973675
private	.1578516	-.0319074	1.12441	.9793197
courtappt	-.5598218	-.1383032	.5323957	.9022363
gp_acc	.0996576	-.0359293	1.593627	.8386169
mst_id	-.5053454	-.3124468	.5477478	.714486
gp_nc	-.4159428	-.3381809	.9325509	.9310709
gp_not1st	.4140355	-.1786285	1.191644	.8507411
ad_guilt	.0834278	.1254064	1.155552	1.184861
gp_d_psyiat	.0602612	-.2351992	1.130322	.5976233
p_evi	.1496694	-.3223934	1.02246	.8688671
ev_weapon	.270421	-.0879496	1.199461	.9217839
witness1	-.0087472	-.2395219	1.029492	1.036201
co_def	.268925	.2222172	1.465374	1.333358
IQ71_90	.125676	.4035998	1.136074	1.209627

Any White Victim

	Raw	Weighted
Number of obs =	313	313.0
Treated obs =	116	160.2
Control obs =	197	152.8

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness3	.068274	-.0223019	1.202878	.9318406
p_felony3	.4567303	-.0930755	.9706931	.985273
p_d_risk3	-.2021065	-.0686527	.8971883	.963537
p_torture3	.3639874	.0471333	1.896806	1.097809
p_death3	.0769341	-.1046217	1.152581	.7997829
p_murder3	-.0772343	-.0398829	.9248612	.9545013
p_drug3	.0760314	-.0216708	1.282659	.9316336
p_v_drug3	-.2892717	-.0656374	.5029516	.8492061
p_v_12_3	-.1169983	.2802936	.6854337	1.940228
p_agg3	.1811447	-.0755365	1.532486	1.159081
d_noconvict	.2824919	-.0012748	1.710358	.99692
d_disturbed	.0608045	.0363494	1.167593	1.088691
d_impaired	.2481005	.0935364	1.870262	1.270071
d_age	.1495703	.1503425	1.255029	1.263436
sum_other_mit	.2230396	.0402415	1.404522	.7547666
MultiVictims	.0747776	-.0156823	1.060648	.9860431
sex_convict	.266984	.0462274	2.917184	1.184417
rob_convict0	.235293	-.0379845	1.372185	.9399357
burg_convict0	.5007402	.0763897	4.500548	1.268146
psych0	.4231908	.2283865	1.18419	1.072134
v1family	.1092302	.0126586	1.490566	1.046078
v1hadkids	.4487567	.0606737	1.494699	1.057949
v1knife	.1942871	-.0054454	1.584672	.9870959
v1barehands	.038109	.2546417	1.095726	1.575221
v_1h_resis	.2891568	-.040257	1.32211	.9554099
v_1h_brutal	.1898094	.2776383	1.317702	1.383437
v_1h_hide	.0950197	-.1309507	1.161355	.7946294
v_1h_execution	-.0468524	-.003012	.964126	.9970456
v_1h_ambush	.0308626	.0122646	1.055684	1.0208
age_mean	.3049558	.0132598	1.648904	1.086836
private	.0998458	.1611395	1.074786	1.099583
courtappt	-.451384	-.111077	.7114516	.9323564
gp_acc	-.0321237	.3887505	.8576156	3.054782
mst_id	-.3767878	-.0788551	.729694	.9332965
gp_nc	-.4412207	-.1950218	.9963129	.9610955
gp_not1st	.0601777	.0848761	1.045635	1.056124
ad_guilt	.2367358	.0303892	1.414335	1.041714
gp_d_psyiat	.1492147	.2379808	1.279611	1.426892
p_evi	.5306297	.0273725	.9831649	1.001824
ev_weapon	.2543069	.0324203	1.211711	1.023337
witness1	-.3381316	.0422628	1.126178	.9802639
co_def	.0177013	.1839271	1.032734	1.318894
IQ71_90	-.2058239	-.0877144	.8171252	.9101178

Any Black Victim

	Raw	Weighted
Number of obs =	313	313.0
Treated obs =	156	162.5
Control obs =	157	150.5

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness3	.066106	-.0362117	1.19555	.8970919
p_felony3	-.5344283	-.0186155	.9746148	1.000053
p_d_risk3	.2028295	-.0333459	1.106216	.974001
p_torture3	-.5139848	.1022786	.3452095	1.174172
p_death3	.0545664	-.0333275	1.105245	.932578
p_murder3	.3081648	.0099696	1.38236	1.011801
p_drug3	.0262049	-.0829698	1.089849	.7855704
p_v_drug3	.2827451	-.0196468	1.863398	.9540774
p_v_12_3	.0253721	-.0463164	1.082176	.8855982
p_agg3	-.0910303	-.0523158	.8637882	.8322164
d_noconvict	-.2672538	-.1654845	.5808764	.7178208
d_disturbed	-.0387253	-.1597124	.9068358	.713832
d_impaired	-.1853387	-.1538105	.612849	.6749544
d_age	-.0773302	-.1385886	.8871567	.7934829
sum_other_mit	-.2553762	.0717256	.718575	1.423761
MultiVictims	.2655401	.0600305	1.226729	1.061506
sex_convict	-.2536409	-.0455095	.3289771	.851559
rob_convict0	-.2949961	-.1111961	.6546058	.8379941
burg_convict0	-.2866447	-.132875	.4199151	.6390299
psych0	-.3548176	.0770021	.8358269	1.021463
v1family	-.1860066	-.0253584	.4869727	.9141101
v1hadkids	-.4173494	.0516249	.6496905	1.051486
v1knife	-.2390845	-.0231613	.5483386	.9530532
v1barehands	-.2333416	.1518052	.5706022	1.287211
v_1h_resis	-.4513559	-.0875418	.61441	.906665
v_1h_brutal	-.3351691	.0918648	.5945302	1.090938
v_1h_hide	-.2913235	.1945955	.6239854	1.267047
v_1h_execution	.1705898	-.0665475	1.155087	.9335107
v_1h_ambush	.0855938	-.0149645	1.152378	.9708476
age_mean	-.3642975	-.0191792	.7021752	1.08113
private	-.1582862	-.1256579	.8925967	.9122263
courtappt	.4554212	.2633625	1.331169	1.16811
gp_acc	.0012718	-.1181781	1.006195	.6296894
mst_id	.6283307	.079533	1.613201	1.080233
gp_nc	.535137	.0786658	.9472107	1.010237
gp_not1st	-.0629588	.1081623	.9569317	1.054176
ad_guilt	-.3876896	-.1417356	.5378595	.8041708
gp_d_psyiat	-.2995984	-.0816479	.5938259	.8757376
p_evi	-.5069697	-.080097	.9501313	1.011318
ev_weapon	-.2729587	.0617579	.7993562	1.029522
witness1	.3929926	-.0032573	.8423869	.9997959
co_def	-.0625702	-.0058935	.9032109	.9886839
IQ71_90	.2442963	-.015453	1.256548	.9844469

Any Hispanic Victim

	Raw	Weighted
Number of obs =	313	313.0
Treated obs =	48	159.8
Control obs =	265	153.2

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness3	-.2574197	-.3266343	.4168584	.2361078
p_felony3	.1243389	.2500114	1.012101	.9502177
p_d_risk3	.0876547	-.076773	1.056709	.9551046
p_torture3	.1989916	-.0774177	1.40237	.8570068
p_death3	-.1259392	-.1950002	.7893617	.6429046
p_murder3	-.057547	.1462648	.9558073	1.130538
p_drug3	.0432384	.0480461	1.167709	1.159404
p_v_drug3	.096514	-.0934418	1.232721	.8027323
p_v_12_3	.0148653	-.0939108	1.065159	.7208291
p_agg3	-.003408	.0232761	.7230825	.7060422
d_noconvict	.2416523	-.071074	1.530972	.8618492
d_disturbed	-.0169504	-.1769895	.9741799	.5769973
d_impaired	.0724494	-.0834314	1.216103	.7896127
d_age	.1572364	-.1033349	1.26574	.8395526
sum_other_mit	.2416236	-.0687157	1.328479	.6283976
MultiVictims	-.0787947	.2817624	.9531876	1.132071
sex_convict	-.0687601	-.1939742	.7607943	.3365781
rob_convict0	.1570721	.0506134	1.238357	1.068541
burg_convict0	-.2338468	-.0293313	.4439743	.9183667
psych0	.1374176	-.0542742	1.074363	.9695478
v1family	-.1000324	.2550681	.6767027	2.049591
v1hadkids	.0892452	-.0545431	1.104654	.942773
v1knife	-.0406257	.0297223	.9191187	1.07275
v1barehands	.0849138	-.1080048	1.226917	.7538989
v_1h_resis	-.001933	-.1256308	1.015389	.8608468
v_1h_brutal	.1380594	-.062251	1.227469	.906972
v_1h_hide	-.0125481	.0332652	.9973185	1.051381
v_1h_execution	-.0927326	-.1953653	.9340554	.8105547
v_1h_ambush	-.1143319	.2504699	.8279119	1.376177
age_mean	.0133176	-.0732799	.5303557	.3376904
private	.1560529	-.2541825	1.116788	.7686456
courtappt	-.157857	.2212847	.905809	1.084122
gp_acc	.0200035	.1128477	1.118815	1.611657
mst_id	-.269271	.0687833	.7890304	1.044449
gp_nc	.0908574	-.0716339	1.002682	1.001108
gp_not1st	.1479947	.0397055	1.109969	1.024727
ad_guilt	.0895178	-.1292813	1.156435	.7958138
gp_d_psyiat	.2640446	.0032969	1.478089	1.005258
p_evi	.0073517	.1663859	1.018106	.9870853
ev_weapon	.1539804	.0330809	1.131469	1.025311
witness1	.205505	.0533879	.9027444	.9747015
co_def	.0682892	.2866428	1.13134	1.412976
IQ71_90	-.164267	-.132387	.8527926	.8648032

Black Def/White Vic.

	Raw	Weighted
Number of obs =	313	313.0
Treated obs =	44	130.2
Control obs =	269	182.8

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness3	-.1275056	-.1986314	.6945379	.5040266
p_felony3	.4627166	.5171286	.8911632	.7831681
p_d_risk3	.0684454	-.0012085	1.050948	1.001583
p_torture3	.3768808	.2179015	1.749345	1.378548
p_death3	-.0120931	-.2143888	.9968516	.613228
p_murder3	.0030174	-.3223179	1.022629	.608543
p_drug3	.1623033	.0105736	1.644577	1.038799
p_v_drug3	-.2598201	-.3812922	.5116531	.2574326
p_v_12_3	-.2911817	-.2900145	.2786487	.2399898
p_agg3	.4666628	.0037598	2.014943	1.211698
d_noconvict	.0286057	.1319234	1.077383	1.261896
d_disturbed	-.1626858	.0755708	.6352321	1.194295
d_impaired	.1107727	.1581237	1.329602	1.420354
d_age	.0922192	.0632828	1.165248	1.102843
sum_other_mit	.1888962	.2184602	1.455851	1.442907
MultiVictims	.154811	-.2534699	1.125454	.7560845
sex_convict	.1665533	-.0573301	1.831904	.7831735
rob_convict0	.5094268	.2907926	1.654219	1.361099
burg_convict0	.3793619	.0507753	2.410167	1.152741
psych0	.0684454	.161207	1.050948	1.059975
v1family	-.2138405	-.287675	.3626504	.1407103
v1hadkids	.3257652	-.0395793	1.292209	.9601151
v1knife	.0749	.2360263	1.211662	1.565025
v1barehands	.1267845	-.1480984	1.337602	.6539974
v_1h_resis	.3430841	.3830754	1.317606	1.270636
v_1h_brutal	.0735213	.4364143	1.131658	1.482904
v_1h_hide	.1642098	.387315	1.28308	1.478701
v_1h_execution	-.0864369	.2569174	.941556	1.152024
v_1h_ambush	.1304776	-.0679987	1.241635	.8854322
age_mean	.010757	-.1485811	.7355138	.7261083
private	-.0915664	.1227693	.9480027	1.074791
courtappt	-.3252962	-.1567339	.7635091	.8911465
gp_acc	.0413156	-.108734	1.235792	.5396438
mst_id	-.3340785	.0630419	.726112	1.043059
gp_nc	-.37875	-.1574385	.9532282	.9915893
gp_not1st	.0133088	-.2315671	1.028868	.7948374
ad_guilt	.2061965	.1997689	1.336236	1.276235
gp_d_psyiat	.1402362	-.1707851	1.262938	.6998105
p_evi	.4357124	.0014473	.927017	1.002407
ev_weapon	.0686734	.1024027	1.073654	1.076351
witness1	-.1369945	.07552	1.065835	.9640824
co_def	-.0104001	.2902438	1.002177	1.42532
IQ71_90	-.0462118	.167792	.9748021	1.13504

Black Def/Black Vic.

	Raw	Weighted
Number of obs =	313	313.0
Treated obs =	137	166.1
Control obs =	176	146.9

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness3	.0617048	-.1239682	1.181687	.6825387
p_felony3	-.5072091	.0651883	.9472723	.9921084
p_d_risk3	.2114454	-.1377383	1.106357	.8944319
p_torture3	-.5355235	.3269217	.2982983	1.511467
p_death3	.1281614	-.0285558	1.263777	.9415954
p_murder3	.2558995	-.0572637	1.295106	.9323478
p_drug3	-.0532248	-.1384493	.8396546	.6570298
p_v_drug3	.2302915	-.067847	1.627495	.8489467
p_v_12_3	.0502426	-.0515534	1.170177	.8548141
p_agg3	-.0361987	-.0621073	.9201075	.7175727
d_noconvict	-.3601743	-.2521249	.4545942	.5282262
d_disturbed	-.1640739	-.1262202	.6510813	.7241109
d_impaired	-.37291	-.2212529	.3229712	.4892145
d_age	-.2225964	-.2233611	.6988589	.650872
sum_other_mit	-.3160243	.2773681	.6413661	1.708686
MultiVictims	.2437715	-.0430178	1.19783	.9560159
sex_convict	-.2024537	-.1711626	.4150228	.53038
rob_convict0	-.3015024	-.2191893	.6379983	.6608815
burg_convict0	-.2622458	-.180243	.4440064	.5201741
psych0	-.4423115	.2390027	.7786711	1.067179
v1family	-.1276407	-.0111487	.6131727	.9594005
v1hadkids	-.4211447	.2517143	.6297409	1.170901
v1knife	-.2394738	-.1196108	.5383074	.7499514
v1barehands	-.2283767	.4160816	.569514	1.681617
v_1h_resis	-.3652625	-.1694822	.6650282	.8122126
v_1h_brutal	-.3175797	.2807645	.6006575	1.219237
v_1h_hide	-.3129632	.4035688	.5896595	1.515266
v_1h_execution	.1395924	-.0798484	1.123652	.9078198
v_1h_ambush	.1018892	-.0832904	1.183479	.8380912
age_mean	-.2642087	.1928989	.7859361	1.120979
private	-.2654352	-.2222804	.8184317	.7891168
courtappt	.5388634	.3314056	1.356217	1.064478
gp_acc	.0500142	-.0370066	1.273836	.8230806
mst_id	.6402394	-.0878154	1.538929	.9257214
gp_nc	.4867376	-.171404	.9264025	.9622094
gp_not1st	-.2205021	.3384648	.8515472	1.159649
ad_guilt	-.3044693	-.2033008	.6096549	.7191497
gp_d_psyiat	-.405044	-.1593661	.4659466	.7274901
p_evi	-.4585013	.0772693	.932266	.9825643
ev_weapon	-.2808018	.3151287	.7863252	1.132019
witness1	.330666	-.1544588	.8557018	.9924604
co_def	-.181804	-.1452128	.7376399	.7328283
IQ71_90	.3194416	-.0969378	1.332788	.9040834

White Def/White Vic.

	Raw	Weighted
Number of obs =	313	313.0
Treated obs =	57	168.8
Control obs =	256	144.2

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness3	.1577964	-.1393148	1.495959	.640051
p_felony3	.0912972	-.3865268	1.012618	.833915
p_d_risk3	-.3542545	.1459334	.7765108	1.047282
p_torture3	.1505245	.1366941	1.304928	1.243243
p_death3	.1505245	.1331348	1.304928	1.245164
p_murder3	-.0230779	.5140507	.9895707	1.264853
p_drug3	-.0155399	-.2257408	.9628335	.3538403
p_v_drug3	-.3424539	.3937373	.3834586	1.752293
p_v_12_3	.0346027	.3538893	1.126545	2.130213
p_agg3	-.1885128	.1638613	.7767652	.7071542
d_noconvict	.3525329	-.1648681	1.797462	.6716048
d_disturbed	.1800759	-.1415687	1.529851	.6704704
d_impaired	.2527708	-.1085415	1.793624	.7309349
d_age	-.0058591	.3898537	1.004686	1.476797
sum_other_mit	.2511123	.2302777	1.483079	.7074592
MultiVictims	.0727543	.4650668	1.067643	1.152275
sex_convict	.2378859	.0192129	2.322095	1.07605
rob_convict0	-.1178597	-.3706499	.8473975	.4527822
burg_convict0	-.0208859	-.2466164	.9549736	.3554268
psych0	.4542218	.0975128	1.112759	1.040365
v1family	.3399791	-.0267282	2.97471	.9000819
v1hadkids	.147397	.5801009	1.155015	1.259005
v1knife	.2137754	-.0699957	1.607363	.8280802
v1barehands	-.0615473	.3282182	.8730532	1.690131
v_1h_resis	-.1726235	-.0877601	.8266793	.9041581
v_1h_brutal	.3275662	.0529453	1.512027	1.076755
v_1h_hide	.0039786	.0703046	1.020238	1.103594
v_1h_execution	-.1169644	.2366302	.908939	1.146816
v_1h_ambush	-.1368959	.378904	.7903818	1.526425
age_mean	.5367345	-.0886084	2.365174	1.146485
private	.0924902	.0467762	1.07675	1.032835
courtappt	-.2892005	.1761184	.798261	1.066025
gp_acc	-.0209279	.1114908	.9144813	1.531854
mst_id	-.2816488	.1495145	.7790906	1.085235
gp_nc	-.2524298	-.0742489	.9973703	.9995763
gp_not1st	-.0509861	-.2969923	.9764464	.7193854
ad_guilt	.1907834	.1815337	1.311637	1.24957
gp_d_psyiat	.0978491	-.0589435	1.18392	.8989022
p_evi	.3411476	-.2949512	.9727804	.8901002
ev_weapon	.3216034	-.1890305	1.22471	.8176953
witness1	-.4116375	-.0540243	1.084365	1.021296
co_def	-.0878972	-.1515833	.871033	.7500271
IQ71_90	-.276306	-.3388175	.7349624	.6425271

Hispanic Def/Hispanic Vic.

	Raw	Weighted
Number of obs =	313	313.0
Treated obs =	18	239.3
Control obs =	295	73.7

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_felony3	-.0930323	-.8398038	1.042506	.4402181
p_d_risk3	.4977982	-.6390215	1.080621	.4216819
p_torture3	-.363216	-.4571965	.3933333	.2187359
p_v_drug3	.0854193	-.5076182	1.250433	.068407
p_agg3	-.0586832	-.8404015	.7866752	.1239576
d_noconvict	.047284	-.5103974	1.154872	.1062317
d_disturbed	.0083041	-.4116783	1.077686	.1206952
d_impaired	.3360489	-.3727386	2.057578	.1684793
d_age	.2053811	-.5007267	1.376497	.2326566
sum_other_mit	.2744342	-.2868584	1.344929	.1967041
MultiVictims	-.1024362	-.8158659	.9643551	.1437612
rob_convict0	.0206632	-.3410696	1.085944	.4930976
psych0	.4977982	1.15125	1.080621	.4976292
v1family	.1896487	-.2985042	1.919129	.1132567
v1hadkids	.3690644	-.7735877	1.328792	.0792959
v1knife	.1560224	-.4436279	1.475181	.0858191
v_1h_resis	.0145448	-.4679516	1.071107	.4237156
v_1h_brutal	-.4639501	1.554629	.333541	.9078441
v_1h_hide	.0788724	-.4776387	1.185905	.2606787
v_1h_execution	-.0664765	-.7176463	.9924068	.2115745
age_mean	-.1342323	-.9004343	.5067493	.2499686
private	-.5763157	1.126825	.4607236	.6550084
courtappt	-.1731829	-.9674972	.9195887	.0611124
gp_acc	.2945469	-.2297326	3.182387	.1142367
mst_id	-.5763157	-.6350126	.4607236	.3518041
gp_nc	-.5436212	-1.274774	.8519718	.1525915
gp_not1st	.2353247	-.7889045	1.180595	.1877256
ad_guilt	.0619819	1.732973	1.154675	.7674373
gp_d_psyiat	.1133471	-.50285	1.256106	.1854813
p_evi	.050106	.8791053	1.05797	.4958687
ev_weapon	.4064441	-.80133	1.252206	.1248365
witness1	-.1023615	-1.179163	1.092011	.4142292
co_def	-.0511198	1.646985	.9662433	.9566011
IQ71_90	.3384772	1.33916	1.288617	.6417211

Death Penalty Given
Black Defendant

	Raw	Weighted
Number of obs =	880	880.0
Treated obs =	591	440.3
Control obs =	289	439.7

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness	.0448328	.0669371	1.271009	1.5118
p_felony	-.0986578	.0544638	.8291737	1.114941
p_d_risk	.023777	.0142908	1.045104	1.029129
p_torture	-.156105	-.0003512	.5520746	.9987126
p_death	-.029475	.0609378	.8772968	1.352011
p_murder	.0336238	.1381235	1.095684	1.518481
p_drug	-.0305171	.0337875	.784009	1.383644
p_v_drug	.1222376	.0638104	2.275598	1.557407
p_v_12	-.0332865	.0353581	.8348481	1.224638
p_agg	.0330704	.080717	1.575596	1.478265
d_noconvict	-.2121011	-.003507	.459177	.985932
d_disturbed	-.207258	.0362977	.3833384	1.18754
d_impaired	-.2298734	-.0110082	.3426104	.9458845
d_age	-.1266213	-.0761343	.6695204	.7924037
sum_other_mit	-.1689048	.036162	.5271019	1.323971
MultiVictims	.0735593	.0860765	1.15906	1.21347
sex_convict	-.0347236	-.0468034	.818397	.788548
rob_convict0	.0446726	-.0781079	1.093805	.8631197
burg_convict0	-.0685731	.0200851	.7809889	1.08057
psych0	-.4820977	.0467116	.5999604	1.0548
v1family	-.4205996	.075239	.2807934	1.244934
v1hadkids	-.3326324	-.0025196	.7398354	.9976536
v1knife	-.3248484	.0383465	.4858501	1.088888
v1barehands	-.3193283	.0071465	.3826041	1.021209
v_1h_resis	-.2645551	.0099298	.7443873	1.011589
v_1h_brutal	-.3270441	.0073244	.5262178	1.014403
v_1h_hide	-.2937962	.0611694	.5629029	1.131078
v_1h_execution	.136382	.05248	1.148309	1.062107
v_1h_ambush	.1930589	-.0109027	1.396006	.9824452
age_mean	-.474503	.0083585	.5097537	.9588343
private	-.1516374	.1175231	.9248767	1.09704
courtappt	.3536017	-.0687887	1.428489	.9507489
gp_acc	-.1588063	-.0342209	.4363954	.8251068
mst_id	.5191287	-.0090264	1.396953	.9958193
gp_nc	.4354039	-.0504016	.99653	1.00609
gp_not1st	-.2206824	.0186057	.8788083	1.011279
ad_guilt	-.3221352	-.0077648	.4834075	.981104
gp_d_psyiat	-.3332907	.0583866	.5520586	1.11634
p_evi	-.3881651	.0475974	.9094012	1.02102
ev_weapon	-.264796	.0193641	.800011	1.016774
witness1	.5044653	-.0558322	.804708	1.034012
co_def	-.1146061	-.0062534	.7773886	.9852561
IQ71_90	.3059414	-.0416256	1.358086	.9680515
jurydum	-.1137182	-.030021	.8212954	.9523653

White Defendant

	Raw	Weighted
Number of obs =	880	880.0
Treated obs =	214	418.9
Control obs =	666	461.1

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness	-.0745931	-.091135	.6589804	.5585345
p_felony	-.044893	-.0734814	.9176391	.8521798
p_d_risk	-.1430685	-.049913	.7452266	.9045997
p_torture	.159173	-.0422813	1.796605	.8578486
p_death	.0723759	-.0325546	1.365119	.85985
p_murder	-.014062	-.0858212	.9650424	.7784244
p_drug	-.0083173	-.0524231	.9375671	.6084396
p_v_drug	-.2094646	-.1912406	.1460742	.1122335
p_v_12	.015352	-.0394377	1.089704	.7887044
p_agg	-.1136842	-.149208	.5988391	.6170516
d_noconvict	.2066383	-.009362	2.063957	.9619544
d_disturbed	.184155	.022246	2.244834	1.106919
d_impaired	.157999	.0221306	2.008545	1.112852
d_age	-.0191722	-.0076282	.9416643	.9754384
sum_other_mit	.147386	.0249393	1.927745	.9968213
MultiVictims	-.0324306	-.0482285	.9398786	.9040692
sex_convict	.0426712	.142527	1.276078	1.957297
rob_convict0	-.1104638	.0740056	.7916964	1.153643
burg_convict0	-.0562602	-.0464644	.8099062	.8297181
psych0	.4131729	.0053632	1.502211	1.006228
v1family	.5115982	-.0764049	4.068416	.8090771
v1hadkids	.2922242	.0290286	1.28655	1.026541
v1knife	.3406729	.0705703	2.032253	1.164617
v1barehands	.3068471	.0073301	2.371268	1.02014
v_1h_resis	.1892796	.035188	1.233438	1.04261
v_1h_brutal	.447417	.0279835	2.225816	1.050237
v_1h_hide	.3012578	-.0112953	1.746639	.9778268
v_1h_execution	-.25019	-.0550043	.7539491	.9398423
v_1h_ambush	-.2008414	.0506118	.698228	1.083109
age_mean	.6328382	-.0076891	2.160951	1.008212
private	.2246572	-.1432128	1.106865	.8862755
courtappt	-.3606604	.0142124	.6757636	1.011003
gp_acc	.1346157	.0135758	1.966517	1.084469
mst_id	-.5458673	-.0369665	.6611436	.9802287
gp_nc	-.4161234	-.0135516	.9780945	1.000695
gp_not1st	.2222403	-.015524	1.129945	.9903203
ad_guilt	.2673638	.0385713	1.780139	1.092755
gp_d_psyiat	.3502459	.0020088	1.79317	1.003848
p_evi	.4756586	-.0248089	1.067228	.9903081
ev_weapon	.2828369	-.0720854	1.248103	.9385128
witness1	-.5482316	.0408016	1.192392	.976706
co_def	.0185956	-.019797	1.045747	.9535063
IQ71_90	-.4455915	-.0363269	.5905766	.9672646
jurydum	.0651457	-.0034119	1.122157	.9941628

Hispanic Defendant

	Raw	Weighted
Number of obs =	880	880.0
Treated obs =	62	490.7
Control obs =	818	389.3

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness	.0842782	-.1703872	1.518898	.2590351
p_felony	.4040719	-.0755611	1.785759	.8519267
p_d_risk	.318456	-.2033043	1.625141	.6125819
p_torture	-.1163952	-.0771872	.5971177	.7158166
p_death	-.0670126	-.2129539	.7338078	.2255854
p_murder	.0006643	-.2138196	1.017001	.4674365
p_drug	.1253874	-.1086409	2.38874	.2664029
p_v_drug	.1273311	-.0454402	1.959721	.7402221
p_v_12	.0981539	.022141	1.641328	1.121478
p_agg	.2375072	-.2840617	.8599457	.4538144
d_noconvict	.1573453	-.2392209	1.706873	.2328546
d_disturbed	.1868712	-.1818153	2.130351	.2793091
d_impaired	.3029301	-.146854	3.075597	.3904206
d_age	.3888208	-.1412821	2.614976	.5636106
sum_other_mit	.1837172	-.1697177	1.417329	.2970225
MultiVictims	-.0613148	-.2273768	.8929922	.5618512
sex_convict	-.0812985	-.1333952	.5895066	.3549976
rob_convict0	.1381566	-.0574386	1.301997	.8847507
burg_convict0	.3020334	-.0833505	2.423149	.705851
psych0	.3835018	-.2032502	1.390483	.7300237
v1family	-.144362	.3687178	.6051962	2.198036
v1hadkids	.2997992	-.357664	1.260781	.5684281
v1knife	.1302739	-.1423195	1.337813	.6756028
v1barehands	.1220269	-.1209383	1.4303	.6481794
v_1h_resis	.2332746	-.3815708	1.270446	.4874161
v_1h_brutal	-.2622205	-.3603513	.49632	.3061759
v_1h_hide	.1109171	-.1297299	1.253701	.7338333
v_1h_execution	.2747099	.1549391	1.22846	1.13041
v_1h_ambush	-.0738862	.430757	.8941532	1.541872
age_mean	-.3966596	-.1642923	.3027364	.2367099
private	-.0609796	-.1970342	.9776872	.8581564
courtappt	-.2788191	.492751	.7353754	1.165652
gp_acc	.1659544	-.0925326	2.151345	.5592997
mst_id	-.2333076	.5022324	.8707813	.9661255
gp_nc	-.1151105	.201506	1.021151	.9298488
gp_not1st	.2368123	-.3519906	1.12657	.6800107
ad_guilt	.1843427	-.1840786	1.484199	.5826533
gp_d_psyiat	.0660084	.1915819	1.144388	1.355067
p_evi	.0572739	-.1841082	1.03395	.8994972
ev_weapon	.0790693	-.0261502	1.086187	.9742304
witness1	-.100073	-.0738109	1.06749	1.03752
co_def	.2853837	-.1843474	1.697916	.5956935
IQ71_90	.1202584	-.1996821	1.110286	.7992165
jurydum	.2380111	-.1802318	1.436262	.6756103

Any White Victim

	Raw	Weighted
Number of obs =	880	880.0
Treated obs =	282	411.3
Control obs =	598	468.7

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness	.048713	.0195224	1.286416	1.116029
p_felony	.307517	.0779494	1.740958	1.142437
p_d_risk	.0630471	-.0311418	1.12752	.9430826
p_torture	.2664597	-.0613238	2.77175	.8050474
p_death	.200014	-.0076832	2.365263	.9675863
p_murder	.0993305	.0059322	1.303879	1.016987
p_drug	.2171128	.0728148	6.865162	2.028412
p_v_drug	-.0121806	-.0499018	.9313391	.6970198
p_v_12	-.0199061	-.0029083	.8976943	.9835887
p_agg	.2586851	-.0005261	1.982696	1.223134
d_noconvict	.2220236	.0502605	2.25165	1.201017
d_disturbed	.0969783	.0274078	1.560863	1.131818
d_impaired	.2153414	.0420296	2.699551	1.23997
d_age	.1376009	.0457395	1.543644	1.154969
sum_other_mit	.1811957	-.0148785	2.184286	.9810068
MultiVictims	.1574614	-.0143804	1.348135	.9716657
sex_convict	.184306	.0597389	2.874786	1.363725
rob_convict0	.1724101	.1448288	1.394018	1.276464
burg_convict0	.349127	.0864197	3.540405	1.367617
psych0	.4351365	.0123683	1.58748	1.01327
v1family	.433199	-.0304249	3.67328	.9204234
v1hadkids	.4990835	.0369714	1.526888	1.03043
v1knife	.4134134	.0242099	2.491608	1.050254
v1barehands	.3314571	.0176054	2.697806	1.051173
v_1h_resis	.4067002	.0546235	1.540921	1.058347
v_1h_brutal	.3298856	.0687548	1.903711	1.12771
v_1h_hide	.3662673	.0096578	2.02895	1.018849
v_1h_execution	-.1265398	-.0097946	.8800351	.9893762
v_1h_ambush	-.0794184	.0071108	.8785421	1.012069
age_mean	.5195403	.0193816	1.936853	1.091663
private	.2350817	.1020949	1.11923	1.059223
courtappt	-.3697987	-.096355	.6844845	.9188821
gp_acc	.1659489	.0063873	2.372594	1.034618
mst_id	-.5302362	-.0383798	.7053755	.9793714
gp_nc	-.4890921	-.0201633	.9914266	1.001026
gp_not1st	.2497288	.0021981	1.153233	1.001628
ad_guilt	.3373312	.0503602	2.130614	1.115255
gp_d_psyiat	.3242805	.081143	1.777987	1.169332
p_evi	.7171222	.0691963	1.09937	1.014978
ev_weapon	.3250014	.0624503	1.303836	1.048369
witness1	-.5629571	-.066679	1.255539	1.033228
co_def	.053277	.0410672	1.127386	1.096432
IQ71_90	-.4102859	-.0749023	.6445625	.9272995
jurydum	.2111449	.0246883	1.425504	1.044518

Covariate balance summary

Any Black Victim

	Raw	Weighted
Number of obs =	880	880.0
Treated obs =	516	479.0
Control obs =	364	401.0

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness	.0800269	-.0674238	1.543803	.6953402
p_felony	-.3802174	.3292249	.4797786	1.604427
p_d_risk	-.0096434	.0058289	.9809489	1.012329
p_torture	-.3964253	.4644814	.1559193	3.16322
p_death	-.1085841	-.1076405	.6187846	.6030525
p_murder	.0025211	-.0485605	1.006104	.8641028
p_drug	-.2042963	-.0798038	.1316366	.4464717
p_v_drug	.0752269	-.032088	1.59175	.8112232
p_v_12	-.0224546	-.0900111	.8846188	.6250593
p_agg	-.2188757	.1569297	.7515932	.9261408
d_noconvict	-.2501489	-.0647622	.3759306	.7541025
d_disturbed	-.1061401	-.0642234	.6068319	.7714645
d_impaired	-.1970653	-.0327854	.3834252	.8489426
d_age	-.1426585	-.0585671	.6295709	.8052986
sum_other_mit	-.2279899	.3509901	.4041754	1.874081
MultiVictims	.0288182	-.0471016	1.058039	.8916719
sex_convict	-.1678998	-.0811861	.3629155	.5935424
rob_convict0	-.1974227	-.1317448	.6758753	.761312
burg_convict0	-.2210372	-.0693751	.4396124	.76076
psych0	-.3912059	.280908	.6317647	1.263448
v1family	-.3842674	-.0295706	.2848556	.9118211
v1hadkids	-.4408541	.2473608	.6528274	1.171819
v1knife	-.376082	-.0756714	.4067418	.8428595
v1barehands	-.402521	.4084217	.2558965	2.352002
v_1h_resis	-.453254	-.1190645	.589467	.8586261
v_1h_brutal	-.3804993	.3182225	.4491679	1.584646
v_1h_hide	-.4272593	.376995	.4059136	1.719422
v_1h_execution	.1573175	-.0771873	1.170075	.9083397
v_1h_ambush	.1364921	-.0455675	1.25205	.9226206
age_mean	-.4929381	.1227321	.5325831	.9499143
private	-.1632254	-.0890839	.916501	.932511
courtappt	.3365957	.273941	1.367887	1.185352
gp_acc	-.2149099	-.0765245	.2937084	.621299
mst_id	.576203	-.0876619	1.384271	.9487222
gp_nc	.4679615	-.1502861	.9654843	1.000854
gp_not1st	-.2332015	.2076739	.865278	1.077907
ad_guilt	-.390811	-.1460721	.385094	.6930926
gp_d_psyiat	-.3545882	-.1046916	.5100762	.8024769
p_evi	-.6025143	.1889928	.8440796	1.039634
ev_weapon	-.3091214	.2506822	.759835	1.147784
witness1	.5361789	-.2166107	.7571689	1.069209
co_def	-.1129195	-.0697401	.7771112	.8465717
IQ71_90	.3351666	-.0332692	1.374428	.9634755
jurydum	-.2201349	.3169534	.681139	1.469535

Any Hispanic Victim

	Raw	Weighted
Number of obs =	880	880.0
Treated obs =	79	438.4
Control obs =	801	441.6

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_felony	.4080705	.0055356	1.805943	1.010595
p_d_risk	.1726899	.1074118	1.350548	1.201922
p_torture	.2822678	-.0092009	2.474809	.9647639
p_death	.0928744	-.0627442	1.475463	.7373408
p_murder	.22455	-.0995657	1.699918	.7371799
p_drug	.1622813	-.0306945	2.9975	.7724854
p_v_drug	-.0056657	-.0502247	.9777045	.7192944
p_v_12	.1119926	-.046396	1.743471	.7601309
p_agg	.3338853	-.0557671	.8043707	.5969696
d_noconvict	.3073094	-.0578308	2.555393	.7928119
d_disturbed	.1178471	-.0843993	1.663516	.6312882
d_impaired	.1726246	-.0347206	2.034509	.8414338
d_age	.2764498	-.0388216	2.109014	.8773206
sum_other_mit	.2841835	-.0217955	2.011026	.6894939
MultiVictims	.1204572	.2368682	1.256387	1.449547
sex_convict	-.0133627	-.0991341	.9344615	.4934518
rob_convict0	.0949848	.0219461	1.208316	1.043861
burg_convict0	-.1912332	-.040922	.4111842	.8540985
psych0	.1585983	.0646293	1.195542	1.075794
v1family	-.2711144	.2901169	.3129725	1.953371
v1hadkids	.0752616	-.1248483	1.086338	.8623315
v1knife	-.1096663	.1306599	.760764	1.311495
v1barehands	.1285372	-.1138357	1.451376	.6665188
v_1h_resis	-.0010314	-.1134898	1.010287	.8558612
v_1h_brutal	.1165521	-.1691929	1.264402	.6565145
v_1h_hide	.0376802	.1794087	1.091653	1.36619
v_1h_execution	.0501805	-.1918866	1.05918	.7921532
v_1h_ambush	-.0658332	-.0043964	.9044818	.992963
age_mean	-.0812349	-.0917534	.6272526	.4892037
private	-.1141998	-.3275312	.9378807	.7359246
courtappt	-.0347782	.0850931	.9810442	1.065726
gp_acc	.1048119	.1817169	1.672976	2.162426
mst_id	-.2059031	-.1316567	.8899864	.9262277
gp_nc	.1270476	-.0643131	.9790566	1.0056
gp_not1st	.1663386	.0033511	1.101068	1.002209
ad_guilt	.1882672	-.064921	1.493386	.8482155
gp_d_psyiat	.1381821	-.0851214	1.282723	.836008
p_evi	-.0657296	-.1191446	.9835202	.9431361
ev_weapon	.0961853	-.021708	1.096884	.9793997
witness1	.1260207	-.1022761	.9249358	1.050528
co_def	.1936844	.0653179	1.475067	1.147819
IQ71_90	.0036325	-.0525479	1.014723	.952303
jurydum	.295542	-.0890884	1.533289	.8421659

Black Def/White Vic.

	Raw	Weighted
Number of obs =	880	880.0
Treated obs =	94	428.3
Control obs =	786	451.7

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness	.0566336	.1970989	1.335547	2.273929
p_felony	.3750207	.1329805	1.757383	1.253119
p_d_risk	.2277846	-.0666749	1.45936	.8713885
p_torture	.3965913	.0078478	3.36582	1.030785
p_death	.2309857	-.0481513	2.380673	.792512
p_murder	.1806912	-.097653	1.557166	.7337377
p_drug	.2951964	.0137291	6.834076	1.129627
p_v_drug	.2089458	-.0465003	2.850625	.7213732
p_v_12	-.0653786	-.140247	.682613	.3545808
p_agg	.4772033	-.0047815	3.421388	1.194864
d_noconvict	.1190148	.1153809	1.519891	1.47666
d_disturbed	-.0469135	-.0911709	.7985879	.604233
d_impaired	.1702945	-.0398748	2.025216	.8147938
d_age	.1664678	.0560582	1.630224	1.193144
sum_other_mit	.1755556	-.0437886	1.683238	.7009888
MultiVictims	.2744928	-.0696568	1.574034	.8592224
sex_convict	.2011517	-.0188144	2.695762	.8989779
rob_convict0	.4522718	.0734658	1.956144	1.150544
burg_convict0	.3966146	.0350167	3.098923	1.13561
psych0	.1472596	-.050251	1.181993	.9374498
v1family	-.1792375	-.0956078	.5204159	.7206315
v1hadkids	.2908645	.0771863	1.257747	1.072642
v1knife	.1633722	-.0342966	1.41995	.9214986
v1barehands	.2146617	-.0802744	1.788576	.7580806
v_1h_resis	.2991469	.1236558	1.330418	1.138628
v_1h_brutal	.09813	.1190813	1.222028	1.247211
v_1h_hide	.3042917	.1010549	1.680132	1.204346
v_1h_execution	.088336	.2178765	1.091328	1.161617
v_1h_ambush	.1564214	-.0292394	1.260356	.9537183
age_mean	.0520012	-.0000153	.9252624	.939256
private	.0638121	.2273765	1.042498	1.072172
courtappt	-.0713944	-.0372516	.9457091	.9676852
gp_acc	.0638703	.0237053	1.389369	1.130667
mst_id	-.2243139	.020064	.8764162	1.00867
gp_nc	-.1794411	.0528695	1.011117	.9897873
gp_not1st	.0158156	-.0384619	1.019792	.9734787
ad_guilt	.2649227	.0383316	1.705611	1.089819
gp_d_psyiat	.1097178	-.1219805	1.224924	.7608903
p_evi	.4516179	.0396041	1.017111	1.013105
ev_weapon	.0997239	-.025934	1.097919	.9753527
witness1	-.2037417	.0213079	1.100662	.987218
co_def	.171503	.2521608	1.420323	1.558563
IQ71_90	-.1717755	-.0404162	.8453712	.9636884
jurydum	.2138819	-.0817908	1.394942	.8524433

Covariate balance summary

Black Def/Black Vic.

	Raw	Weighted
Number of obs =	880	880.0
Treated obs =	467	480.3
Control obs =	413	399.7

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness	.0929593	-.0685356	1.651471	.6854595
p_felony	-.3195767	.3889211	.529442	1.701232
p_d_risk	-.0651277	-.0135399	.8828191	.971082
p_torture	-.3890871	.4996287	.1387949	3.336776
p_death	-.0595004	-.0852951	.7676406	.6799859
p_murder	-.0324814	-.0279208	.914862	.922379
p_drug	-.1817112	-.1021055	.1644405	.303857
p_v_drug	.0515155	-.0150606	1.363788	.8925304
p_v_12	-.0086726	-.0943834	.9536025	.6092733
p_agg	-.1906987	.18612	.8529114	.9271111
d_noconvict	-.3115057	-.1316857	.2628652	.5425765
d_disturbed	-.1750788	-.1189189	.4200889	.5766948
d_impaired	-.2902141	-.129569	.1942081	.4590815
d_age	-.2340051	-.0698369	.4510447	.773166
sum_other_mit	-.2560266	.4086224	.363819	2.133643
MultiVictims	.0317959	-.0455273	1.064679	.8968492
sex_convict	-.1312687	-.0856258	.4519981	.5783267
rob_convict0	-.179765	-.1326477	.6951153	.7442759
burg_convict0	-.1822724	-.0675028	.5030559	.7611514
psych0	-.4557912	.3153264	.5665588	1.306461
v1family	-.3187098	-.0086757	.3488171	.973335
v1hadkids	-.3978713	.3002736	.6648873	1.210816
v1knife	-.3341492	-.1084601	.4385125	.7706719
v1barehands	-.3900507	.4614945	.2480359	2.508238
v_1h_resis	-.3825934	-.1639198	.6256353	.7967912
v_1h_brutal	-.3542189	.369946	.4612222	1.661081
v_1h_hide	-.4417951	.4099343	.3714381	1.789269
v_1h_execution	.089857	-.1052373	1.091082	.8764834
v_1h_ambush	.1461383	-.0583943	1.26858	.8975725
age_mean	-.4343802	.1689823	.5427579	.9340586
private	-.169531	-.1102238	.9109384	.9093358
courtappt	.3453507	.2961717	1.359011	1.168223
gp_acc	-.1762378	-.0878345	.3652789	.572442
mst_id	.5685388	-.0945874	1.324801	.9468957
gp_nc	.4101067	-.1715219	.9484339	.9886442
gp_not1st	-.2585051	.2553678	.8460908	1.102705
ad_guilt	-.3504937	-.1647069	.4129956	.6508164
gp_d_psyiat	-.396153	-.1042832	.4520508	.7957244
p_evi	-.5058599	.1941933	.8372075	1.041527
ev_weapon	-.2709071	.2994444	.7776758	1.181121
witness1	.4581896	-.2447889	.7658859	1.07648
co_def	-.2042382	-.0838841	.6277498	.8060012
IQ71_90	.342245	-.0782092	1.363541	.9193318
jurydum	-.2505467	.3482477	.6380442	1.49136

White Def/White Vic.

	Raw	Weighted
Number of obs =	880	880.0
Treated obs =	169	401.1
Control obs =	711	478.9

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness	-.0237688	-.0642685	.8842556	.6788899
p_felony	.0054016	.0926216	1.01508	1.179645
p_d_risk	-.1288961	.0431911	.7676677	1.083128
p_torture	.0554878	.1282103	1.239139	1.49997
p_death	.1154899	-.0231032	1.615857	.89801
p_murder	.0166158	-.0080363	1.050763	.9784398
p_drug	.0294113	-.0424831	1.263116	.694523
p_v_12	-.0079042	-.0363547	.9618424	.8065002
p_agg	-.0870346	.0547269	.7027777	.8455772
d_noconvict	.1761802	-.0141615	1.839622	.9457856
d_disturbed	.1131993	.0577566	1.648409	1.283048
d_impaired	.1446258	.0631071	1.874191	1.321588
d_age	-.0423561	.0557992	.8710089	1.185311
sum_other_mit	.1422143	.0763712	2.101176	1.270097
MultiVictims	.0374093	.1181237	1.079847	1.231852
sex_convict	.098415	.2364166	1.708979	2.708241
rob_convict0	-.1431758	.2711296	.7309948	1.517476
burg_convict0	.0189721	-.0111875	1.075813	.9590486
psych0	.4161936	.2315985	1.472749	1.208404
v1family	.6493615	-.0321119	5.113472	.9175479
v1hadkids	.4266098	.1522225	1.371547	1.121516
v1knife	.4177261	.2126504	2.253417	1.476915
v1barehands	.2990802	.1473969	2.25249	1.445209
v_1h_resis	.2359891	.1249249	1.281711	1.137634
v_1h_brutal	.4125619	.2019703	2.032292	1.367804
v_1h_hide	.2625647	.0851118	1.615583	1.166579
v_1h_execution	-.3074619	-.1780878	.6881115	.796611
v_1h_ambush	-.2558524	-.0326925	.6142929	.9472412
age_mean	.7092225	.0634915	2.160248	1.085899
private	.2577063	-.0719864	1.111602	.9497289
courtappt	-.4650641	-.0329605	.5617302	.9727421
gp_acc	.2002351	.0152851	2.619228	1.092347
mst_id	-.6012984	-.2248296	.5939964	.8457551
gp_nc	-.5287092	-.2299484	.9177303	.9616655
gp_not1st	.3003661	-.0007447	1.154115	.9999699
ad_guilt	.2559862	.2079887	1.715395	1.506311
gp_d_psyiat	.3698445	.1068892	1.799951	1.193384
p_evi	.6430512	.1318978	.9950425	1.032426
ev_weapon	.3795347	.0184229	1.298888	1.015708
witness1	-.6402409	-.0998969	1.145508	1.046581
co_def	-.1224839	.0714332	.7437707	1.165719
IQ71_90	-.4759255	-.1976483	.5451588	.8023147
jurydum	.0874556	.0748949	1.164235	1.133764

Attorney Type: Death Penalty Filed

Private Attorney

	Raw	Weighted
Number of obs =	880	880.0
Treated obs =	322	446.4
Control obs =	558	433.6

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness3	.1400201	-.0401815	1.753638	.8536577
p_felony3	-.0359546	.0391008	.9656547	1.037095
p_d_risk3	-.1512414	.0100703	.8735652	1.0085
p_torture3	.0786527	-.0475625	1.260088	.8563261
p_death3	.0850246	-.0002386	1.30137	.9991077
p_murder3	-.0733998	.1518272	.8433374	1.362264
p_drug3	-.1254533	-.0643213	.5268535	.7114282
p_v_drug3	-.1802683	.0338457	.5823977	1.095958
p_v_12_3	.0006125	-.0256584	1.004475	.8781634
p_agg3	-.1722533	.0962635	.7548847	1.110257
d_noconvict	.1483952	-.0225222	1.736706	.9160959
d_disturbed	-.0203272	-.0409239	.9090543	.8065576
d_impaired	.053988	-.0307661	1.286903	.8690628
d_age	.0775832	-.0393831	1.284087	.8801896
sum_other_mit	-.0956815	-.0745559	.4898394	.5063883
MultiVictims	-.0684687	.047138	.8722091	1.097739
sex_convict	.0933064	.0007517	1.707252	1.004335
rob_convict0	-.081955	.0020955	.8454317	1.004194
burg_convict0	.0847404	.0975408	1.357691	1.354311
psych0	.1226741	.0349064	1.157265	1.041521
v1family	-.0061733	-.0288291	.9825751	.9158068
v1hadkids	.1111686	-.0295527	1.117431	.970552
v1knife	.0237483	-.0104113	1.058467	.9755458
v1barehands	.0427673	-.0103136	1.142181	.9668113
v_1h_resis	.1409099	-.0649142	1.180355	.918663
v_1h_brutal	.0050795	-.0604607	1.01201	.8695938
v_1h_hide	.069802	-.061586	1.155055	.8692876
v_1h_execution	.1605743	-.0552608	1.160123	.9422193
v_1h_ambush	.1070222	-.0003336	1.183545	.9994066
age_mean	-.0442637	-.0040998	1.073417	.9351204
gp_acc	.1010568	-.0193027	1.702473	.9023584
mst_id	.2546328	-.0340239	1.100317	.9847234
gp_nc	.3806967	-.051144	.9081152	1.005532
gp_not1st	.0424452	.0305001	1.029051	1.020479
ad_guilt	-.0878788	.0200655	.807029	1.046926
gp_d_psyiat	.16275	-.0310265	1.35337	.9405938
p_evi	.1817846	-.0739663	1.061572	.9699626
ev_weapon	-.0535392	-.0420504	.9515527	.9594854
witness1	.1053017	-.0367332	.9375166	1.021387
co_def	.1783782	-.0320971	1.478287	.9284351
IQ71_90	-.1874995	-.0019472	.8413524	.9982941
FD_black	-.1478114	.0187131	1.108727	.9863981
FD_hispanic	-.0324765	.0019808	.8966849	1.005985
anywhite_v_dum	.2275697	.0423684	1.176145	1.030879

Court Appointed Attorney

	Raw	Weighted
Number of obs =	880	880.0
Treated obs =	269	442.9
Control obs =	611	437.1

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness3	-.1486583	-.0489312	.5082775	.809124
p_felony3	.0287526	.0117847	1.030805	1.011962
p_d_risk3	.2420841	.0248651	1.201187	1.020793
p_torture3	.0014139	.004657	1.00631	1.0138
p_death3	-.0218691	-.0185171	.9349339	.9424931
p_murder3	.0904732	-.0329127	1.224563	.924244
p_drug3	.2078719	-.0189698	2.57953	.914186
p_v_drug3	.3819493	-.0230563	2.720364	.9367269
p_v_12_3	-.1315569	-.045337	.4658223	.7782388
p_agg3	.2008649	-.0248514	1.242793	.9402453
d_noconvict	-.1869525	-.0667918	.441975	.756374
d_disturbed	-.2021742	-.0557493	.3047896	.7508913
d_impaired	-.076548	-.0902574	.6846015	.6164524
d_age	-.0178739	-.0966648	.9448683	.6945127
sum_other_mit	-.0252322	-.0002903	.950746	.9148891
MultiVictims	.0734547	-.0741115	1.154215	.8543178
sex_convict	-.1172569	-.0425184	.4636309	.7663224
rob_convict0	-.0171548	.0582023	.9678305	1.110278
burg_convict0	-.0804769	.059748	.7362216	1.214997
psych0	-.1339363	-.0433947	.8420942	.9467039
v1family	-.2785114	-.0202256	.3504118	.9388738
v1hadkids	-.2922158	-.0061307	.7077215	.993767
v1knife	-.2866416	.0133544	.450468	1.031402
v1barehands	-.1536473	.0673204	.5938424	1.214843
v_1h_resis	-.244015	.0259187	.7179242	1.031336
v_1h_brutal	-.0515133	-.0003059	.8975247	.99931
v_1h_hide	-.2207579	-.062093	.5997305	.8698854
v_1h_execution	.0459356	-.02398	1.04647	.9751221
v_1h_ambush	.1154287	.0772771	1.196625	1.123991
age_mean	-.2654852	.0624774	.6119139	1.225162
gp_acc	-.1875412	.0598928	.2816108	1.339777
mst_id	.2209728	.0502291	1.082907	1.020553
gp_nc	.090443	-.0124319	.9853498	1.001355
gp_not1st	-.120705	-.0044784	.919777	.9970529
ad_guilt	-.1285713	-.0398861	.7233068	.9065161
gp_d_psyiat	-.2935741	.0603917	.5198034	1.115187
p_evi	-.4311969	.0399835	.788293	1.013566
ev_weapon	-.2387828	.0212007	.77784	1.018845
witness1	.1271426	.0493361	.9227157	.9686961
co_def	-.1841664	-.0294809	.6355688	.9353774
IQ71_90	.2266054	-.0152895	1.192054	.9871653
FD_black	.36089	.057671	.7207736	.9543111
FD_hispanic	-.1532215	.0240169	.5684149	1.078847
anywhite_v_dum	-.3749028	-.0206356	.698077	.9837318

Public Defender

	Raw	Weighted
Number of obs =	880	880.0
Treated obs =	285	435.2
Control obs =	595	444.8

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness3	-.0375419	.0488758	.8570262	1.208895
p_felony3	.0113034	.0054626	1.013125	1.005457
p_d_risk3	-.0656275	.0455124	.9457005	1.037109
p_torture3	-.0814196	-.0125569	.7792192	.9633917
p_death3	-.0657483	-.05872	.8098581	.8146829
p_murder3	-.0047422	-.0043071	.9910118	.9898963
p_drug3	-.0920102	-.0349186	.6309542	.8411369
p_v_drug3	-.2240621	-.1128756	.493487	.697611
p_v_12_3	.1162994	.00049	1.788294	1.002513
p_agg3	-.0192332	.0008485	1.03987	1.052551
d_noconvict	.0106743	.0608425	1.042995	1.241594
d_disturbed	.1889245	.0232559	2.382193	1.121669
d_impaired	.0175026	.0456348	1.087327	1.223028
d_age	-.0615739	.0292291	.8147898	1.096784
sum_other_mit	.1137558	.0045804	1.952843	1.166449
MultiVictims	.0083434	-.0045533	1.018435	.9909192
sex_convict	.0072051	-.0295026	1.044507	.836505
rob_convict0	.0947343	.0119955	1.205681	1.023598
burg_convict0	-.0324911	.035806	.8879197	1.129354
psych0	-.0162374	-.0171772	.9820475	.9785307
v1family	.2272828	.0046943	1.945036	1.014786
v1hadkids	.1414098	.0119235	1.148064	1.012441
v1knife	.2004574	.0051214	1.568241	1.012643
v1barehands	.0994698	-.0057159	1.352873	.9825422
v_1h_resis	.0882284	-.0019811	1.111088	.9975757
v_1h_brutal	.0370761	.0057732	1.081679	1.012064
v_1h_hide	.1339969	.0140942	1.309721	1.029513
v_1h_execution	-.2322289	-.0183381	.7797687	.9822522
v_1h_ambush	-.2269672	-.0217809	.6702962	.9653701
age_mean	.2830078	.0025052	1.356996	1.101855
gp_acc	.0555922	.007739	1.339389	1.040116
mst_id	-.5289178	-.0323394	.7076855	.9847604
gp_nc	-.5045124	-.0270205	.9901436	1.003652
gp_not1st	.0746633	.0142504	1.049896	1.009013
ad_guilt	.2117266	.0004692	1.618222	1.001158
gp_d_psyiat	.0982074	.0058585	1.20209	1.011241
p_evi	.1938514	.0228202	1.062138	1.008332
ev_weapon	.2570306	.0328766	1.241884	1.030665
witness1	-.2365944	.0000254	1.129726	1.000035
co_def	-.0148565	-.0022067	.968651	.9952535
IQ71_90	-.0242847	-.0169284	.9808308	.9847886
FD_black	-.1797542	-.044937	1.12882	1.030059
FD_hispanic	.1724032	.0183704	1.747946	1.06048
anywhite_v_dum	.1067966	.0280737	1.08293	1.020699

Attorney Type: Death Penalty Retracted

Private Attorney

	Raw	Weighted
Number of obs =	313	313.0
Treated obs =	104	192.4
Control obs =	209	120.6

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness3	.2163695	-.1524423	1.754458	.6237295
p_felony3	.3247247	.2663647	.9841394	.9179162
p_d_risk3	-.1352941	-.3741583	.9333981	.7138761
p_torture3	.1167652	-.2099626	1.235568	.5896364
p_death3	.2657281	-.2365671	1.585642	.5876563
p_murder3	-.1057442	.5096125	.8965379	1.322751
p_drug3	-.2137751	-.1424857	.4496679	.5746692
p_v_drug3	-.1408956	.7243688	.7329789	2.086583
p_v_12_3	.0876754	-.1444194	1.310913	.6026424
p_agg3	.0006173	.701203	.7106577	1.10958
d_noconvict	.399515	-.1745223	2.084634	.6378264
d_disturbed	.0321927	-.2044101	1.08904	.487039
d_impaired	.1820667	-.1016841	1.575848	.7538619
d_age	.273157	-.1630773	1.486908	.7202582
sum_other_mit	-.0356477	-.2145901	.6987457	.3747473
MultiVictims	.0135201	.3793957	1.015203	1.101311
sex_convict	.3636327	-.1925188	4.392461	.4541869
rob_convict0	.0603965	.4895049	1.091601	1.487638
burg_convict0	.1608274	.7118498	1.5547	2.584287
psych0	.1608866	.3528577	1.078545	1.060185
v1family	-.2140894	-.2307607	.3982029	.3023424
v1hadkids	.287621	-.2259803	1.298227	.7827299
v1knife	-.0899598	-.2063628	.8017565	.5259512
v1barehands	.1445011	-.1829818	1.388921	.5693278
v_1h_resis	.2470523	-.3152943	1.267169	.5992121
v_1h_brutal	.0733441	-.2681018	1.118421	.5533876
v_1h_hide	.1102475	-.284329	1.188014	.5066496
v_1h_execution	.436973	-.2660589	1.361939	.6861635
v_1h_ambush	.0022561	.1067443	1.00863	1.161731
age_mean	-.3130965	-.0384575	.6604904	.4313812
gp_acc	.0735032	-.1072481	1.420675	.5560406
mst_id	.1346207	-.0089572	1.09911	.9900106
gp_nc	.4920035	-.1252704	.8813946	.9732252
gp_not1st	.0941571	.403931	1.069802	1.143075
ad_guilt	-.09489	-.2890337	.8653133	.5971356
gp_d_psyiat	.2691733	-.2643341	1.532614	.56076
p_evi	.2162688	-.4278264	1.010039	.7708131
ev_weapon	-.0797791	-.4051177	.9396454	.6009282
witness1	.1539375	-.263865	.9330017	1.051658
co_def	.3485301	-.1312322	1.690939	.7617256
IQ71_90	-.3025436	-.0103377	.7269819	.9879035
FD_black	-.2505982	.3551964	1.125472	.7457736
FD_hispanic	.1057417	-.0491979	1.295187	.8875236
anywhite_v_dum	.1023718	.2860367	1.057827	1.023296

Court Appointed Attorney

	Raw	Weighted
Number of obs =	313	313.0
Treated obs =	111	146.1
Control obs =	202	166.9

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness3	-.2460092	-.0939111	.4734336	.7532035
p_felony3	-.2032722	.1482559	.9829524	1.000374
p_d_risk3	.1657964	.1240751	1.081145	1.052773
p_torture3	-.0411517	.1332522	.9302943	1.249588
p_death3	-.1577273	-.0376498	.7396834	.9298289
p_murder3	.0578298	-.0702284	1.064503	.922862
p_drug3	.245555	.0988222	2.20648	1.295501
p_v_drug3	.379231	.0684459	2.158638	1.124678
p_v_12_3	-.2677954	-.0832539	.3744361	.7452982
p_agg3	.0155106	.0411036	1.163933	1.314278
d_noconvict	-.4076319	-.0137658	.3735839	.9727676
d_disturbed	-.3950389	.0299593	.27582	1.072179
d_impaired	-.2236514	.0950394	.5290261	1.231939
d_age	-.1663925	-.0284732	.7643614	.9524462
sum_other_mit	-.0895633	.1383574	.9919283	1.100919
MultiVictims	-.0243716	-.0404963	.9854408	.9681596
sex_convict	-.1978203	-.1234712	.4093463	.5354203
rob_convict0	-.0946438	.0669474	.8758125	1.081278
burg_convict0	-.1123561	.0786842	.7208769	1.1965
psych0	-.2688478	.0042931	.8579932	1.002717
v1family	-.1675004	-.085137	.5073909	.6938905
v1hadkids	-.3859547	-.0857825	.6379101	.9031746
v1knife	-.3160264	.0373939	.4059968	1.094852
v1barehands	-.1524153	-.0369595	.6893596	.9112376
v_1h_resis	-.3645245	.0859102	.6475754	1.088491
v_1h_brutal	.0571942	.1540039	1.09222	1.251356
v_1h_hide	-.1916094	.0847609	.7270522	1.137511
v_1h_execution	-.0013494	.0269473	1.002956	1.029045
v_1h_ambush	.0993524	.0386812	1.178295	1.0544
age_mean	-.2265845	-.1873491	.5438185	.6114579
gp_acc	-.1744669	.0896929	.3775609	1.456566
mst_id	.3275516	.0222095	1.229908	1.015551
gp_nc	.0792226	-.1136275	.9946246	1.000169
gp_not1st	-.0959417	.0152624	.9359912	1.011573
ad_guilt	-.291165	.0505921	.6108992	1.076252
gp_d_psyiat	-.424869	-.0851015	.4190298	.8496624
p_evi	-.4855424	.0214119	.8927443	1.004933
ev_weapon	-.3338911	-.1000135	.733028	.9142625
witness1	-.0291452	.086682	1.01638	.9489657
co_def	-.2440046	.1919332	.6495637	1.279378
IQ71_90	.1741506	.0600218	1.168089	1.038617
FD_black	.4239222	.0639894	.7499052	.9554554
FD_hispanic	-.3543836	.0314393	.3415529	1.075996
anywhite_v_dum	-.4561147	-.0421359	.7290604	.9764162

Public Defender

	Raw	Weighted
Number of obs =	313	313.0
Treated obs =	96	164.2
Control obs =	217	148.8

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness3	.0244983	-.0866368	1.073845	.7642207
p_felony3	-.1178738	.0128544	.9951453	.9982109
p_d_risk3	-.0153802	-.0189128	.9981355	.9912354
p_torture3	-.0674073	-.1719399	.8859033	.7189154
p_death3	-.1093848	.2783022	.8152738	1.488366
p_murder3	.0645629	-.1433648	1.072978	.8323692
p_drug3	-.0617199	-.1036973	.8162693	.6961211
p_v_drug3	-.2887915	-.2175015	.4913892	.5778224
p_v_12_3	.1752944	.0643532	1.690854	1.20127
p_agg3	.015405	-.1124634	1.181878	.7513427
d_noconvict	-.0174622	-.128211	.9716923	.7442615
d_disturbed	.3410429	.0320818	2.243725	1.087166
d_impaired	.0423801	-.0872449	1.120142	.7923168
d_age	-.1041568	-.2279327	.8499388	.6385069
sum_other_mit	.1287148	-.1218901	1.44457	.5936852
MultiVictims	.0326596	.1496623	1.030713	1.092657
sex_convict	-.2338913	.2139316	.3188848	1.920479
rob_convict0	.0164034	-.042962	1.029071	.940962
burg_convict0	-.1006931	-.0039628	.7463618	.9897608
psych0	.0769172	-.1700598	1.042432	.8892927
v1family	.3481912	.0432199	3.524211	1.220045
v1hadkids	.1098254	.0827102	1.115807	1.087213
v1knife	.3080566	-.0091652	2.014467	.9754046
v1barehands	.0157581	.0137579	1.043212	1.032554
v_1h_resis	.1308539	-.0371408	1.142105	.9623891
v_1h_brutal	-.1659644	-.0922926	.7697806	.8590819
v_1h_hide	.0974441	-.1441469	1.166043	.7708454
v_1h_execution	-.4670033	-.1235959	.6002305	.8850557
v_1h_ambush	-.0979447	-.1930698	.8495865	.6800545
age_mean	.5181519	-.0954066	2.251978	1.421571
gp_acc	.0983595	-.0072339	1.590789	.9633276
mst_id	-.546166	-.1560584	.5795037	.8738788
gp_nc	-.6051282	-.2170909	.9269638	.9751723
gp_not1st	-.0064852	-.0119311	1.001298	.9910371
ad_guilt	.3982773	.1732013	1.718946	1.237143
gp_d_psyiat	.1462785	.1285587	1.270749	1.204299
p_evi	.2504395	-.1486168	1.005723	.9613893
ev_weapon	.3821074	.0835569	1.292849	1.063597
witness1	-.1210871	.1671982	1.052965	.887824
co_def	-.1095155	-.0464451	.8345978	.9273203
IQ71_90	.1010643	-.2304658	1.099367	.7660378
FD_black	-.1672476	-.1137672	1.088217	1.046987
FD_hispanic	.2381917	-.0541376	1.748678	.8799423
anywhite_v_dum	.3538589	.0238816	1.159049	1.010339

Covariate balance summary

Attorney Type: Death Penalty Given

Private Attorney

	Raw	Weighted
Number of obs =	880	880.0
Treated obs =	322	436.8
Control obs =	558	443.2

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness	.0375585	-.0481504	1.216257	.8111153
p_felony	-.0004332	.0372138	1.000477	1.066153
p_d_risk	-.0788583	-.0297126	.8579307	.9443522
p_torture	-.0560694	-.0583244	.7992541	.7727615
p_death	-.0796694	.0723585	.6931826	1.352542
p_murder	-.0518832	.0830103	.8668047	1.234833
p_drug	-.0742056	.0164376	.5251216	1.13676
p_v_drug	-.143777	.0564666	.3734851	1.364559
p_v_12	.0034125	-.0229831	1.020086	.8840806
p_agg	-.1385133	.0504744	.7233143	1.325124
d_noconvict	.1483952	-.0356985	1.736706	.872801
d_disturbed	-.0203272	-.0580184	.9090543	.7237231
d_impaired	.053988	-.0944275	1.286903	.6388104
d_age	.0775832	-.0483242	1.284087	.8553488
sum_other_mit	-.0956815	-.0711083	.4898394	.5487869
MultiVictims	-.0684687	.0452265	.8722091	1.091492
sex_convict	.0933064	.0002785	1.707252	1.001626
rob_convict0	-.081955	-.0083142	.8454317	.9837019
burg_convict0	.0847404	.0483607	1.357691	1.161837
psych0	.1226741	-.0056849	1.157265	.9933988
v1family	-.0061733	-.0125451	.9825751	.9625824
v1hadkids	.1111686	-.017704	1.117431	.9833063
v1knife	.0237483	.0283968	1.058467	1.06585
v1barehands	.0427673	-.0023618	1.142181	.9924552
v_1h_resis	.1409099	-.0495863	1.180355	.9391723
v_1h_brutal	.0050795	-.041477	1.01201	.9096343
v_1h_hide	.069802	-.0431767	1.155055	.9066346
v_1h_execution	.1605743	-.0266162	1.160123	.9722639
v_1h_ambush	.1070222	-.0106005	1.183545	.9834752
age_mean	-.0442637	-.0250149	1.073417	1.036064
gp_acc	.1010568	-.0209366	1.702473	.8953296
mst_id	.2546328	-.0101012	1.100317	.9959142
gp_nc	.3806967	-.0285917	.9081152	1.004461
gp_not1st	.0424452	.0175044	1.029051	1.011857
ad_guilt	-.0878788	.0450657	.807029	1.108286
gp_d_psyiat	.16275	-.0407443	1.35337	.9235378
p_evi	.1817846	-.0375584	1.061572	.9868829
ev_weapon	-.0535392	-.0348224	.9515527	.9664806
witness1	.1053017	-.003652	.9375166	1.002355
co_def	.1783782	-.0337238	1.478287	.9259792
IQ71_90	-.1874995	.0162931	.8413524	1.013851
FD_black	-.1478114	-.0242907	1.108727	1.016696
FD_hispanic	-.0324765	.0363318	.8966849	1.112188
anywhite_v_dum	.2275697	.0220769	1.176145	1.015453

Covariate balance summary

Court Appointed Attorney

	Raw	Weighted
Number of obs =	880	880.0
Treated obs =	269	441.9
Control obs =	611	438.1

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness	-.057545	-.0526387	.7317207	.740216
p_felony	.0005749	-.0357245	1.003206	.9318648
p_d_risk	.1926729	-.045982	1.417423	.910511
p_torture	.0761576	-.0065097	1.340086	.975183
p_death	.0276883	-.0536408	1.131197	.7688128
p_murder	.0538556	-.0775436	1.157743	.7854376
p_drug	.084157	.0085305	1.92955	1.070782
p_v_drug	.2085027	.0080586	3.406538	1.055097
p_v_12	-.1799422	-.114077	.2928448	.457226
p_agg	.1081027	-.0855129	1.197449	.7932509
d_noconvict	-.1869525	-.0700883	.441975	.7507351
d_disturbed	-.2021742	-.0935968	.3047896	.593529
d_impaired	-.076548	-.0753994	.6846015	.6629191
d_age	-.0178739	-.0764745	.9448683	.7534082
sum_other_mit	-.0252322	-.0195038	.950746	.9068369
MultiVictims	.0734547	-.0483783	1.154215	.9025114
sex_convict	-.1172569	-.0531492	.4636309	.7121979
rob_convict0	-.0171548	.0646157	.9678305	1.126644
burg_convict0	-.0804769	.0819275	.7362216	1.303116
psych0	-.1339363	-.0555015	.8420942	.9297808
v1family	-.2785114	-.0295877	.3504118	.911255
v1hadkids	-.2922158	.0448822	.7077215	1.043278
v1knife	-.2866416	.0068933	.450468	1.016117
v1barehands	-.1536473	.0335577	.5938424	1.102982
v_1h_resis	-.244015	.0214173	.7179242	1.025719
v_1h_brutal	-.0515133	-.0192719	.8975247	.9588685
v_1h_hide	-.2207579	-.0988714	.5997305	.7992675
v_1h_execution	.0459356	-.0291955	1.04647	.9700378
v_1h_ambush	.1154287	.0562343	1.196625	1.087283
age_mean	-.2654852	.0358043	.6119139	1.04326
gp_acc	-.1875412	.0437249	.2816108	1.243228
mst_id	.2209728	.0312267	1.082907	1.012468
gp_nc	.090443	-.0341242	.9853498	1.004139
gp_not1st	-.120705	.0230953	.919777	1.014818
ad_guilt	-.1285713	-.0585311	.7233068	.8604209
gp_d_psyiat	-.2935741	.0431239	.5198034	1.082946
p_evi	-.4311969	.0322961	.788293	1.010923
ev_weapon	-.2387828	.0324226	.77784	1.029135
witness1	.1271426	.0899444	.9227157	.9400353
co_def	-.1841664	-.056061	.6355688	.8747571
IQ71_90	.2266054	-.0061026	1.192054	.9946718
FD_black	.36089	.0650296	.7207736	.9478062
FD_hispanic	-.1532215	-.0237735	.5684149	.9213486
anywhite_v_dum	-.3749028	.0386403	.698077	1.027572

Covariate balance summary

Public Defender

	Raw	Weighted
Number of obs =	880	880.0
Treated obs =	285	444.9
Control obs =	595	435.1

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
p_v_witness	.0175085	.0931621	1.097228	1.54404
p_felony	-.0202334	.0297456	.9630303	1.057377
p_d_risk	-.1179013	.0333596	.7907457	1.064696
p_torture	-.0125028	.0600074	.9535533	1.242679
p_death	.0583479	-.0227338	1.29047	.8964745
p_murder	.0082575	.0379911	1.024647	1.108302
p_drug	-.0090899	.1133335	.9306072	2.09102
p_v_drug	-.0831804	-.038065	.5885996	.7874684
p_v_12	.1209312	.001185	1.898228	1.006971
p_agg	.029021	.0667433	1.133075	1.208264
d_noconvict	.0106743	.0755693	1.042995	1.304023
d_disturbed	.1889245	.013442	2.382193	1.070996
d_impaired	.0175026	.1434957	1.087327	1.762747
d_age	-.0615739	.086458	.8147898	1.296289
sum_other_mit	.1137558	.0035311	1.952843	1.113127
MultiVictims	.0083434	.0175178	1.018435	1.035339
sex_convict	.0072051	-.0394085	1.044507	.7819905
rob_convict0	.0947343	-.0113226	1.205681	.9777822
burg_convict0	-.0324911	.1330973	.8879197	1.503593
psych0	-.0162374	.0096298	.9820475	1.011668
v1family	.2272828	.0033886	1.945036	1.010864
v1hadkids	.1414098	.046522	1.148064	1.047251
v1knife	.2004574	-.0008666	1.568241	.9978754
v1barehands	.0994698	-.0222809	1.352873	.9309966
v_1h_resis	.0882284	.0160101	1.111088	1.019579
v_1h_brutal	.0370761	-.0133692	1.081679	.9721355
v_1h_hide	.1339969	.0221491	1.309721	1.046763
v_1h_execution	-.2322289	-.0361718	.7797687	.964493
v_1h_ambush	-.2269672	-.0168628	.6702962	.9730401
age_mean	.2830078	-.0022302	1.356996	1.050811
gp_acc	.0555922	-.0032719	1.339389	.9827109
mst_id	-.5289178	.0029138	.7076855	1.001187
gp_nc	-.5045124	.0117807	.9901436	.9978168
gp_not1st	.0746633	-.0013266	1.049896	.9990706
ad_guilt	.2117266	-.0124971	1.618222	.970329
gp_d_psyiat	.0982074	-.0136653	1.20209	.9736645
p_evi	.1938514	.0305944	1.062138	1.011057
ev_weapon	.2570306	.022558	1.241884	1.021069
witness1	-.2365944	.0184205	1.129726	.9888095
co_def	-.0148565	.0316486	.968651	1.070019
IQ71_90	-.0242847	-.0178335	.9808308	.9839243
FD_black	-.1797542	-.0639036	1.12882	1.040974
FD_hispanic	.1724032	.0579971	1.747946	1.196748
anywhite_v_dum	.1067966	.0698364	1.08293	1.047525