The Interaction between Victim Race and Gender on Capital Sentencing Outcomes: An Exploration of Previous Research

by

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ABSTRACT

This study is an exploration and extension of previous research on the interactive effects of victim-race and victim-gender on death sentence outcomes. Williams and Holcomb’s (2004) study suggests that an interactive effect exists between victim-race and victim-gender on Ohio death sentencing outcomes, such that killers of White women are especially singled out for capital punishment. The current study analyzes a sample of death eligible cases at the trial level in North Carolina to determine if Williams & Holcomb’s findings hold up for a different sample of cases and in a different state. Logistic regression is used to determine if there are direct and/or interactive effects of victim’s race and victim’s gender on capital sentencing outcomes, controlling for the variety of other factors that influence that decision. Results suggest that the interactive effects reported by Williams and Holcomb do not exist in North Carolina at the sentencing/penalty processing phase of capital trials.
Chapter One

Literature Review

Legal Research on Capital Punishment Sentencing

The arbitrariness of the death penalty was the central issue in Furman v. Georgia (1972), where the Supreme Court decided in a 5-4 vote that “the imposition of the death penalty in these cases [one involving murder, and the other involving rape] constitutes cruel and unusual punishment in violation of the Eighth and Fourteenth Amendments” (239-240). The majority of justices believed that unguided discretion in the imposition of death sentences increased the potential for sentences to be administered in an arbitrary and discriminatory manner. Arbitrariness occurs in capital punishment cases when legally relevant factors do not distinguish between those defendants that are sentenced to death and those defendants that are sentenced to life. If extra-legal factors occur randomly from case to case then they are termed as capricious, but if extra-legal factors are consistent from one case to another they are termed as discrimination.

Furman was a landmark decision in the history of capital punishment that forced the revisions of death penalty laws in state statutes, closed the execution chambers, and completely changed the constitutional parameters of capital punishment. States responded to Furman by trying to enact new capital punishment statutes that would ensure that the death penalty would not be administered in the arbitrary and discriminatory manner that the Court found objectionable. In 1976, the Supreme Court approved three states’ death penalty statutes (Gregg v. Georgia; Jurek v. Texas; Proffitt v. 1
That same day, the Supreme Court disapproved of two states’ death penalty statutes that called for a mandatory death sentence for certain offenses, ruling that a mandatory sentence of death was unconstitutional (*Woodson v. North Carolina; Roberts v. Louisiana*). This ushered in what has become known as the post-*Gregg* era.

Essentially, the new standards imposed in *Gregg* required that the jury must consider both aggravating and mitigating circumstances before they make a death penalty decision. Guided discretion required one condition to be met before the defendant could be sentenced to death, namely that the case be characterized by at least one statutory aggravating circumstance. If one is found to be present, it is in the hands of the jury or judge (depending on the state) to make the life or death decision after weighing mitigating and aggravating circumstances against each other.

The new capital punishment systems established procedural reforms as well. After *Gregg*, capital punishment cases were tried in a bifurcated trial procedure consisting of a guilt phase and a sentencing phase. The first trial determines the guilt or innocence of the defendant. If the defendant is guilty of capital murder, the second trial determines the life or death sentence of the defendant. The new statutes also provide automatic appellate review of all death sentences.

The *Gregg* decision also enacted a proportionality review of any case in which the defendant received a death sentence. For the sentence to be upheld, the severity of the punishment must be proportional to the seriousness of the crime. The sentence must be a function of legally relevant characteristics of the offender and the crime and should not have any relation to extra-legal characteristics of the offender and the crime. Although the Court stated that discretion must be channeled to avoid arbitrary and capricious
sentencing outcomes, a large body of research suggests that extra-legal factors may still be an important aspect of criminal justice system decisions regarding capital punishment (Baldus, Pulaski, & Woodworth, 1983; Baldus, Woodworth, & Pulaski, 1985, 1990; Bowers & Pierce, 1980; Gross & Mauro, 1984; Pierce & Radelet, 2002; Radelet & Pierce, 1991).

Discrimination can take many forms. In terms of a capital trial, discrimination can be in reference to the characteristics of the defendant or as will be discussed in the following section, the characteristics of the victim (Bowers & Pierce, 1980). The research mentioned above suggests that some aspects of such characteristics can serve as predictors of death sentencing.

*Victim-Race and Victim-Gender Sentencing Research – Post-Furman Period*

Post-*Gregg* research regarding capital sentencing indicates that racial and gender discrimination continue to exist in capital sentencing. While, much research has focused on the defendant’s characteristics as salient extra-legal factors in capital sentencing (Crawford, 2000; Daly, 1989; Daly & Bordt, 1995; Spohn & Holleran, 2000; Steffensmeier, Kramer, & Streifel, 1993; Steffensmeier, Ulmer, & Kramer, 1998), race of the victim is among the most persistent effects found in sentencing research. A summary of the race-of-victim literature is found in a United States General Accounting Office (GAO) report that contains a systematic review of empirical studies conducted of capital punishment in the 1970’s and 1980’s. The report concluded that in 82% of the studies, the victim’s race influenced the likelihood of being charged with a capital murder or being sentenced to death (GAO, 1990). Specifically, it was found that defendants who murdered Whites were more likely to be sentenced to death than those who murdered
Blacks. The race-of-victim effect was found at all stages of the criminal justice system (GAO, 1990).

The largest, and perhaps best known, of the studies reviewed by the GAO was Baldus, Woodworth, and Pulaski’s (1990) extensive analysis of capital sentencing in Georgia for the years 1973 - 1980. They found that, while controlling for hundreds of relevant factors, the odds of a death sentence for a defendant who killed a White victim were 4.3 times higher than for a defendant who killed a Black victim.

Subsequent work after the GAO report is consistent with the findings of the GAO report. Both race-of-defendant and race-of-victim effects have been found in some regards (Baldus et. al., 1998; Connecticut v. Cobb, 1995; U.S. Department of Justice, 2000), while other works report a race-of-victim effect alone (Bortner & Hall, 2002; Brock, Cohen, & Sorensen, 2000; Klein & Rolph, 1991; McCord, 2002; Paternoster & Brame, 2003; Pierce & Radelet, 2002; Radelet & Pierce, 1991; Unah & Boger, 2001; Ziemba-Davis & Myers, 2002). As an example of this latter research, Ziemba-Davis and Myers (2002) found that the odds of being charged with the death sentence were 3.7 times more likely when the victim was White compared to when the victim was Black for Indiana first degree-murder convictions between 1993 and 2001. Also, in an analysis of Illinois first-degree murder convictions between 1988 and 1997, Pierce and Radelet (2002) found that the odds of receiving a death sentence were 60% lower if the victim was Black, controlling relevant variables.

Post-Gregg research also suggests that gender-of-victim disparities can be found in sentencing outcomes as well (Baldus et al., 1983, 1985, 1990; Baumer, Messner, & Felson, 2000; Farrell & Swigert, 1986; Gross & Mauro, 1984; Myers, 1979; Smith, 1987;
Williams & Holcomb, 2001), with cases involving female victims being treated more severely than cases with male victims. As an example of this research, Gross & Mauro (1984) examined death sentencing in eight states: Arkansas, Florida, Georgia, Illinois, Mississippi, North Carolina, Oklahoma, and Virginia, and found that “killing a woman more than doubled the probability of a death sentence in each state” (Gross & Mauro, 1984, p. 62).

Interaction Effects of the Victim’s Race and Gender on Sentencing Outcomes

Some researchers have looked at interactive effects of race and gender of the defendant on sentencing. Steffensmeier, Ulmer, & Kramer (1998) studied sentencing patterns in Pennsylvania from 1989-1992. In addition to race and gender of the defendant, Steffensmeier et al. also looked at age of the defendant and found that young Black males are sentenced more severely than any other age-race-gender combination. Spohn, Gruhl, & Welch (1987) examined the prosecutor’s decision to reject or dismiss an offender’s charges in Los Angeles, California. Their results suggested, “Hispanic males are most likely to be prosecuted fully, followed by Black males, Anglo males, and females of all ethnic groups” (p. 175).

Limited research exists looking at the interaction between race of the victim and gender of the victim on sentencing (Williams & Holcomb, 2004). Most research focuses on race and gender effects independently of each other and fail to test for a possible interaction between victim-race and victim-gender (hereafter referred to as victim race*gender) even when victim-race and victim-gender are significantly associated with sentencing outcomes (Baldus et al., 1990). The existence of interactive effects between race-of-victim and gender-of-victim would prompt us to modify the way we think about
capital sentencing disparities. Interactive effects go against conventional ideas. Race-of-victim has been thought to be a very influential factor in sentencing disparities. If interactive effects between race-of-victim and gender-of-victim explain sentencing outcomes, then this may narrow arbitrariness down to just offenders with White female victims being treated differently.

This study is an exploration of the interactive effects of the victim’s race and the victim’s gender on capital sentencing outcomes. Williams and Holcomb’s (2004) study is significant in the fact that they find that interactive effects of victim’s gender and race influence a sample of non-capital and capital cases, something that has not been studied as a main interest before in sentencing. But their study has a few flaws, such as the inclusion of non-capital cases and the exclusions of legal factors in the analysis, which the current study will address. Williams & Holcomb’s study will be the template for the current study. The main focus of this study is to test whether Williams & Holcomb’s results can be generalized to a set of North Carolina capital punishment eligible cases while controlling for legally relevant variables.

Williams and Holcomb (2004) attempted to address the problem by examining the relationship between victim race*gender and death sentences in Ohio from 1981-1994. Homicide data from the Supplementary Homicide Reports (SHR) and death sentencing data gathered from the Office of the Ohio Public Defender, the Office of the Ohio Attorney General, and the Ohio Department of Rehabilitation and Corrections were used for their analyses. The SHR data contained information about murder, negligent manslaughter, and non-negligent manslaughter. Cases of negligent manslaughter were omitted from the analysis. SHR data distinguish between murder and non-negligent
manslaughter; therefore non-negligent manslaughter cases (not death eligible) had to be included in the analysis. Death sentencing data contained information of homicides that resulted in a death sentence. The two datasets were merged into one, with each death penalty case matched with a homicide case including identical information, to form a dataset on death sentencing in Ohio.

Williams and Holcomb (2004) found that race and gender alone were significant predictors of a death sentence, with female victim homicides and White victim homicides more likely to receive a death sentence. In addition, they found that White female victims were disproportionately represented when it came to the imposition of a death sentence. To test this interaction, logistic regression was used. Williams and Holcomb’s results suggest that homicides with victim race*gender combinations other than “White female” were significantly less likely to result in a death sentence than homicides with White female victims. Specifically, homicides with Black female victims, Black male victims, and White male victims were less likely to result in a death sentence than homicides with White female victims. The effect of Williams and Holcomb’s findings suggests a narrower base of arbitrariness than race alone. Sentencing disparities are no longer explained by race, but must include the interaction between race-of-victim and gender-of-victim.

A limitation of the Williams and Holcomb (2004) study is the use of SHR data. SHR data are missing many key variables, particularly legal factors, including prior criminal behavior, type of attorney, whether the homicide involved rape, number of aggravating circumstances accepted, and number of mitigating circumstances accepted. Williams and Holcomb controlled for victim gender, victim race, offender gender,
offender race, if gun was used, stranger homicide, homicide involving another felony, multiple homicide, urban area, victim age (12 years or younger), offender age (under 25), and race*gender of the victim. Their data did not allow for the inclusion of legal factors in their analysis, despite the fact that many have been shown to be important in sentencing outcomes. For this reason, all variables listed above as well as type of attorney, prior criminal behavior, whether the murder involved rape, total number of aggravating circumstances accepted, and total number of mitigating circumstances accepted will be included in this analysis.

Another limitation of the Williams and Holcomb’s (2004) study is the choice of sample. Their sample included non-capital and capital homicide cases. Including non-capital homicide cases is inappropriate when analyzing death sentencing outcomes, because non-capital cases are not able to receive a death sentence.

Current Study

The current study is a further exploration of Williams & Holcomb’s (2004) results. It is intended to extend their research by determining whether their results can be corroborated. For the current study, North Carolina capital cases will be examined to see if Williams & Holcomb’s findings of race*gender interactive effects hold for a different sample of cases, particularly capital cases, and a different state. Logistic regression is used to determine if there is an interaction between the victim’s race and the victim’s gender that predicts capital sentencing outcomes. All variables that were used in Williams & Holcomb’s study are replicated, but supplemented with the legal variables described above. It is hypothesized that interactive effects of victim’s race and victim’s gender will hold true for the North Carolina capital sentencing system. To expand on this,
it is hypothesized that offenders with White female victims will be treated more harshly in capital sentencing than any other race*gender combination.
Chapter Two

Methodology

Data

The analysis is based on information from reviews of capital murder trials in North Carolina. These cases were determined from LexisNexis searches of North Carolina Supreme Court and Court of Appeals cases. In these trials, the offenders were convicted of, or pled guilty to, first degree murder, the state sought the death penalty, the trial progressed to a sentencing phase whereby the jury heard evidence concerning aggravating and mitigating factors, and the jury issued a binding recommendation for a sentence. In making a sentencing recommendation, North Carolina capital juries have only two options, a death sentence or a sentence of life in prison, currently one without the possibility of parole except by executive clemency. Included in the analyses are cases where the sentencing phase was conducted, but the jury declared that they could not reach the required unanimous decision regarding a sentence (in essence, a “hung jury”), resulting in the default sentence of life in prison.

Reviews of capital trials were derived from public records materials that accompany decisions regarding appeals of capital murder convictions rendered by the North Carolina Supreme Court and the North Carolina Court of Appeals. These materials include defendant and state briefs, as well as a form completed by the jury that records its responses to aggravating and mitigating factors and concludes with a sentencing recommendation. Historically, these materials have been published in hard-copy form
and placed in two university law libraries in North Carolina, while other locations have microfilm copies. Beginning with decisions returned from cases tried in 1999, hard copies have not been made available, but materials are accessible via an electronic data file (http://www.ncappellatecourts.org).

There are 818 cases in the dataset from trials held during the period 1979-2000. 1979 is selected as the initial year for review because it is the first year following the Gregg decision that death sentences tended to be sustained upon appeal in North Carolina. The year 2000 represents the latest year for which Supreme or Appeals Court decisions have been issued for the substantial majority of appeals filed. Of these cases 732 are original trials while 86 are retrials following a vacating of either the defendant’s conviction and/or death sentence.

Because there is no centralized source of information regarding capital murder trials in North Carolina, it is impossible to determine the precise number of all capital murder trials conducted during the period covered in the data. However, appeals of death sentences are automatically referred to the North Carolina Supreme Court. Also, a large proportion of defendants receiving a life sentence appeal their first-degree murder convictions to the Court of Appeals. If the Court of Appeals decision is not in their favor, defendants may appeal to the Supreme Court, but that court has the option of declining to hear the case. Given that the substantial majority of capital cases are appealed to at least one of these courts, we estimate that the available data contain reviews of 80-90% of all sentencing recommendations made by juries during this period.\footnote{There are two instances where defendants are unlikely to appeal, and are therefore not included in the dataset. First, if they pled guilty and received a life sentence, there is little basis for appeal. Second, some defendants’ convictions are upheld but their death sentences vacated. If, upon retrial of the penalty phase, they receive a life sentence, there is no basis for appeal. Both of these situations result in cases that are difficult to discover, especially if the trials were held in smaller rural counties without a major news outlet. A much smaller basis for some trials not included in the dataset involved those that were actually identified, but their case materials were not available because hard copies were missing from both libraries or not yet posted in electric form.}

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Of the 818 cases reviewed, 640 had complete information necessary for the analyses. Several sources of missing data have been identified. They include:

- Cases that did not have a full set of materials necessary for review. In particular, a number of appeals in cases where the individual received a life sentence did not include the jury recommendation form (termed “Issues and Recommendation”) among the case materials. Therefore, it was impossible to determine the specific aggravating circumstances and mitigating factors submitted for jury consideration.

- Also excluded from the analysis are trials that involved two types of situations emerging from the jury deliberations. First, the jury did not find an aggravator factor. Second, the jury found an aggravating circumstance to exist, but judged that it did not merit the death penalty. In either scenario, the sentencing decision defaults to life, and the deliberations conclude prior to considering mitigating evidence.

- In the early post-

-Gregg years of capital trials in North Carolina, the juries of some counties submitted a set of mitigating circumstances and were asked if they accepted any of those listed. Thus, the acceptance or rejection of individual mitigating circumstances was not required, rendering these cases invalid for this analysis.

- Finally, some appeals were prepared in a manner that did not allow for coding of all variables used in the analysis. That is, descriptions of the crime were lacking in detail, or materials were excluded that were necessary to complete some codings.

Comparisons of missing cases with those remaining in the dataset revealed an overrepresentation of life sentence cases, suggesting that the reduced dataset overstates the proportion of death sentence cases in the full sample. Forty-five percent of the original dataset consisted of life sentences, compared to 38% of the reduced dataset.
Cases with a life sentence that were omitted from the dataset were compared to cases with a life sentence included in the dataset to see if the missing “lifers” were similar in their profile to the retained “lifers.” As shown in Table 1 analysis revealed that there are more urban homicides, cases represented by appointed attorneys, multiple victim homicides, non-stranger homicides, white victim homicides, and female victim homicides among the retained lifers compared to the missing lifers. This has the potential to bias the results.

[INSERT TABLE 1 HERE]

All of the above factors have been shown to influence sentencing decisions. Research has suggested that the decision to seek the death penalty is more likely for homicides tried in a rural area than an urban area (Bowers & Pierce, 1980; Paternoster, 1983). Research also has shown that cases represented by appointed attorneys are more likely to be treated more harshly than cases with a private attorney (Beck & Shumsky, 1997; Nagel, 1969), and offenders who commit multiple victim homicides are more likely to receive a death sentence (Radelet & Pierce, 1991; Williams & Holcomb, 2001) than offenders who kill a single victim. In addition, research has suggested that defendants with White victims (Pierce & Radelet, 2002; Ziembra-Davis & Myers, 2002) and with female victims (Gross & Mauro, 1984) are more likely to receive a death sentence than defendants with Black victims and male victims. Also, research has suggested that when the victim and offender have a closer relationship with each other it is less likely the state will pursue the death penalty and the death penalty will be given (Gross & Mauro, 1984).
Data Collection Instrument

A data collection instrument was developed that contained information about the offender (sex, race, age), the victim (sex, race, age, marital status), characteristics of the offense (number of victims, date of offense, victim/offender relationship, victim involvement in illegal activity, cause of death, number of accomplices, rape, torture, kidnapping, physical evidence, bloody murder, and urban/rural county), and legal aspects of the case (sentence, type of attorney, retrial, jury decision/guilty plea, conviction upheld, sentence upheld, confession, witnesses testify, number of females on jury, number of Blacks on jury, aggravating circumstances accepted, aggravating circumstances submitted, mitigating circumstances accepted, and mitigating circumstances submitted) (Appendix A). Variables in the instrument were selected to approximate the reduced model of the Baldus et al. (1990) study. For the current study, however, only a subset of variables will be included in the analysis.

[INSERT APPENDIX A HERE]

Defendant Information

Defendants’ age, race, and sex were available from the North Carolina Department of Corrections website (http://www.doc.state.nc.us/offenders).

Victim Information

Through 1996, victims’ age, race, and sex were taken from a commercially available CD-ROM, North Carolina Vital Records: Deaths 1968-1996 (Ancestry View, 2000). For 1997-2000, victims’ demographic information was determined from some combination of court material (such as reference to the victim in the state’s or defendant’s appeals briefs), newspaper accounts, or obituaries obtained through World Wide Web
search engines. Cases for which this information could not be obtained are not included in the dataset.

Variables

For this study variables were recoded to match Williams & Holcomb’s variables. Additional legal variables that could influence capital case outcomes were also included (Baldus et al., 1990). All variables analyzed are listed in Table 2.

[INSERT TABLE 2]

The variables used in this study consisted of one dependent variable and multiple independent variables. The dependent variable is whether a death sentence was imposed in the penalty phase of the trial. This is a binary variable (0 = no; 1 = yes). Many of the independent variables were collapsed into dichotomous variables for the purpose of this study. All independent variables are listed in Table 2. Williams and Holcomb (2004) controlled for the following variables in their analysis, victim gender, victim race, offender gender, offender race, if a gun was used, stranger homicide, homicide involving another felony, multiple homicide, urban area\(^2\), victim age (12 years or younger), offender age (under 25), White male victim, Black female victim, and Black male victim.

Legal variables were included in the present analysis because they have been shown to influence sentencing outcomes. Type of attorney has been shown to be important in sentencing outcomes (Beck & Shumsky, 1997). Beck and Shumsky performed a reanalysis of the data of Baldus et al. (1990) and found that a death sentence is more likely when the defense counsel was appointed as opposed to retained, while controlling for the character of the victim and the circumstances of the crime. Prior

\(^2\) For the current study the urban/rural county information was available through the North Carolina Rural Economic Development Center’s website (http://www.ncruralcenter.org/databank/rural_county_map.asp). Rural or urban counties are defined based on population density from the 1990 Census of Population. Rural counties are defined as containing fewer than 200 persons per square mile.
criminal behavior has been shown to be an important factor in prosecution and sentencing
decisions (Baldus et al., 1990; Kleck, 1981; Paternoster & Kazyaka, 1988; Steffensmeier
et al., 1998). For instance, Paternoster and Kazyaka (1988) conducted a study in South
Carolina on death sentencing between the years 1977-1981 and found that a prosecutor
was more likely to seek the death penalty if the offender had a history of prior criminal
behavior. Whether rape is involved in a case has been shown to be very influential in
sentencing (Baldus et al., 1983; 1990; Wolfgang & Riedel, 1973; 1975). For instance,
Baldus (1983) found that when rape was involved in a homicide offenders were more
likely to receive a harsher sentence. Aggravating and mitigating circumstances have been
shown to be important factors in sentencing decisions as well (Baldus et al., 1983; 1985;
1990; Baldus et al., 2002; Paternoster & Kazyaka, 1988). Baldus et al. (1983) found the
likelihood that an offender would receive a death sentence increased if one or more
statutory aggravating factors were present. Paternoster and Kazyaka (1988) found that a
prosecutor was more likely to seek the death penalty when no mitigating circumstances
were present.

Procedure

This study examines whether interactive effects of the victim’s race and the
victim’s gender serve as predictors of death sentencing outcomes in capital cases in North
Carolina, while controlling for numerous variables of potential importance. Because the
dependent variable, whether a death sentence was imposed, is a binary or dichotomous
variable (1= yes; 0 = no), logistic regression is used for the analysis. OLS regression is
inappropriate to use when the dependent variable is a dichotomous level variable. OLS
regression uses a linear function form to predict the Y values based on an equation that
takes into account the values of the Y-intercept \( (b_0) \) and the independent variables \( (b_1X_1) \). The predicted values are not limited as to what values they can take. For a dichotomous dependent variable, the predicted value of \( Y \) should be not greater than 1 and not less than 0, thus using OLS regression would create a problem. A model that uses a sigmoid function form to constrain the predictions to values between 0 and 1 would only be appropriate (Weisburd & Britt, 2003).

In contrast, logistic regression is based on the transformation of the regression model. The transformation allows the outcomes of the regression model to vary without limit, while at the same time constraining the predicted values of the dependent variable between 0 and 1. Also, logistic regression does not rely on the assumptions of the population distribution. To fit the data, logistic regression uses a sigmoid function form instead of a linear function form, as was used for OLS regression. To obtain the outcomes between 0 and 1 the regression equation must be altered from the original OLS equation \( (Y = b_0 + b_1X_1) \) to \( \ln\{P(Y=1)/[1-P(Y=1)]\} = \alpha + \beta X \), or equivalently, \( \{P(Y=1)/[1-P(Y=1)]\} = e^{\alpha+\beta X} \). For logistic regression the natural logarithm (ln) of the odds of getting a 1 on the dependent variable is predicted. A logarithm is the exponent of the power to which a fixed number (the base) must be raised to produce another number. For logistic regression the base is 2.71828 and is called the natural logarithm (ln). The odds are determined by dividing the probability of getting a 1 on the dependent variable by the probability of not getting a 1 on the dependent variable (Weisburd & Britt, 2003).

Logistic regression estimates the impact of the independent variables on the odds that a defendant would receive a sentence of death. The odds refer to the probability of an event occurring (death sentence) divided by the probability of an event not occurring (no
death sentence or a life sentence). The odds can take values between 0 and $\infty$. The odds ratio determines whether the probability of a certain event (ex. death sentence) is the same for 2 groups (ex. males and females). The odds ratio is the ratio of the odds of an event occurring for one group (ex. the odds of a death sentence occurring for males) divided by the odds of an event occurring for another group (ex. the odds of a death sentence occurring for females). An odds ratio of 1 indicates that an event is equally likely in both groups. When an odds ratio is greater than 1 it indicates that the odds of getting a 1 on the dependent variable increases when the independent variable increases. When an odds ratio is between 0 and 1 it indicates that the odds of getting a 1 on the dependent variable decreases when the independent variable increases (Menard, 1995).

For example, for total number of aggravating circumstances accepted, the coefficient ($b$) is .882, the p is .000, and the odds ratio is 2.416. Since this variable is statistically significant, it is interpreted as each additional aggravating circumstance accepted increases the odds of a death sentence by 242% or the odds of a death sentence is 2.416 times more likely with each increase of one accepted aggravating circumstance. As another example, for the total number of mitigating circumstances accepted, the coefficient ($b$) is -.076, the p is .000, and the odds ratio is .926. Since this variable is statistically significant, it is interpreted as each additional mitigating circumstance accepted decreases the odds of a death sentence by $1 - .926$, which equals 7.4%.

In logistic regression, the Hosmer and Lemeshow’s Goodness of Fit Test reports the $X^2$ statistic that determines if the model fits the data well; it is roughly equivalent to the F statistic in OLS regression. If the statistic (p-value) is not significant the model appears to fit the data reasonably well, because it suggests that there is no difference
between observed and predicted values. The Cox and Snell’s $R^2$ and Nagelkerke’s $R^2$ (adjusted $R^2$) are roughly equivalent in interpretation to the $R^2$ in OLS regression. The Nagelkerke’s $R^2$ is an improvement over the Cox and Snell’s $R^2$, because it can attain a value of 1 when the model predicts all the outcomes perfectly whereas the Cox and Snell’s $R^2$ may not achieve a value of 1 even when the model predicts the data perfectly. The interpretation is that the model explains 30% of the variation in the data (Nagelkerke’s $R^2 = .300$) (Menard, 1995; Weisburd & Britt, 2003).
Chapter Three

Results

Descriptive Statistics

Table 3 reports the distribution of death sentences across categories of both victim and offender race and gender. While the majority of defendants who kill either males or females receive the death penalty (58.1% and 67.5% respectively), defendants with female victims are significantly more likely to receive the death penalty compared to defendants with male victims. The majority of White and Black victim cases also receive the death penalty (63.0% and 61.0% respectively). This suggests a slight difference in White and Black victim cases, although it is not statistically significant. Likewise, the majority of cases with White female victims, White male victims, Black female victims, and Black male victims receive the death sentence (67.7%, 59.5%, 67.0%, and 54.0% respectively). These distributions suggest that killers of females are treated significantly more harshly than killers of males. It is also suggested, although not statistically significant, that among killers of males, those who kill Whites are treated more harshly than those who kill Blacks. This suggests inconsistent support for Williams and Holcomb’s (2004) thesis – it is not the killers of White females who are singled out for capital punishment but simply killers of women.

The majority of cases with female offenders are sentenced to life (56.5%), compared to male offenders where the majority is sentenced to death (63.1%). This
suggests a difference in White and Black victim cases, although it is not significant. Conversely, cases with White offenders and Black offenders are nearly equally likely to be sentenced to death (63.8% and 60.8% respectively).

[INSERT TABLES 3 HERE]

Logistic Regression

Table 4 reports the logistic regression results for direct effects of victim and offender race and gender on the likelihood of a death sentence. Direct effects of victim-race and victim-gender are tested first to see if Williams and Holcomb’s (2004) claims of a White-female effect are likely for the current study. Williams and Holcomb did find direct effects for victim-race and victim-gender, such that cases with White victims were more likely to receive a death sentence than cases with Black victims and cases with female victims were more likely to receive a death sentence than cases with male victims. The Nagelkerke R² (Corrected R²) for the model is .097; however, direct effects of the victim’s race and gender do not attain statistical significance (b=.025, p=.914, and b=.291, p=.115, respectively).

[INSERT TABLE 4 HERE]

Many of the other variables included in this model are significantly related to death sentencing. The model shows that the odds of an offender receiving a death sentence is 2.856 times more likely when the offender is male. The odds of a death sentence is 38.4% lower for offenders under the age of 25. The odds of an offender receiving a death sentence is 2.143 times more likely when the homicide involves another felony. The odds of a death sentence is 77.0% higher when the homicide involves multiple victims. The odds of a death sentence is 34.0% lower for homicides that were
tried in an urban area. These findings are consistent with previous research. Williams and Holcomb (2004) found the same results for each variable with the exception of whether the case was tried in an urban area. Although, they did not find an urban/rural effect other research has suggested that homicides that take place in urban areas are less likely to result in a death sentence (Bowers & Pierce, 1980; Paternoster, 1983).

Despite the lack of direct effects of victim race and gender on capital sentencing outcomes, it is worthwhile to test for Williams and Holcomb’s (2004) claim of a gender-specific, race of victim effect. Thus, Table 5 reports the logistic regression results for the base model presented in Table 4 plus victim race*gender interaction variables. To test for interactive effects, dummy variables were created using different victim race*gender combinations (Black female, Black male, White male). White female victim was used as the reference category. The Nagelkerke R² (Corrected R²) is only .095, indicating no improvement to the base model provided by the inclusion of these dummy variables. In addition, the results indicate that victim race and gender interactive effects are not statistically significant for this sample of cases. That is, the odds of receiving a death sentence for killers of White females are not significantly different than are the odds for killers of Black females, White males, or Black males.

Similar to the base model in Table 4, the same control variables are significant in the same direction and with almost identical effects. The model shows that the odds of an offender receiving a death sentence is 2.912 times more likely when the offender is male. The odds of a death sentence is 38.4% lower for offenders under the age of 25. The odds of an offender receiving a death sentence is 2.143 times more likely when the
homicide involves another felony. The odds of a death sentence is 76.4% higher when the homicide involves multiple victims. The odds of a death sentence is 33.3% lower for homicides that were tried in an urban area.

Finally, Table 6 reports the logistic regression results for the full model plus the inclusion of several legal variables -- previous criminal behavior, whether the homicide involved rape, whether an appointed attorney defended the case, total number of aggravating circumstances accepted, and total number of mitigating circumstances accepted. This model allows us to test for possible suppression effects and to see if the Williams and Holcomb’s (2004) hypothesis holds at a more stringent level of analysis. The Nagelkerke R² (Corrected R²) for this revised model improved dramatically to .284. However, the Williams and Holcomb (2004) hypothesis of victim race*gender interaction effect is not supported. The results show that the victim race*gender interactive effects once again fail to attain statistical significance. This suggests that Williams and Holcomb’s (2004) results are not generalizable to a different sample of cases, particularity capital cases, and to a different state.

[INSERT TABLE 6 HERE]

Many other control variables are significantly influential on death sentencing. The odds of an offender receiving a death sentence is 94.1% higher for White offenders opposed to Black offenders. The odds of a death sentence is 36.0% lower for offenders under the age of 25. The odds of an offender receiving a death sentence is 2.475 times more likely for cases with an appointed attorney. The odds of an offender receiving the death sentence is 2.526 times more likely with each increase of one accepted aggravating
circumstance. A one-unit increase in the number of accepted mitigating circumstances decreases the odds of an offender receiving a death sentence by 7.3%.
Chapter Four

Discussion and Conclusion

Discussion

The purpose of this study is to examine whether or not Williams and Holcomb’s (2004) findings of a female-specific race of victim effect on death sentencing can be corroborated in a different state and for a different sample of cases, specifically capital homicide cases. Williams and Holcomb’s study found interactive effects to exist between the victim’s race and the victim’s gender on Ohio death sentencing outcomes, such that offenders who kill White females are more likely to receive the death penalty compared to any other victim race*gender combination. Williams and Holcomb used SHR data for their analysis and included capital (death eligible) and non-capital cases (non-death eligible) cases. The current study restricts the analysis to death eligible cases from North Carolina.

The initial baseline or direct effects model suggested no direct effects for either the victim’s race or gender. Inclusion of race*gender interaction variables in the analysis produced similar results; that is, race*gender interactive effects were not statistically significant. In the final model, legal variables were included to see if there were possible suppression effects. Again, the existence of race*gender interactive effects was not supported. Although the main hypothesis was not supported, there are several other important findings.
The logistic regression results for the full model plus legal variables showed that the odds of an offender receiving a death sentence are higher for White offenders, older offenders, cases that are represented by an appointed attorney, cases that have more accepted aggravating circumstances, and cases that have less accepted mitigating circumstances. All findings except the race-of-offender effect is consistent with previous research. Research has suggested that older offenders are more likely to receive a death sentence (Williams & Holcomb, 2001). Research has also shown that cases with appointed attorneys are treated harsher than cases with private attorneys (Beck & Shumsky, 1997; Nagel, 1969). In addition, it has been found that one or more aggravating factors significantly influences who is charged with death (Baldus et al., 1983) and prosecutors are more likely to seek the death penalty when no mitigating circumstances are present (Paternoster and Kazyaka, 1988).

There have been inconsistent findings on race-of-offender on sentencing. The General Accounting Office (GAO, 1990) synthesis of empirical studies report ambiguous results. More than half of the studies found race-of-offender effects and in three-fourths of these, Blacks offenders were more likely to receive a death sentence than White offenders. Studies after the GAO report show mixed results as well. Some studies report no race-of-offender effects (Baime, 2001; Baldus et al., 2002; Radelet & Pierce, 1991; Pierce & Radelet, 2002; Ziemba-Davis & Myers, 2002; Unah & Boger, 2001), and some report race-of-offender effects (Baldus et al., 1998; U.S. Department of Justice, 2000; Connecticut v. Cobb, 1995), with the majority of the race-of-offender effects favoring White offenders, meaning that Blacks were more likely to receive a death sentence.
Analysis reveals that offender-race is not significantly related to death sentencing until the legal variables are entered into the model, which suggests a possible suppression effect between offender-race and the legal variables. Further evaluation reveals that the true strength of the association between offender-race and death sentencing may have been suppressed by not controlling for total number of aggravating circumstances accepted in the first two models. When the total number of aggravating circumstances accepted is entered into the model offender-race becomes significantly related to death sentencing. Total number of aggravating circumstances accepted is significantly related to death sentencing in a positive direction ($r = .326$) and significantly related to offender race in a negative direction ($r = -.142$), causing a possible suppression effect for offender-race.

The findings suggest that neither White female victims, nor any other victim race*gender combination, are treated differently in capital sentencing in North Carolina. From these results it appears that there are race-of-offender disparities in the North Carolina capital sentencing system.

**Limitations**

One limitation of this study is that important variables might have not have been included in the analyses. Offender race*gender interaction variables have shown to be important factors influencing sentencing outcomes (Spohn, Gruhl, & Welsh, 1987). Also, the inclusion of individual aggravating circumstances and individual mitigating circumstances has shown to be very influential in sentencing (Baldus et al., 1990; Unah & Boger, 2001). In addition, information relevant to prior phases of the capital case processing was not available and has shown to be important (Paternoster, 1983;
Another limitation, which was stated earlier, is the omission of cases with missing data. Table 2 suggests a possible bias in the data. A majority of the cases omitted from the dataset were cases where the offender received a life sentence. When cases of lifers in the dataset were compared to cases of lifers omitted from the dataset, the analysis showed that there are more urban homicides, appointed attorneys, non-stranger homicides, multiple victim homicides, white victim homicides, and slightly more female victims in the retained lifers, compared to the missing lifers. A comparison of the proportions of victim race*gender combinations suggests that if missing data was collected and the missing lifers were included in the dataset there would be slightly more death sentences for offenders with white female victims and black female victims and slightly less death sentences for offenders with black male victims and white male victims. This slightly favors Williams and Holcomb’s (2004) results, but the bias is minimal.

*Future Research*

More research needs to be done on interactive effects of victim race and gender on capital sentencing outcomes to determine whether Williams and Holcomb’s (2004) findings can be replicated in other capital jurisdictions. Contrary to Williams and Holcomb’s findings, the current study suggests that interactive effects of the victim’s race and gender are not influencing the sentencing phase of capital first-degree capital murder trials. This does not mean that this form of discrimination does not exist, it just may not exist in the sentencing phase in North Carolina. For instance, information on prosecutorial discretion was not available for this study and has been shown to be important (Paternoster, 1983). Paternoster (1983) examined the decision of the prosecutor
in South Carolina to request the death sentence for a case and found that the decision to seek the death penalty was significantly related to the race of the victim. This finding suggests that discrimination may take place at an earlier stage of the criminal justice system and may not show up at the sentencing phase. More research needs to be done to determine if this is the case for North Carolina.
References


*Proffitt v. Florida, 428 US 242 (1976).*


*Roberts v. Louisiana, 428 U.S. 325 (1976).*


Williams, M., & Holcomb, J. (Forthcoming, 2004). The interactive effects of victim race and gender on death sentence disparity findings. *Homicide Studies, 8* (May).


Appendix
Appendix A: North Carolina Capital Sentencing Project Coding Sheet

County*: _______________________ Case #: ________________
NCSC Ref#: ________________
(*Write a note above if this is a change of venue from the county where the charges were filed)

Defendant (D) Information [If more than one D shown in the title of the NCSC decision, complete a separate sheet for each]

D Name [Last name, First, Middle]: _____________________________________________________

D Sex: 0 = male  1 = female
D Race: 1 = white  2 = black  3 = other (specify): ______________________
D Age  (date of birth if available; ex. = 05/22/75): ____________________
Was D in the military at time of the offense? 0 = no  1 = yes
Judgement Date: _____________________

Victim (V) Information

Defendants sometimes are tried for the murder of more than one person. Be careful: juries have to return separate verdicts for each victim; thus, they may reach different verdicts for separate killings (e.g., they might find one murder as first degree, the other as second degree; or, they may recommend sentences of death for one, life for the other). Thus, a new form must be filled out for each case where the death penalty for the murder of a victim (e.g., two victims, the death penalty sought for each = two forms).

V Name: [Last name, First, Middle]: _____________________________________________________

V Sex: 0 = male  1 = female
V Race: 1 = white  2 = black  3 = other (specify): _______________
V Age: ________________
V=s Marital status: 1 = never married 2 = divorced 3 = widowed 4 = married

Total number of victims who were murdered: _____

In some cases, multiple victimization occurred, but the death penalty was not sought for the murder of all victims. Or, one victim was murdered and the death penalty requested; in the same incident, other victims were injured but did not die. For any of these types of cases, record the information below. Put A0″ if there were no victims of these natures. REMEMBER: IF THE DEATH PENALTY IS SOUGHT FOR MULTIPLE VICTIMS, COMPLETE A SEPARATE FORM FOR EACH VICTIM (e.g., if a defendant was charged with killing two people, you would fill out two complete forms, tailoring the information to each victim).

Number of murdered victims for whom death penalty was sought: _____

Number of non-fatal victims (injured, but not murdered): _____

Characteristics of the Offense [Information should be specific to the victim listed above]

Date of offense (ex. = 12/25/90): ________________

Victim/Offender Relationship:
1 = family, including ex-spouses and in-laws; also, boyfriend/girlfriend, current or former (i.e., domestic situation)
If 1, specify relationship:_____________________________________________
2 = acquaintance/friend (includes roommate)
3 = casual acquaintance (D and V knew "of" one another)
4 = stranger (no prior relationship stated)

Was the victim mentioned as involved in an illegal activity of some sort (e.g., drug use, prostitution)?
0 = no 1 = yes

Cause of death:
1 = shot 2 = stabbed
3 = bludgeoned (blunt instrument) 4 = strangled/ asphyxiated
5 = other (describe)_________________________________________________

If shot, stabbed, or bludgeoned, were multiple wounds inflicted?
(If yes, how many? ________________)
0 = no 1 = yes 8 = death not by one of these means
If shot, type of firearm:
1 = handgun*  2 = rifle  3 = shotgun  4 = not specified
8 = victim not shot  (*What caliber?______________________)

Number of Accomplices: ______

Total number of Ds on trial: ______

(1)_________________________
(if multiple, list other Ds) -----> (2)_________________________

(3)_________________________

If there were accomplices, was defendant the accused "triggerman" (or one of the triggermen)?
1 = no  2 = yes  3 = uncertain; disputed at trial  8 = no accomplices

Did offense description mention rape, or sexual assault?
0 = no  1 = yes

Did offense description mention torture (physical or psychological)?
0 = no  1 = yes

Did offense description mention kidnaping?
0 = no  1 = yes

Was the offense described as a bloody murder or an unusually repulsive murder?
0 = no  1 = yes

Was there any physical evidence to link the defendant to the crime?
0 = no  1 = yes  (Physical evidence would include such items as blood samples, fingerprints, weapon, ballistics, hair samples, semen matches, etc.)

If yes, what?: ________________________________________________

Legal Aspects of Case

Sentence:  0 = life sentence  1 = death penalty

Type of attorney representing D:
0 = assigned, appointed, or public defender  1 = retained (hired by defendant)
Was this a retrial? 0 = no 1 = yes
(If yes, sentence date: ____________________)

Conviction resulted from: 0 = guilty plea 1 = jury decision

Was the defendant’s conviction upheld on appeal to the state supreme court?
  0 = no  1 = yes  7 = no appeal
  8 = unknown (including appeal not yet ruled on)

Was the defendant’s sentence upheld on appeal to the state supreme court?
  0 = no  1 = yes  7 = no appeal
  8 = unknown (including appeal not yet ruled on)

Did D confess to crime or engaging in the act that caused death, even if denied later or claimed to be coerced? This may be a formal confession, or D told someone else who testified to this at trial.
  0 = no  1 = yes  7 = D plead guilty; no guilt phase of trial  8 = unclear

Other than giving a statement or confessing, did D cooperate with authorities (e.g., helping to recover body, surrendering to police, voluntarily turning over evidence, testifying against other Ds)?
  0 = no  1 = yes

Was there testimony at trial from persons who actually witnessed the murder (include testimony of accomplices)?
  0 = no  1 = yes  8 = D plead guilty; no guilt phase of trial

Number of females on jury:______
(out of 12; do not count alternates unless they replaced a selected juror during trial; count should reflect those who issued the sentence decision; note where the information was obtained B court documents, Supreme Court decision, newspaper, interview, etc.):

Number of blacks on jury (out of 12, same procedure as for number of females): ______

Aggravating Circumstances Accepted by Jury

  1 = not submitted  2 = submitted but not accepted  3 = accepted
  9 = missing/not found

Murder was committed in the course of a robbery, rape, burglary, kidnapping, or other felony crime.

  1  2  3
{Circle the one (or ones) specified by the prosecution}

(Note: sometimes, this circumstance is submitted multiple times by using separate offenses as aggravators. In the count below (p. 4), treat each circumstance as a unique
submission. For example, *Aduring the comission of a rape* and, as a separate submission, *Aduring the course of a burglary* would count as 2 submissions. But one submission reading *Ain the course of a rape and kidnapping* would count as 1 aggravating circumstance.]

Murder was committed for pecuniary gain
1  2  3

Offense was especially heinous, atrocious or cruel
1  2  3

Murder was committed as course of conduct involving other crimes of violence against other person or persons
1  2  3

Defendant created a great risk of death to more than one person
1  2  3

Defendant previously convicted of a felony involving violence or threat of violence
1  2  3

Murder was committed by a person lawfully incarcerated (a prisoner)
1  2  3

Defendant had been previously convicted of another capital felony (i.e., murder)
1  2  3

Murder was committed to avoid arrest or to escape from custody
1  2  3

Murder was committed to disrupt or hinder lawful exercise of governmental function
1  2  3

Murder of a law enforcement officer or other criminal justice official in the course of their duties, including juror or witness in case involving defendant
1  2  3

Total number of aggravating circumstances submitted (total coded 2 and 3): __________

Total number of aggravating circumstances accepted (total coded 3): __________
**Mitigating Circumstances** (Statutory and other)

1 = not submitted  2 = submitted but not accepted  3 = accepted  
4 = acceptance of individual circumstance not required of jury  
5 = aggravator(s) not accepted  
8 = aggravating circumstances ruled by jury as not sufficient to justify death penalty

[all those listed immediately below are statutory mitigating circumstances]

- Defendant has no significant history of prior criminal activity
  
<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>8</th>
</tr>
</thead>
</table>

- Committed while defendant was under influence of mental or emotional disturbance
  
<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>8</th>
</tr>
</thead>
</table>

- Age of the defendant
  
<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>8</th>
</tr>
</thead>
</table>

- Capacity of the defendant to appreciate the criminality of his conduct or to conform to the requirements of law was impaired
  
<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>8</th>
</tr>
</thead>
</table>

- Defendant was an accomplice and participation was relatively minor
  
<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>8</th>
</tr>
</thead>
</table>

- Defendant acted under duress or influence of another person
  
<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>8</th>
</tr>
</thead>
</table>

- Defendant aided in the apprehension of another felon or testified truthfully on behalf of the prosecution in pursuing a felony case
  
<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>8</th>
</tr>
</thead>
</table>

- Victim was a voluntary participant or consented to the homicide
  
<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>8</th>
</tr>
</thead>
</table>

Total mitigating circumstances considered (both statutory and non-statutory): ________
Total mitigating circumstances accepted (both statutory and non-statutory): ________

[if 5s or 8s, code this entry as 77, meaning mitigators not considered; if 4s, code as 88; enter 99 if missing]

Was any aspect of D=s military service (past or present) submitted as a mitigating circumstance?

0 = no  
1 = yes

If yes to military service, did the jury accept it as a mitigating circumstance?

0 = no  
1 = yes  
8 = military service not entered as mitigating
Did jury hear any reference to alcohol/drug use by defendant in conjunction with the crime?

0 = no  1 = yes

Were any of these entered as mitigating circumstances?  (Missing = 9)

D suffered from alcohol abuse: 
1 2 3 4 5 8

D suffered from drug abuse: 
1 2 3 4 5 8

D was physically abused as child or teenager: 
1 2 3 4 5 8

D was sexually abused as child or teenager: 
1 2 3 4 5 8

D suffered from broken home: 
1 2 3 4 5 8

D suffered from father absence/ father abandonment: 
1 2 3 4 5 8

D suffered from mother absence/ mother abandonment: 
1 2 3 4 5 8

D placed in foster care: 
1 2 3 4 5 8

Parental misconduct witnessed by D (fighting, criminal activity, drug use, etc.): 
1 2 3 4 5 8

Low IQ: 
1 2 3 4 5 8

A specific mental illness/disorder (specify: ________________________________): 
1 2 3 4 5 8

This sheet coded by (date): ___________________________________________

Data verified by (date): _______________________________________________

Brief summary of case:
### Table 1

*Descriptive Statistics of Lifers not in Data Set and Lifers in Data Set*

<table>
<thead>
<tr>
<th></th>
<th>Lifers not in data set* (n = 128)</th>
<th>Lifers in data set (n = 241)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% (Frequency)</td>
<td>% (Frequency)</td>
</tr>
<tr>
<td>Victim &lt; or =12</td>
<td>6.3 (8)</td>
<td>5.0 (12)</td>
</tr>
<tr>
<td>Defendant &lt; 25</td>
<td>51.6 (66)</td>
<td>42.7 (103)</td>
</tr>
<tr>
<td>Urban Homicide</td>
<td>43.0 (55)</td>
<td>49.4 (119) **</td>
</tr>
<tr>
<td>Appointed Attorney</td>
<td>71.1 (91)</td>
<td>91.3 (220) **</td>
</tr>
<tr>
<td>Missing = 23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stranger Relationship</td>
<td>38.3 (49)</td>
<td>32.8 (79) **</td>
</tr>
<tr>
<td>Missing = 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple homicide</td>
<td>20.3 (26)</td>
<td>29.9 (72) **</td>
</tr>
<tr>
<td>Missing = 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White offender</td>
<td>50.0 (64)</td>
<td>49.0 (118)</td>
</tr>
<tr>
<td>Male offender</td>
<td>96.1 (123)</td>
<td>94.6 (228)</td>
</tr>
<tr>
<td>White victim</td>
<td>64.8 (83)</td>
<td>69.7 (168) **</td>
</tr>
<tr>
<td>Female victim</td>
<td>28.9 (37)</td>
<td>39.0 (94) **</td>
</tr>
<tr>
<td>Gun used</td>
<td>57.0 (73)</td>
<td>58.1 (140)</td>
</tr>
<tr>
<td>Missing = 6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* deleted from data set due to missing information on key analytical variables.

** Independent t-test showed significant difference between the two groups at the \( \alpha = .05 \) level.
### Table 2

*Variables used in Analyses (n = 640)*

<table>
<thead>
<tr>
<th>Dependent variable:</th>
<th>0 = no (n = 241)</th>
<th>1 = yes (n = 399)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Was Death sentence imposed?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control variables:</td>
<td>0 = no (n = 351)</td>
<td>1 = yes (n = 289)</td>
</tr>
<tr>
<td>Was the victim female?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was the victim White?*</td>
<td>0 = no (n = 187)</td>
<td>1 = yes (n = 453)</td>
</tr>
<tr>
<td>Was the offender male?</td>
<td>0 = no (n = 23)</td>
<td>1 = yes (n = 617)</td>
</tr>
<tr>
<td>Was the offender White?*</td>
<td>0 = no (n = 314)</td>
<td>1 = yes (n = 326)</td>
</tr>
<tr>
<td>Was a gun used?</td>
<td>0 = no (n = 293)</td>
<td>1 = yes (n = 347)</td>
</tr>
<tr>
<td>Was it a stranger homicide?</td>
<td>0 = no (n = 425)</td>
<td>1 = yes (n = 215)</td>
</tr>
<tr>
<td>Was offense a multiple homicide?</td>
<td>0 = no (n = 411)</td>
<td>1 = yes (n = 229)</td>
</tr>
<tr>
<td>Was the victim 12 or younger?</td>
<td>0 = no (n = 605)</td>
<td>1 = yes (n = 35)</td>
</tr>
<tr>
<td>Was the offender under 25?</td>
<td>0 = no (n = 402)</td>
<td>1 = yes (n = 238)</td>
</tr>
<tr>
<td>Did homicide occur in urban area?</td>
<td>0 = no (n = 362)</td>
<td>1 = yes (n = 278)</td>
</tr>
<tr>
<td>Did homicide involve other felony?</td>
<td>0 = no (n = 262)</td>
<td>1 = yes (n = 378)</td>
</tr>
</tbody>
</table>
Table 2 Continued…

*Variables used in Analysis (n = 640)*

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Was the victim a White male?</td>
<td></td>
<td>0 = no (n = 393)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = yes (n = 247)</td>
</tr>
<tr>
<td>Was the victim a Black female?</td>
<td></td>
<td>0 = no (n = 540)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = yes (n = 100)</td>
</tr>
<tr>
<td>Was the victim a Black male?</td>
<td></td>
<td>0 = no (n = 553)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = yes (n = 87)</td>
</tr>
<tr>
<td>Appointed attorney?</td>
<td></td>
<td>0 = no (n = 39)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = yes (n = 601)</td>
</tr>
<tr>
<td>Number of aggravating factors accepted</td>
<td></td>
<td>mean = 2.11, sd = 1.14</td>
</tr>
<tr>
<td>Number of mitigating factors accepted</td>
<td></td>
<td>mean = 8.32, sd = 8.18</td>
</tr>
<tr>
<td>Did the offender have prior criminal history?</td>
<td></td>
<td>0 = no (n = 456)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = yes (n = 184)</td>
</tr>
<tr>
<td>Was homicide committed in course of a rape?</td>
<td></td>
<td>0 = no (n = 557)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = yes (n = 56)</td>
</tr>
</tbody>
</table>

* Race was coded in the dataset as “White, Black, Indian, Asian, Hispanic, and other.” For the current study, the race variable was collapsed into “White” (White, Indian, Asian, Hispanic, and other) and “non-white” (Black) to match Williams and Holcomb’s (2004) study. This did not affect the results of the study since few Indians, Asians, Hispanics, and others were offenders or victims in the dataset.
Table 3

*Sentencing Outcomes: Demographic Characteristics of Offender and Victim*

<table>
<thead>
<tr>
<th>Demographic Characteristics</th>
<th>Sentencing Outcomes</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Life</td>
<td>Death</td>
<td></td>
</tr>
<tr>
<td><strong>Victim Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>32.5% (94)</td>
<td>67.5% (195) *</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>41.9% (147)</td>
<td>58.1% (204)</td>
<td></td>
</tr>
<tr>
<td><strong>Victim Race</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>37.0% (168)</td>
<td>63.0% (285)</td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>39.0% (73)</td>
<td>61.0% (114)</td>
<td></td>
</tr>
<tr>
<td><strong>Victim Race*Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White Female</td>
<td>32.3% (61)</td>
<td>67.7% (128) **</td>
<td></td>
</tr>
<tr>
<td>White Male</td>
<td>40.5% (100)</td>
<td>59.5% (147)</td>
<td></td>
</tr>
<tr>
<td>Black Female</td>
<td>33.0% (33)</td>
<td>67.0% (67) ***</td>
<td></td>
</tr>
<tr>
<td>Black Male</td>
<td>46.0% (40)</td>
<td>54.0% (47)</td>
<td></td>
</tr>
<tr>
<td><strong>Offender Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>56.5% (13)</td>
<td>43.5% (10)</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>36.9% (228)</td>
<td>63.1% (389)</td>
<td></td>
</tr>
<tr>
<td><strong>Offender Race</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>36.2% (118)</td>
<td>63.8% (208)</td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>39.2% (123)</td>
<td>60.8% (191)</td>
<td></td>
</tr>
</tbody>
</table>

* Independent t-test showed statistically significant differences between the percentage of
dearth sentences for the subset of cases at the α = .05 level.

** The percentage of offenders with White female victims who receive the death penalty
is statistically different (higher) than the percentage of offenders with White male victims
who receive the death penalty at the α = .05 level.

*** The percentage of offenders with Black female victims who receive the death penalty
is significantly different (higher) than the percentage of offenders with Black male
victims who receive the death penalty at the α = .05 level.
Table 4

*Logistic Regression Results for Death Sentence Outcome on Key Predictor Variables*

<table>
<thead>
<tr>
<th>Predictor</th>
<th>b</th>
<th>se(b)</th>
<th>$\chi^2$</th>
<th>$p$</th>
<th>Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Victim Gender (female = 1)</td>
<td>.291</td>
<td>.185</td>
<td>2.491</td>
<td>.115</td>
<td>1.338</td>
</tr>
<tr>
<td>2. Victim Race (white = 1)</td>
<td>.025</td>
<td>.232</td>
<td>.012</td>
<td>.914</td>
<td>1.025</td>
</tr>
<tr>
<td>3. Offender Gender (male = 1)</td>
<td>1.049</td>
<td>.458</td>
<td>5.249</td>
<td>.022</td>
<td>2.856</td>
</tr>
<tr>
<td>4. Offender Race (white = 1)</td>
<td>.168</td>
<td>.203</td>
<td>.687</td>
<td>.407</td>
<td>1.183</td>
</tr>
<tr>
<td>5. Offender Age (under 25 = 1)</td>
<td>-.485</td>
<td>.184</td>
<td>6.951</td>
<td>.008</td>
<td>.616</td>
</tr>
<tr>
<td>6. Gun Used (yes = 1)</td>
<td>-.199</td>
<td>.186</td>
<td>1.138</td>
<td>.286</td>
<td>.820</td>
</tr>
<tr>
<td>7. Stranger Homicide (yes = 1)</td>
<td>-.025</td>
<td>.205</td>
<td>.015</td>
<td>.903</td>
<td>.975</td>
</tr>
<tr>
<td>8. Involve other Felony (yes = 1)</td>
<td>.762</td>
<td>.183</td>
<td>17.274</td>
<td>.000</td>
<td>2.143</td>
</tr>
<tr>
<td>9. Multiple Victims (yes = 1)</td>
<td>.571</td>
<td>.186</td>
<td>9.377</td>
<td>.002</td>
<td>1.770</td>
</tr>
<tr>
<td>10. Urban Area (yes = 1)</td>
<td>-.416</td>
<td>.174</td>
<td>5.736</td>
<td>.017</td>
<td>.660</td>
</tr>
<tr>
<td>11. Victim Age (12 or under = 1)</td>
<td>.073</td>
<td>.377</td>
<td>.037</td>
<td>.847</td>
<td>1.075</td>
</tr>
<tr>
<td>Intercept</td>
<td>-.890</td>
<td>.508</td>
<td>3.066</td>
<td>.080</td>
<td>.411</td>
</tr>
</tbody>
</table>

$R^2$ (Cox & Snell)  
Corrected $R^2$ (Nagelkerke)  
$-2 \log \text{Likelihood} (\text{Intercept})$  
$-2 \log \text{Likelihood} (\text{Model})$  
Model $\chi^2$  
$n$
### Table 5

**Logistic Regression Results for Williams and Holcomb's Full Model: Victim Race*Gender Interactions**

<table>
<thead>
<tr>
<th>Predictor</th>
<th>b</th>
<th>se(b)</th>
<th>Wald's χ²</th>
<th>p</th>
<th>Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Black Female Victim (yes = 1)</td>
<td>.061</td>
<td>.310</td>
<td>.039</td>
<td>.844</td>
<td>1.063</td>
</tr>
<tr>
<td>2. Black Male Victim (yes = 1)</td>
<td>-.275</td>
<td>.305</td>
<td>.814</td>
<td>.367</td>
<td>.760</td>
</tr>
<tr>
<td>3. White Male Victim (yes = 1)</td>
<td>-.200</td>
<td>.211</td>
<td>.898</td>
<td>.343</td>
<td>.819</td>
</tr>
<tr>
<td>4. Offender Gender (male = 1)</td>
<td>1.069</td>
<td>.460</td>
<td>5.399</td>
<td>.020</td>
<td>2.912</td>
</tr>
<tr>
<td>5. Offender Race (white = 1)</td>
<td>.175</td>
<td>.204</td>
<td>.739</td>
<td>.390</td>
<td>1.192</td>
</tr>
<tr>
<td>6. Offender Age (under 25 = 1)</td>
<td>-.485</td>
<td>.185</td>
<td>6.875</td>
<td>.009</td>
<td>.616</td>
</tr>
<tr>
<td>7. Gun Used (yes = 1)</td>
<td>-.212</td>
<td>.187</td>
<td>1.286</td>
<td>.257</td>
<td>.809</td>
</tr>
<tr>
<td>8. Stranger Homicide (yes = 1)</td>
<td>-.028</td>
<td>.205</td>
<td>.018</td>
<td>.893</td>
<td>.973</td>
</tr>
<tr>
<td>9. Involve other Felony (yes =1)</td>
<td>.726</td>
<td>.183</td>
<td>17.265</td>
<td>.000</td>
<td>2.143</td>
</tr>
<tr>
<td>10. Multiple Victims (yes =1)</td>
<td>.568</td>
<td>.187</td>
<td>9.183</td>
<td>.002</td>
<td>1.764</td>
</tr>
<tr>
<td>11. Urban Area (yes =1)</td>
<td>-.406</td>
<td>.174</td>
<td>5.460</td>
<td>.019</td>
<td>.667</td>
</tr>
<tr>
<td>12. Victim Age (12 or under = 1)</td>
<td>.078</td>
<td>.377</td>
<td>.042</td>
<td>.837</td>
<td>1.081</td>
</tr>
<tr>
<td>Intercept</td>
<td>-.654</td>
<td>.538</td>
<td>1.479</td>
<td>.224</td>
<td>.520</td>
</tr>
</tbody>
</table>

|                      |       |       |           |       |            |
|                      |       |       |           |       |            |
|                      |       |       |           |       |            |
|                      |       |       |           |       |            |
|                      |       |       |           |       |            |

- $R^2$ (Cox & Snell) : .070
- Corrected $R^2$ (Nagelkerke) : .095
- $-2$ Log Likelihood
  - (Intercept) : 847.816
  - (Model) : 801.459
- Model $\chi^2$ : 46.357 (df=12, $p < .001$)
- $n$ : 640
Table 6

*Logistic Regression Results for Revised Williams and Holcomb's (2004) Model: Victim Race*Gender Interacts plus Legal Variables*

<table>
<thead>
<tr>
<th>Predictor</th>
<th>b</th>
<th>se(b)</th>
<th>Wald's $\chi^2$</th>
<th>$p$</th>
<th>Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Black Female Victim (yes = 1)</td>
<td>.362</td>
<td>.344</td>
<td>1.108</td>
<td>.292</td>
<td>1.437</td>
</tr>
<tr>
<td>2. Black Male Victim (yes = 1)</td>
<td>.024</td>
<td>.331</td>
<td>.005</td>
<td>.943</td>
<td>1.024</td>
</tr>
<tr>
<td>3. White Male Victim (yes = 1)</td>
<td>-.148</td>
<td>.230</td>
<td>.416</td>
<td>.519</td>
<td>.862</td>
</tr>
<tr>
<td>4. Offender Gender (male = 1)</td>
<td>.824</td>
<td>.484</td>
<td>2.906</td>
<td>.088</td>
<td>2.281</td>
</tr>
<tr>
<td>5. Offender Race (white = 1)</td>
<td>.663</td>
<td>.230</td>
<td>8.339</td>
<td>.004</td>
<td>1.941</td>
</tr>
<tr>
<td>6. Offender Age (under 25 = 1)</td>
<td>-.446</td>
<td>.204</td>
<td>4.769</td>
<td>.029</td>
<td>.640</td>
</tr>
<tr>
<td>7. Gun Used (yes = 1)</td>
<td>-.002</td>
<td>.208</td>
<td>.000</td>
<td>.993</td>
<td>.998</td>
</tr>
<tr>
<td>8. Stranger Homicide (yes = 1)</td>
<td>-.097</td>
<td>.224</td>
<td>.186</td>
<td>.666</td>
<td>.908</td>
</tr>
<tr>
<td>9. Involve other Felony (yes = 1)</td>
<td>-.059</td>
<td>.229</td>
<td>.066</td>
<td>.789</td>
<td>.943</td>
</tr>
<tr>
<td>10. Multiple Victims (yes = 1)</td>
<td>.086</td>
<td>.225</td>
<td>.146</td>
<td>.702</td>
<td>1.090</td>
</tr>
<tr>
<td>11. Urban Area (yes = 1)</td>
<td>-.336</td>
<td>.190</td>
<td>3.106</td>
<td>.078</td>
<td>.715</td>
</tr>
<tr>
<td>12. Victim Age (12 or under = 1)</td>
<td>.269</td>
<td>.416</td>
<td>.418</td>
<td>.518</td>
<td>1.309</td>
</tr>
<tr>
<td>13. Previous Criminal Behavior (yes = 1)</td>
<td>-.021</td>
<td>.238</td>
<td>.008</td>
<td>.931</td>
<td>.979</td>
</tr>
<tr>
<td>14. Involve Rape (yes = 1)</td>
<td>.014</td>
<td>.055</td>
<td>.067</td>
<td>.796</td>
<td>1.014</td>
</tr>
<tr>
<td>15. Public Defender (yes = 1)</td>
<td>.906</td>
<td>.376</td>
<td>5.827</td>
<td>.016</td>
<td>2.475</td>
</tr>
<tr>
<td>16. Total # of Aggravators Accepted (#)</td>
<td>.927</td>
<td>.136</td>
<td>46.440</td>
<td>.000</td>
<td>2.526</td>
</tr>
<tr>
<td>17. Total # of Mitigators Accepted (#)</td>
<td>-.075</td>
<td>.012</td>
<td>36.797</td>
<td>.000</td>
<td>.927</td>
</tr>
<tr>
<td>Intercept</td>
<td>-2.302</td>
<td>.696</td>
<td>10.932</td>
<td>.001</td>
<td>.100</td>
</tr>
</tbody>
</table>

$R^2$ (Cox & Snell) \hspace{1cm} [.208]
Corrected $R^2$ (Nagelkerke) \hspace{1cm} [.284]

-2 Log Likelihood
  (Intercept) \hspace{1cm} 847.816
  (Model) \hspace{1cm} 698.198

Model $\chi^2$ \hspace{1cm} 149.618 (df=17, $p < .001$)

$n$ \hspace{1cm} 640