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Adverse Childhood Experiences and Their Role as Mitigators for Youthful and Non-Youthful Offenders in Capital Sentencing Cases

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by

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DEDICATION

To my family: I could never thank you enough for all that you do, or put into words how much I truly love you. Migs: Thank you for your unwavering love and support, even from a thousand miles away. Abbi and Mickey: You have opened my eyes to so much – thank you both for being exactly who you are. Elizabeth: thank you for being a great mentor and a great inspiration to me. To my cohort: I'm looking forward to seeing the incredible things you will all accomplish!

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It should also be noted that the data used in this study began to measure adverse childhood experiences before they had even been identified in the literature, and was the first data set to purposefully operationalize ACE mitigators. For having this great foresight into an emerging concept of great interdisciplinary importance, the data collectors should be commended.

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ABSTRACT

Adverse childhood experiences (ACEs) and their role as mitigators in capital sentencing is an important, yet relatively unexplored, topic in criminological literature. Using data from the North Carolina Capital Sentencing Project, this study explores the role of ACEs as mitigating factors for youthful and non-youthful capital offenders: whether youthful offenders are less likely to be sentenced to death, whether or not ACEs are effective as mitigating factors, and whether ACE mitigators are more effective for youthful or non-youthful offenders. Results show that youthful capital offenders are less likely to be sentenced to death than adult capital offenders, and while ACE variables effectively mitigate against a death sentence, they do not mitigate more effectively for youthful offenders than non-youthful offenders. These findings, along with policy implications and directions for future research, are then discussed.

INTRODUCTION

In *Gregg v. Georgia* (1976), the U.S. Supreme Court upheld the constitutionality of the new death penalty statutes enacted after the *Furman* decision (*Furman v. Georgia*, 1972) and reiterated that the courts were required to examine both mitigating and aggravating factors during sentencing. Aggravating factors are statutory factors that elevate an offender's culpability, usually by increasing the perceived severity of the criminal act. Mitigating factors are statutory and non-statutory elements of the case and of the offender's life that are intended to make the decision regarding punishment less severe if considered or accepted by the jury. These factors are intended to humanize the defendant or to encourage the jury to empathize with the life of the defendant. Its purpose is to lessen the jury's perceived need, desire, or rationale to return a death verdict. "Under the death penalty statutes that govern most states, jurors are instructed to "weigh" mitigating factors (which lessen the tendency to punish with death) against aggravating factors (which increase that tendency)" (Cutler, 2007, p. 60).

In 2005, the United States Supreme Court declared the juvenile death penalty unconstitutional in *Roper v. Simmons*. Given the implications of the *Roper* and *Gregg* decisions, it would stand to reason that mitigating factors may be more relevant for youthful offenders than for adult offenders. Youthful offenders; 18-25 years of age, are those offenders closer in age to juveniles, and it can be argued that such offenders may be more susceptible to the same factors that the Supreme Court cited as making the death penalty a disproportionate sentence for juveniles. Some of these factors may be presented as mitigators reflective of Adverse Childhood Experiences (ACEs). Given that it has been established that there are important implications for how the justice system evaluates the responsibility of juvenile and adult violent offenders with

histories that encompass these significant mitigating circumstances (Heide & Solomon, 2006), it stands to reason that there may also be important implications for how the justice system treats youthful offenders. It can be argued that youthful offenders are still in the process of developing a mature brain that is able to offset the trauma associated with these ACEs, which may be considered mitigating circumstances (Arain et al., 2013; Casey, Getz, & Galvan, 2008).

Using data from 837 capital sentencing cases in North Carolina (NC) from 1990-2009, this study will investigate the impact of ACEs on the 390 sentencing decisions for youthful offenders and compare this to the 447 adult offenders, ages 26 and older, sentenced during this time. This study looks to contribute to the extant literature regarding ACEs and mitigation by addressing three research questions: (1) are youthful capital offenders less likely to be sentenced to death than adult capital offenders, (2) do ACE variables mitigate against a death sentence, and (3) does the effect of ACE mitigators on capital sentencing outcomes vary by youthful versus non-youthful offender status? It is hypothesized that youthful offenders will be less likely to be sentenced to death, that ACEs will mitigate against a death sentence, and that ACEs will mitigate more effectively for youthful offenders than non-youthful offenders.

LITERATURE REVIEW

This study will first review the conceptualization of ACEs, which emanated from a public health discourse. It will go on to discuss the role of ACEs as mitigators in sentencing. Then, a brief review of the literature regarding the bio-psycho-social consequences of these experiences will be presented. To conclude, a review of the history of the juvenile death penalty and its implication for the evolving standards of decency outlined by the U.S. Supreme Court will be discussed. These sections lay out the conceptual framework for this study.

Adverse Childhood Experiences

Only recently has the concept of the ACE entered the criminological discourse (Baglivio, Wolff, Piquero, & Epps, 2015; Baglivio, Jackowski, Greenwald, & Howell, 2014; Fox, Perez, Cass, Baglivio, & Epps, 2015). The concept, which stems from public health and intersects with biology and psychology, has recently emanated into criminological literature through its application to juvenile justice. Briefly, the ACE paradigm was developed in 1998 by Felitti, Anda, Nordenberg, Williamson, Spitz, Edwards, Koss, and Marks to examine the relationship of exposure to childhood emotional, physical, or sexual abuse and household dysfunction to the leading causes of death in adults. A questionnaire about these situations was mailed to 13,494 adults who had completed a standardized medical evaluation at a large health maintenance organization; 9,508 adults responded.

Seven categories of experiences were studied, including psychological, physical, or sexual abuse; violence against mother; or living with household members who were substance abusers, mentally ill or suicidal, or ever imprisoned. The number of categories of these experiences was then compared to measures of adult risk behavior, health status, and disease.

Findings suggested a strong relationship; those individuals with multiple categories of these adverse childhood experiences were likely to have multiple health risk factors later in life (Felitti et al., 1998). These authors identified what are now referred to as ACEs. An ACE is defined as surviving any of the following categories of abuse, neglect, or loss prior to age 18: 1) emotional abuse by a parent, 2) physical abuse by a parent, 3) sexual abuse, 4) emotional neglect, 5) physical neglect, 6) loss of a parent, 7) domestic violence, 8) a household member who abused alcohol or drugs, 9) a family member experiencing mental illness, or 10) experiencing the incarceration of a household member.

The information yielded helped to inform research regarding juvenile justice, and the prevalence of ACEs in juvenile delinquents. For example, Grevstad (2010) found that juvenile delinquents had three times higher ACE scores than what was reported in the Felitti (1998) study. More recent studies have indicated that ACEs may increase the odds of involvement in the criminal justice system, and youth with higher ACE scores are more likely to offend and re-offend than youth with lower ACE scores (Baglivio et al., 2013). Other assessments have also validated the ACE assessment as an effective predictor of negative outcomes throughout life (Chapman, Dube, & Anda, 2007; Dong et al., 2005). Now, it is common to use the developed ACE assessment tool to identify how many of these risk factors an individual has experienced.

Groundbreaking work linking ACEs to juvenile offending trajectories has been conducted by Baglivio. His 2015 study with Wolff, Piquero, and Epps looked at 64,000 adjudicated juvenile offenders in Florida and identified different offending trajectories. The findings indicated that increased exposure to ACEs distinguished early-onset and chronic offending from other patterns of offending such as mid-to-early onset, which offenders later desist, and late starters. These trajectories persisted net of several control variables across demographic,

individual risk, familial risk, and personal history domains (Baglivio, Wolff, Piquero, & Epps, 2015). In 2016, Baglivio and Epps found that many ACEs are co-occurring. They also found that ACE exposure differs by gender and race/ethnicity, with female youth and Black youth the most likely to be exposed to ACEs (Baglivio & Epps, 2016).

Baglivio, Wolff, Epps, and Nelson (2017) have also linked adverse childhood experiences such as living with someone with a history of mental illness to homicide and attempted homicide among early-onset juvenile offenders. Therefore, there is growing evidence to suggest that experiencing one or several adverse experiences as a child has implications for future behaviors throughout the life span. Adverse childhood experiences were also found to have both a direct and indirect effect on recidivism (Wolff & Baglivio, 2016).

ACEs as Mitigators

In this section, research supporting how adverse childhood experiences influence the bio-psycho-social development of youthful offenders will be discussed. Simi, Sporer, and Bubolz (2016), emphasized the importance of childhood risk factors as a series of "destabilizing and adverse conditions that dovetailed with adolescent misconduct" (p. 533). The potential negative effects of these risk factors include adverse psychological and physical consequences and, in some cases, may result in trauma (Simi, Sporer, & Bubolz, 2016). Symptoms of this potential trauma include various negative emotional states such as anger, hostility, anxiety, depression, and lowered self-esteem (Neller, Denney, Pietz, & Thomlinson, 2005). The following section briefly discusses the support for each ACE as a potential disturbance in normal bio-psycho-social development.

Physical abuse. A link between childhood physical abuse and later physical perpetration in adulthood for males has been established (Whitfield, Anda, Dube, & Felitti, 2003). Sunday,

Kline, Kaplan, Labruna, Pelcovitz, and Salzinger (2011) found that those young adults who had been physically abused during adolescence were more than twice as likely to be physically aggressive and almost six times more likely to be verbally aggressive towards an intimate partner than young adults without a history of abuse. Felson and Lane (2009) found that those offenders with histories of physical abuse were more likely to commit violent offenses than nonviolent offenses. Lansford, Miller-Johnson, Berlin, Dodge, Bates, and Pettit (2007) found in a longitudinal study of 574 children that those who were physically abused within the first 5 years of life had a greater risk of being arrested as juveniles.

Sexual abuse. Felson and Lane (2009) also found that male offenders who experienced sexual abuse during childhood were more likely to commit sexual offenses than nonviolent sexual offenses, particularly sexual offenses against children. Watts and McNulty (2013) drew on general strain theory to develop and test a model of the relationship between childhood abuse and later criminal behavior. They found that childhood physical and sexual abuses are "robust predictors of offending in adolescence" (p. 3023). For girls, this is mediated by closeness to the mother (Watts & McNulty, 2013).

Abuse has also been linked to later perpetration of homicide. Family abuse was associated with a homicide defendant being younger than those defendants who came from non-abusive families (Darby, Allan, Kashani, Hartke, & Reid, 1998). The 'cycle of violence' or the 'victim to offender' hypothesis has also received attention (Gregory, 2004). Those children who are exposed to child abuse, domestic violence, or both in combination are at an increased risk for internalizing outcomes, like depression, and externalizing outcomes, such as delinquency and violence perpetration, in adolescence (Moylan et al., 2010). Previous research has indicated that

victims of physical abuse, neglect, emotional abuse, or sexual abuse are more likely to be arrested and incarcerated (Falshaw & Browne, 1997).

Mother or father absence/abandonment and emotional abuse. These experiences approximate emotional neglect, physical neglect, loss of a parent, and experiencing the incarceration of a household member, which are all ACEs. Studies have shown that emotional neglect and physical neglect could be attributed to mother or father absence or abandonment (Lopez, 2000; Troemé & Wolfe, 2001). Emotional neglect has also been linked to later perpetration of personal and property crimes (Lowe, Quinn, Richards, Pothen, Rundle, Galea, & Bradley, 2016). Father absence has been linked to the likelihood of incarceration of adolescent males, with mother's remarriage and residential instability increasing the risk of incarceration in those juveniles from father-absent households (Harper & McLanahan, 2004).

Although not all of those abused become criminals, child abuse and neglect lead to an increased risk of later violent crime and/or criminal behavior (Widom, 1989). Hildyard and Wolfe (2002) found that relative to physically abused children, neglected children had "more severe cognitive and academic deficits, social withdrawal and limited peer interactions, and internalizing (as opposed to externalizing) problems" (p. 679). It could also be argued that parental absence or abandonment, either intermittent or permanent, constitutes psychological and emotional abuse. Some of the many types of measurements of psychological abuse are a parent threatening abandonment, refusing to speak to the child, threatening to kick the child out of the household, or actually locking the child out of the household (Lopez, 2000).

Parental misconduct. Additionally, witnessing parental misconduct such as fighting, criminal activity, or drug use has also been shown to influence children negatively. Unfortunately, the presence of domestic violence in the household also means that poverty,

parental unemployment, and substance abuse are more common (Fantuzzo, Boruch, Beriama, Atkins, & Marcus, 1997). Exposure to parental violence has been shown to predict dating violence perpetration and victimization in early adulthood (Narayan, Englund, Carlson, & Egeland, 2014). A child may not only experience domestic violence by witnessing it, but may be used as part of it. This enhances child adjustment problems such as conduct disorder, delinquency, antisocial behavior and aggression (Edleson, 1999). According to Kitzmann, Gaylord, Holt, and Kenny, there is "robust evidence that exposure to interparental aggression is associated with significant disruptions in in children's psychosocial functioning" (p. 347). Witnessing partner violence in the family home has also been found to overlap strongly with maltreatment such as physical abuse, psychological/emotional abuse, neglect, and sexual assault (Hamby, Finkelhor, Turner, & Ormrod, 2010).

Youth exposed to adverse parenting practices are more likely to offend and juvenile offenders with maltreatment histories are more likely to re-offend (Wolff & Baglivio, 2016). Offenders' life histories consistently include family conditions characterized by alcohol and drug abuse, domestic violence, sexual molestation and incest, neglect, and instability (Simi, Sporer, & Bubolz, 2016). Youth with criminal fathers have at least two times higher odds of having a criminal conviction than those with noncriminal fathers, and an additional paternal sentence increases the child's conviction by at least 32%, and up to 53% for females (Hjalmarsson & Lindquist, 2012).

In a review of six major longitudinal studies of children, Haapsalo and Poleka (1998) found that all reported parental punitiveness as crucial to the development of antisocial behavior in youths. Styles of parenting including corporal punishment, power assertion, rejection, physical abuse, and neglect were prime predictors of future criminal behavior (Haapsalo &

Poleka, 1998). A later study resulted in similar findings that hostile parenting significantly elevated the risks of youthful aggression and misconduct (Brannigan, Gemmell, Pevalin, & Wade, 2002).

Foster care and broken home. A broken home or defendants having been placed in foster care are also considered ACEs. A broken home implies that the mother, father, or both were not present. Alternatively, the defendant could have been placed in foster care in the absence of his or her parents. It has been suggested that divorce or separation early in a child's life is related to delinquency, and that association with deviant peers and attitudes favorable to delinquency are the best way to account for the broken homes/delinquency relationship (Rebellon, 2002).

Theobald, Farrington, and Piquero (2013) found that children who experience a family breakdown due to parental separation or divorce may face an increased risk of violent offending, especially if they have also experienced low family income, marital disharmony, or parental criminality. Those adolescents who have been released from foster care have been shown to have educational deficits, health problems, difficulty obtaining or keeping housing, substance abuse, and low-wage employment. They also are more likely to be involved with the juvenile justice system or the adult corrections system. Although youth may identify their experience with the foster care system as a positive one, they struggle to adjust to life after being released from foster care (Barth, 1990; Ryan, Herz, Hernandez, & Marshall, 2007). Children placed into a substitute care situation are more likely to engage in delinquent activity than those who are not removed from their family, and placement instability further increases the risk of delinquent activity for male foster children, but not for female foster children (Ryan & Schuerman, 2004).

Mental illness. Specific mental disorders or illnesses are also shown to be viable as mitigators, as they have been linked to violence by Elbogen and Johnson (2009). While severe mental illness does not independently predict violent behavior, people with mental illness did report violence more often, largely because there were other factors present that were associated with violence such as environmental stressors, substance abuse, or a history of violence. Attention-Deficit/Hyperactivity Disorder (ADHD) and tic disorders have been linked to an elevated risk of committing violent crimes, however, autism spectrum disorders and Obsessive Compulsive Disorder (OCD) showed no such link in a study done by Lundström, Forsman, Larsson, Kerekes, Serlachius, Långström, and Lichtenstein (2014). Edwards, Holden, Felitti, and Anda (2003) found a dose-response relationship between the number of types of abuse reported (sexual abuse, physical abuse, and witnessing maternal battering) and mental health scores. An emotionally abusive family environment was found to accentuate reductions in mental health scores (Edwards et al., 2003).

Drug and alcohol use. Substance abuse has also been linked to criminality. Not only is there a known stability of drug use and delinquency between early adolescence and young adulthood, drug use that occurs during early adolescence has been shown to have an impact on delinquency continuing through young adulthood (Brook, Whiteman, Finch, & Cohen, 1996). In 2011, Klinteberg, Almquist, Beijer, and Rydelius found that criminality for subjects from the Stockholm Birth Cohort study was associated with family psychosocial characteristics. These connections were partly explained by individual risk factors, especially by drug and/or alcohol use. Parker (2011) reviewed 4 studies, one of which was a natural experiment, which provided a substantial empirical foundation for the theory that alcohol plays a causal role in violent crime. In addition, a 2010 United States Department of Justice survey suggested that alcohol is linked to

approximately one-third of crimes, especially in the areas of juvenile delinquency, domestic violence, sexual assault, and homicide (Horvath & LeBoutillier, 2014).

Given that ACEs have been shown to impact future development, delinquency, and violence perpetration, they should be considered as mitigating factors in sentencing. Again, these mitigators are not to alleviate the culpability of the offender, but simply to humanize the defendant and allow the jury to empathize with their plight, which likely includes one or more of these adverse circumstances.

History of the Juvenile Death Penalty and Evolving Standards of Decency

Supreme Court legislation has addressed juvenile offenders, and the decisions reflect an important standard that can also be applied to youthful offenders. Juvenile offenders are defined as those offenders ages under the age of 18 at the time an offense is committed, and youthful offenders are defined as those offenders ages 18-25 when the offense is committed. The Supreme Court, in its elimination of the juvenile death penalty, cited evolving standards of decency that help to inform how juries may look at the mitigating factors in a youthful offender's case.

Legal issues. The U.S. Supreme Court affirmed the legality of the death penalty in a 7-2 decision in 1976 in *Gregg v. Georgia*. The Court ruled that the imposition of the death penalty was not "cruel and unusual" under the Eighth or Fourteenth Amendment (*Gregg v. Georgia*, 1976). It was determined that in "extreme criminal cases" the "careful and judicious use of the death penalty may be appropriate if carefully employed" (*Gregg v. Georgia*). The interpretation of "careful and judicious" was left up to the individual states.

In 2002, the U.S. Supreme Court decided in *Atkins v. Virginia* that the death penalty should never be imposed on a mentally retarded criminal. The basis for this decision was that

the execution of mentally retarded persons violates the Eighth Amendment. The Court determined that the impairments associated with mental retardation reduced the culpability of the mentally retarded and created a "special risk of wrongful execution." For both of these reasons, a sentence of death was seen as being disproportionate for these offenders (*Atkins v. Virginia*, 2002). When the justices announced their opinion, four of them expressed their view that the decision also implied that the execution of juveniles was unconstitutional (Fagan & West, 2005). It was only a matter of time before the Supreme Court would be asked to address the juvenile death penalty.

At the same time, the United States began to feel international pressure regarding its use of the juvenile death penalty and consistent refusal to consent to treaty provisions restricting the juvenile death penalty (Bradley, 2002; Reimels, 2001). It was well-known that the gap between evolving international law norms and United States judicial enforcement regarding the juvenile death penalty would have to be resolved through United States constitutional processes (Bradley, 2002). Shortly thereafter, in 2005, a U.S. Supreme Court decision in *Roper v. Simmons* determined that the execution of minors violated the prohibition of cruel and unusual punishment as well. This also applied to states through the incorporation doctrine of the 14th Amendment (*Roper v. Simmons*, 2005). In the majority opinion, the Court attributed their decision to "evolving standards of decency." There was already a Supreme Court consensus that the death penalty was disproportionate for minors. International opinion against the death penalty was also cited in the Court's opinion in *Roper v. Simmons* (2005).

Youthful offenders in North Carolina. To date, there is no explicit Supreme Court reference to "youthful offenders," however, according to a 2007 report pursuant to North Carolina Session Law 2006-248, Sections 34.1 and 34.2 entitled "Study Youthful Offenders,"

youthful offenders were identified as those offenders who had committed offenses between their 16th and 21st birthdays, and those juveniles who had been transferred from the juvenile courts for trial as adults. The North Carolina Department of Corrections defines youthful inmates as being between the ages of 13 and 25 (NC Sentencing and Policy Advisory Commission, 2007).

There has been a substantial amount of variability in the level of support for the death penalty, but studies consistently reveal that a substantial majority of the public has opposed the imposition of capital punishment for juvenile offenders since the 1930s (Boots, Heide, & Cochran, 2004). Vogel and Vogel (2003) reviewed a plethora of studies that looked at public opinion on the juvenile death penalty. Public support decreased as respondents were asked about the death penalty specifically for juveniles, even if public support for the death penalty in general was high.

According to Hoffmann (1989), there is a litany of reasons for not subjecting juveniles to the death penalty, including international consensus, lack of deterrence, potential for rehabilitation or reformation, that our society as a whole (legislatures, judges, juries, and prosecutors) has rejected the juvenile death penalty, and finally, that the juvenile death penalty does not serve a legitimate retributive purpose, since juveniles are generally less mature and responsible than adults. The argument here is that juveniles should be viewed as less culpable than adults, even if they commit the same crimes. It is argued that the offender's deservingness of the death penalty should not be based on age but on "maturity, judgment, responsibility, and the capability to assess possible consequences" of his or her actions (Hoffman, 1989, p. 233).

According to Vogel and Vogel (2003), there is a "long-held legal tradition in which juveniles have been considered less culpable for their actions than adults" (p. 180). In fact, the entire juvenile justice system is based on the premise that juveniles should be treated and

punished differently than adults. Evolving standards of decency essentially say that as our nation evolves, so too should the laws that govern it. Public opinion does not stay the same over decades, and laws should be reflective of public opinion. Our standards of decency should reflect a civilized society that is constantly progressing and maturing (*Trop v. Dulles*, 1958). These evolving standards of decency are to be measured by "objective factors to the maximum possible extent" (*Coker v. Georgia*, 1977).

Youthful Offenders

Given that the majority of the public has historically opposed capital punishment for juvenile offenders and relevant Supreme Court legislation regarding the juvenile death penalty has been relatively consistent, it could be posited that youthful offenders may be less likely to receive a sentence of death. If the public does not support the death penalty for a 16 or 17 year old, will they support the death penalty for youthful offenders (i.e. those between the ages of 18 and 25)? Our standards of decency, first cited in *Trop v. Dulles* (1958) and revisited in *Atkins v. Virginia* (2002) and *Roper v. Simmons* (2005), have evolved such that states are receptive for mitigating circumstances for offenders, and may be more receptive to those circumstances for more youthful offenders.

Hirschi and Gottfredson (1983) posed an age-crime curve based on the age distribution of crime that is widely accepted in the field of criminology. They found that age is correlated with important events thought to be related to crime, such as leaving school, marriage, and gainful employment, but the affects of age on crime do not appear to depend on these events. Age affects crime regardless of whether or not these events occur. Therefore, more youthful offenders are more likely to commit crimes than adult offenders.

For the purposes of this study, it is argued that the youthful offender is any offender who is 25 years of age or younger. Gbedd (1999, 2004) and Gbedd and colleagues (1999) found that the brain was not developed by 18 or even 21 years of age, but was fully developed by the age of 25. The Massachusetts Institute of Technology Young Adult Development Project also reflects a great deal of evidence to suggest that the brain is not completely developed until the age of 25. (For a comprehensive list of references regarding this literature, please see the online MIT EndNote database.) This medical research, in conjunction with the NC DOC's youthful offender label, led to the designation of any offender 25 years of age and under as a "youthful offender" for the purposes of this study.

It is crucial to note that there are juvenile offenders have been subjected to the death penalty who have problems that would usually lead them to be designated as not being mature enough or not possessing enough judgment to know that the crime they had committed was wrong. Lewis, Pincus, Bard, Richardson, Prichep, Feldman, and Yeager, in 1988, evaluated 14 of the 37 juveniles on death row at that time and found that all of them had suffered head injuries as children; 12 of them had been abused sexually and/or physically; 12 of them had IQ scores of 90 or less, 11 of them had below-average reading abilities; 9 of them had major neuropsychological problems; 7 of them had psychotic disorders since early childhood; 7 of them had serious psychiatric disturbances; and 5 of them reported being sodomized by relatives (Lewis et al., 1988).

In conclusion, there is evidence to suggest that individual experiences can offer insight into subsequent criminogenic actions. This study aims to consider mitigating circumstances in sentencing as they are reflective of adverse childhood experiences. The prior research that has been produced with regards to ACEs and their propensity to effect future criminality implies that

similar attention should be given to those experiences as mitigating circumstances. In addition, literature regarding brain development and the identification of youthful offenders implies that these ACE mitigators will be more effective for youthful offenders ages 18-25. When a defendant has experienced one or more of these ACEs, also commonly used as mitigating factors, it is important to communicate those experiences to the jury to give full life to a case and ensure that the defendant is not given an inappropriate sentence.

Research Questions

Given what is known about these ACEs and their propensity to affect future criminality and other aspects of the life-course, it seems appropriate that these experiences should be utilized as mitigators in sentencing. Youthful offenders, in particular, should be allowed to present these ACE mitigators as part of their defense, given that their brains have not fully developed. This study seeks to contribute to the extant literature regarding ACEs and the influence on capital sentencing outcomes by addressing three research questions: (1) are youthful capital offenders less likely to be sentenced to death than non-youthful adult capital offenders, (2) do ACE variables mitigate against a death sentence, and (3) do the effects of ACE mitigators on capital sentencing outcomes vary by youthful versus non-youthful offender status?

METHODOLOGY

Data

The North Carolina Capital Sentencing Project (NCCSP) provided the data for this study. The NCCSP consists of the population of penalty-phase jury decisions in capital murder trials in North Carolina (1977–2009). The information was derived from reviews of capital murder trials in North Carolina gleaned from LexisNexis searches of the North Carolina Supreme Court and Court of Appeals cases, and subsequent information was derived from public records materials that accompany these decisions. Defendant's age, race, and sex were available from the North Carolina Department of Corrections web site (for detailed information on the NCCSP, see Kavanaugh-Earl, Cochran, Smith, Fogel, & Bjerregaard, 2008 and Stauffer, Smith, Cochran, Fogel, & Bjerregaard, 2006).

These data focus on jury decisions during the penalty phase of the capital trial process: the final step, excluding appeals, in which a sentence of life in prison versus death is determined. As such, these data do not permit an examination of prosecutorial decisions to seek the death penalty. That is, the data set comprises all cases in which the following three conditions were each met: (a) the state secured a first-degree murder conviction; (b) the state sought the death penalty; and (c) the trial advanced to the penalty phase whereby the jury was instructed to make a sentence of life or death. At the penalty phase the capital jury in North Carolina is presented with an ''Issues and Recommendation as to Punishment'' form and is instructed to record their responses as to the aggravating factors submitted by the prosecution, mitigating factors submitted on behalf of the offender, and a recommendation for a sentence of either death or life without parole.

The NCCSP data contain all cases (N = 1,356) meeting these criteria for North Carolina between June 1977 and December 2009. The initial date marks the return to capital punishment in North Carolina following the *Gregg v. Georgia* (1976) decision that allowed for the resumption of capital punishment in the United States. The latter date is the last year for which a full contingency of information is available and compiled. These cases include measures of mitigating factors occurring in childhood including physical abuse, sexual abuse, suffering from a broken home, suffering from mother or father absence, being placed in foster care, and witnessing parental misconduct.

For this study, only those cases that were tried after the *McKoy v. North Carolina* (1990 onward) case were utilized. In the *McKoy* decision, North Carolina's Supreme Court found it unconstitutional to require that jurors accept mitigating circumstances unanimously (*McKoy v. North Carolina*, 1990). The difference in requirements for jury acceptance of mitigating factors pre- and post-*McKoy* necessitated the removal of pre-*McKoy* cases (for a discussion of the impact on analyses of the *McKoy* case, see Kremling, Smith, Cochran, Bjerregaard, & Fogel, 2007). The size of the full post-*McKoy* sample is 935, however, only those cases with a full contingency of variables were used.[1] Thus, the utilized post-*McKoy* sample is 837; comprised of

[1] There are 98 of the 935 post-*McKoy* cases that do not have aggravating or mitigating information. In 10 cases, the jury did not complete the Issues & Recommendation as to Punishment (I&R) form. In 20 cases, the form was not found in the county file of case information during data collection – it is possible that the I&R form was not filled out, so the clerk of court did not think it was relevant to retain. In another 20 cases, the jury, in answering the first question on the form, indicated that the crime did not warrant a death penalty so they did not move to the parts that presented Aggravation and Mitigation. Last, in 48 cases the jury considered aggravators, but did not find any, so stopped there and did not consider mitigators. In all missing cases, the sentence was life. Those cases that were excluded by utilizing casewise deletion had a mean age of 25, were only 1% female, and were 70% Black. By comparison, those cases that were included in these analyses had a mean age of 28, were 4% female, and 54% Black. The major implication is that recommendations for death sentences are overrepresented in the working dataset. But, that does not influence the focus of the study, which is to determine the impact of mitigating factors in jury decisions where mitigation was considered.

390 youthful offenders (those aged 25 or younger at the time of the offense) and 447 non-youthful offenders (those 26 or older at the time of the offense).

Dependent Variable

The dependent variable in this study was capital sentencing outcome (0=life, 1=death). Of the post-*McKoy* cases in this population data set, 438 (52%) received a life sentence and 399 (48%) received a death sentence. When these cases are divided into youthful and non-youthful offenders, 204 (46%) non-youthful offenders received a life sentence and 243 (54%) non-youthful offenders received a death sentence. A total of 234 (60%), while only 156 youthful offenders received a death sentence (40%).

Independent Variables

Two offender/offense characteristics comprise the key independent variables in this study: youthful offender status and a set of indicators measuring ACE mitigating factors. The first of these, youthful offender status, makes a dichotomous distinction between those offenders aged 25 and younger at the time of the offense (=1) and those over the age of 25 (=0).

For all remaining analyses, the remaining key independent variables are a set of indicators that measure potential ACE mitigating factors. These mitigating factors have been outlined in the previous review of the literature and measured by the NCCSP data set. These variables were coded as dichotomous distinctions - either accepted (=1) or not presented/presented and rejected (=0). They include alcohol abuse, drug abuse, physical abuse, sexual abuse, broken home, father absence or abandonment, mother absence or abandonment, being placed in foster care, witnessing parental misconduct, and mental illness. These ACE mitigating factors were also coded as dichotomous distinctions – either accepted (=1) or not presented/presented and rejected (=0).

Research has shown that the co-occurrence of ACEs is prevalent (Edwards, Holden, Felitti, & Anda, 2003), so these ACE mitigating factors were used to create 3 ACE indexes. The first index; individual/health, includes mental or emotional distress, capacity of defendants to appreciate the criminality of their conduct, alcohol use, drug use, and mental illness. The family/environment index includes physical and sexual abuse, a broken home, mother or father absence or abandonment, foster care, and the offender having witnessed domestic violence in the home. The family and environment index and the individual/health index were used to compare and contrast the offender's dispositional characteristics to their situational ones - in other words, to determine whether those things that happen outside of the individual or to the individual are more powerful than the things that are innate to the offender. The final indication is an additive index of all of these ACE mitigators.

Control Variables

A large number of offender, offense, and victim characteristics are available in the NCCSP dataset, and many of these could be used as potential control variables.[2] Employing all of these, however, would increase the risks of multicollinearity, reduced degrees of freedom, and model over-identification. As such, as a preliminary step, this study first examines bivariate correlations between these potential control variables and sentence (DV) and both youthful offender status and the total ACE index (primary IVs). As a guiding principle, this study

[2] Prior to their elimination, potential control variables included whether or not the case was a retrial and whether it took place before or after *Roper v. Simmons* (2005) or *Atkins v. Virginia* (2002). Other controls included whether the defendant was tried in an urban or rural jurisdiction and a variety of physical characteristics of both the victim and offender, including gender of the victim and the offender, race of the victim and the offender, and age of the victim. The total number of victims, whether or not the offender was the triggerman, and the total number of defendants on trial for the murder were also taken into consideration as control variables. Finally, variables were dichotomized based on whether or not the defense had mentioned them during trial: whether rape was mentioned, whether torture was mentioned, and whether the defense mentioned kidnapping. Youthful offenders comprised 64% of those cases that were excluded from analyses.

required that these potential control variables have statistically significant and at least modest correlations with both the dependent variable and these primary independent variables.

Where the correlation between these potential control variables and both death sentence and the key independent variables did not attain a moderate strength of $r = +/- .15$ or statistical significance, they were removed from further analyses. After elimination, only two control variables remained that were both modestly and significantly correlated with both the dependent and key independent variables – total number of aggravating factors accepted and total number of non-ACE mitigating factors accepted. Both of these are highly relevant legal factors in capital sentencing. The total number of accepted aggravating factors and total number of non-ACE mitigating factors accepted were indexes utilized as control variables. Table 1 presents descriptions of all dependent and independent variables and displays summary statistics for each.

Analytic Plan

This study seeks to contribute to the extant literature regarding ACEs and their influence on capital sentencing outcomes by addressing three research questions: (1) are youthful capital offenders less likely to be sentenced to death than non-youthful adult capital offenders, (2) do ACE variables mitigate against a death sentence, and (3) do the effects of ACE mitigators on capital sentencing outcomes vary by youthful versus non-youthful offender status? To address these questions, both bivariate and multivariate analyses are employed. For the latter, because the dependent variable, capital sentencing outcome, makes a dichotomous distinction between those sentenced to death and those sentenced to life, this study employs logistic regression to model the effects of youthful offender status and ACE mitigators while controlling for the effects of the total number of aggravating factors accepted and the total number of non-ACE mitigating factors accepted by the capital jury.

The study addresses these three research questions through four sets of logistic regression models. The first set of models examines the relative or independent effects of youthful offender status and ACE mitigators on capital sentencing in order to address the first two research questions. Model 2 adds cross-product terms to Model 1 to represent the interaction between youthful offender status and the indicators of these ACE mitigators. The final two sets of models examine the effects of the ACE mitigators separately for youthful and non-youthful adult offenders. These latter models allow for tests for the equality of the maximum likelihood estimates for the effects of the ACE mitigators (Brame, Paternoster, Mazerolle, & Piquero, 1998).

The North Carolina Capital Sentencing Project includes the population of capital murder penalty phase trials in North Carolina. It is debatable whether these data comprise a population or a sample. If the data is a population, then inferential statistics are unnecessary. If the data comprise a sample, then the sample is not a random sample but a purposive one, and thus in violation of the underlying assumptions of inferential statistics. As such, findings are interpreted independently of inferential statistics, and the p-values are reported for heuristic purposes only.

RESULTS

To reiterate, our research questions for this study are: (1) are youthful capital offenders less likely to be sentenced to death than non-youthful adult capital offenders, (2) do ACE variables mitigate against a death sentence, and (3) do the effects of ACE mitigators on capital sentencing outcomes vary by youthful versus non-youthful offender status?

Bivariate Results

Table 2 presents the distribution of capital sentencing outcomes by youthful offender status; the results presented permit a preliminary answer to the first research question: are youthful offenders less likely to receive the death penalty than non-youthful offenders? Of the 390 youthful capital offenders in these data, 156 (39%) received the death penalty. Conversely, of the 447 non-youthful offenders, 243 (61%) received the death penalty. A t-test for a difference between the two proportions found that there was a statistical difference between the two subsamples of the population. Moreover, the correlation between capital sentencing outcome and youthful offender status is negative though weak to modest ($r = -.14$). As expected, youthful offenders are less likely to be sentenced to death than non-youthful offenders.

Table 3 reports percentage of death sentences for youthful offenders and non-youthful adult offenders across each of the ten ACE mitigating circumstances, for which each ACE factor is coded as either not presented, presented but rejected, or accepted. Note that there is a different *n* for each correlation, noted in parenthesis after the percentage is reported. Readers should be aware that there was a small *n* for some correlations, sexual abuse and foster care mitigators in particular. Results presented in Table 3 allow for an assessment of whether or not it is better to not present an ACE mitigator, to present it but have it rejected, or to have it accepted. Table 3

also allows for a preliminary assessment of each of the three research questions that drive this study. For instance, with regard to the first research question, out of three groups (youthful offenders, non-youthful offenders, and the total sample), youthful offenders were less likely to be sentenced to death than non-youthful adult offenders. In three comparisons, youthful offenders were more likely than non-youthful offenders to receive death sentences. One of these exceptions involved ACEs that were presented but rejected by the capital jury: the defendant suffering from alcohol abuse (78% vs. 72%). In another two comparisons for which ACE factors were accepted by the capital jury, youthful offenders were again more likely than non-youthful offenders to be sentenced to death. These involved jury acceptance of broken home status (46% vs. 33%) or foster care experience (54% vs. 50%). Combined with results from Table 2, the findings presented in Table 3 indicate that under most circumstances, youthful offenders are less likely to be sentenced to death than non-youthful adult offenders.

Results in Table 3 also address the second research question as to whether or not the acceptance of ACE mitigating factors decrease the likelihood of a capital sentence. Here, the preliminary findings are mixed. On the one hand, the likelihood of a death sentence for those capital offenders for which ACE mitigators were accepted are essentially the same as they are for those cases in which ACE mitigating factors are not even presented to the jury. Across the ten comparisons presented in Table 3, the percentage of a death sentence ranges from a low of .38 to a high of .52. By contrast, if one compares the percentage of a death sentence between those cases for which ACE mitigators are accepted to those for which these ACE mitigators have been presented but rejected, the results consistently reveal a substantially lower probability of a death sentence when ACE mitigators are accepted. These differences in the likelihood of a death sentence are typically 25-40 percentage points lower when the ACE mitigator is accepted. In

only two instances is the percentage point difference in the likelihood of a death sentence less than 20 points; these involve cases in which offenders experience sexual abuse as a child (14%), or cases in which the offender had been placed in foster care (15%).

In summation, with regard to our second research question, the capital jury's acceptance of ACE mitigators does not reduce the likelihood of a capital sentence more so than had the ACE mitigator not been presented to the jury in the first place. More importantly, the presentation of ACE mitigators that are subsequently rejected by the capital jury have a substantial counter-mitigating impact on capital sentencing. Presented but rejected ACE mitigators increase the likelihood of a death sentence well above that for cases in which these ACE mitigators are either accepted or not presented at all.

The third research question asks whether or not accepted ACE mitigators have a more powerful mitigating effect for youthful offenders compared to non-youthful offenders. Results presented in Table 3 show that in seven of the ten circumstances in which ACE mitigators are accepted, their mitigating impact was greater among youthful offenders than non-youthful offenders. These involved the offender's alcohol abuse (34% vs. 46%), offender's drug abuse (37% vs. 57%), childhood experience of physical abuse (35% vs. 55%), father's absence from the family home (31% vs. 49%), mother's absence from the family home (44% vs. 46%), the witnessing of parental misconduct in the family home (33% vs. 51%), and offender's mental illness (29% vs. 45%). Conversely, three other ACE factors had an equally or less effective mitigating impact for youthful offenders. These were offender's experiences of sexual abuse (both 47%), growing up in a broken home (46% vs. 33%), and foster care experience (54% vs. 50%). In all instances save for a broken home and foster care experience, these ACE mitigators lessen the percentage of a death sentence equally or more effectively for youthful offenders.

Table 4 presents zero-order correlations between the ten measures of ACE mitigating factors and capital sentencing outcomes for the total sample as well as the youthful offender and non-youthful offender subsamples. The bivariate correlations between the indicators of ACE mitigators and capital sentencing are reported in two ways: first, the ACE mitigators are coded dichotomously to distinguish between cases in which an ACE mitigator is presented (=1) to those for which it wasn't presented (=0). Second, the ACE indicators are dichotomized to distinguish between the jury's acceptance (=1) and the jury's rejection (=0) of a specific ACE factor from among those cases for which an ACE mitigator was presented to the jury.

When examining the bivariate association between specific ACE mitigators measured as presented vs. not presented and capital sentencing outcomes, a number of findings are observed. First, all of the correlations are weak ($r \leq .12$). Second, and more importantly, with two exceptions, all of these correlations are positive, indicating that the presentation of an ACE mitigating factor is associated with a very slight increase in the percentage of a death sentence. These weak and counter-intuitive findings are likely due to the manner by which the ACE factors were coded. Again, recall that the ACE factors measured here distinguish their presentation to the jury against no presentation. Presented factors conflate the effects of jury acceptance and jury rejection of these factors. As observed in Table 3, the rejection of ACE mitigators increases the percentage of a death sentence and thus accounts for the weak and counter-intuitive bivariate associations just discussed.

When ACE mitigating factors are measured so as to distinguish accepted from rejected mitigators, the correlations between the acceptance of an ACE mitigator and capital sentencing outcome are consistently modest to moderate in strength and negative ($-.12 \geq r \leq -.41$), with one exception. These negative associations indicate that the acceptance of an ACE factor by the

capital jury is associated with substantially lower percentage of a death sentence. These correlations allow us to answer the second research question affirmatively - ACE mitigators reduce the likelihood of a death sentence when accepted by the jury.

To reiterate, in these correlations the youthful offender variable is dichotomized (youthful=1, non-youthful=0). A comparison of the correlations presented in Table 4 between those for youthful offenders and those for non-youthful offenders reveal stronger mitigating effects for youthful offenders compared to non–youthful offenders for the following ACE mitigating factors: offender's alcohol use (r=−.41 vs. r=−.25), offender's drug use (r=−.32 vs. r=−.18), experience of physical abuse (r=−.41 vs. r=−.29), father's absence from the childhood household (r=−.35 vs. r=−.20), and offender's mental illness (r=−.50 vs. r=−.35). Conversely, another four ACE factors show stronger mitigating effects for non-youthful offenders than for youthful offenders. These are the offender's experience of sexual abuse (r=−.37 vs. r=−.22), broken home status (r=−.54 vs. r=−.15), mother's absence from childhood household (r=−.27 vs. r=−.16), and foster care experience (r=−.40 vs. r= .00).

Finally, with regard to the effects of capital offender's witness of parental misconduct in the childhood household, the mitigating effect of this ACE factor is identical for both youthful offenders and non-youthful offenders (r=−.25 vs. r=−.24). In sum, these correlations reveal that some ACE factors have more powerful mitigating effects for youthful offenders, while others have more powerful mitigating effects for non-youthful offenders. T-tests were conducted for both the presented vs. not presented category and the accepted vs. rejected category. Of these 20 t-tests, the following revealed a difference in proportions: offender's alcohol abuse (t = -2.58), offender's drug abuse (t = -2.23), experience of physical abuse (t = -2.08), experience of sexual abuse (t = 2.35), broken home (t = 6.48), absent father (t = -2.47), foster care experience (t =

6.01), and mental illness (t = -2.69). All of these statistical differences between youthful vs. non-youthful offenders were in the accepted vs. rejected category. None of the presented vs. not presented differences in proportions were statistically different.

Table 5 presents zero-order correlations between the three indexes of ACE mitigators and capital sentencing outcome for the total sample and for both youthful and non-youthful subsamples. These correlations are weak and negative for both the total ACE mitigators ($-.07 \geq r \leq -.11$) and family/environment indexes ($-.04 \geq r \leq -.10$). The individual/health index presents more moderate negative correlations ($-.19 \geq r \leq -.22$). The correlations between these indexes and capital sentencing outcome are not stronger than those between individual ACE mitigators and capital sentencing outcome, which is a counter-intuitive finding because aggregate indexes should be more effective than individual mitigators. None of these t-tests revealed statistical differences between the means of youthful and non-youthful offender subsamples.

With regard to all bivariate findings presented in Tables 2-5, the preliminary results provide tentative affirmation but occasionally mixed responses to the three research questions. At the bivariate level, youthful offenders do appear to be less likely to be sentenced to death than their non-youthful adult counterparts. ACE factors have mixed associations with capital sentencing depending largely on how they are measured. When comparing the presentation vs. non-presentation of ACE factors, the ACE factors appear to have a weak, non-mitigating impact. Conversely, when comparing their acceptance vs. their rejection, ACE mitigators have substantial mitigating impact. Finally, the effects of ACE mitigators appear largely due to the counter-mitigating impact they have on death sentences when presented but rejected by the capital jury. Lastly, these bivariate associations suggest that some ACE factors mitigate more strongly for youthful offenders, while others do so for non-youthful offenders.

When individual factors are summed into indexes, the effects of these aggregated mitigating factors are not more effective than the individual mitigators on their own. All of these results, however, are bivariate and hence preliminary. The degree to which these results hold under more stringent multivariate analyses is an issue that will now be discussed.

Multivariate Results

Table 6 presents the results of a number of logistic regression analyses which examine the effects of youthful offender status and various indicators of ACE mitigating factors on the capital sentencing outcome. For each of the thirteen different ways of measuring the ACE mitigators, two separate logistic regression models are presented: the first presents the relative effects of youthful offender status and an ACE mitigator, and the second model examines their interactive or conditioning effects. All models control for the total number of aggravating circumstances accepted by the jury as well as the number of non-ACE mitigating factors accepted by the jury.

These models allow us to address all three research questions. In all thirteen models, the effects of youthful offender status on capital sentencing outcome are substantial and negative, and the odds ratios across these thirteen models are between .50 and .60, indicating that the odds of a death sentence are between 40% and 50% less for youthful offenders than for non-youthful offenders. Next, in all but one of these thirteen models, the parameter estimates for the effects of the ACE mitigators are negative, indicating that the acceptance of these ACE mitigators do reduce the odds of a death sentence for youthful offenders. Model 11 reveals that for each ACE factor accepted, the odds of a death sentence decrease by 16%. Model 12 indicates that for each individual/health-related ACE factor accepted, the odds of a death sentence decrease by 28%. Each family/environmental ACE factor accepted decreases the odds of a death sentence by 16%.

Among the individual ACE factors, the acceptance of the ACE factor reduces the odds of a death sentence anywhere from 21% to 46%. However, acceptance of the foster care ACE factor is associated with a 45% increase in the odds of a death sentence.

Effects of the ACE mitigators on the youthful offender-capital sentencing outcome relationship, the conditional effects models reported in Table 6 reveal in all but two instances that ACE factors substantially mitigate less for youthful offenders compared to non-youthful offenders. The two exceptions are for offender's drug use (8% decrease) and offender's witnessing of parental misconduct in the childhood household (42% decrease). For each of these two ACE factors, the mitigating effect was greater for youthful offenders. This is counter-intuitive because one would not expect ACE factors to increase the odds of a death sentence, especially for youthful offenders.

Because the conditional effects models presented in Table 6 revealed counter-intuitive conditioning effects for the ACE mitigators, separate youthful offender and non-youthful offender models will now be examined. As such, Table 7 presents these age-specific models for the effects of each ACE indicator on capital sentencing outcome. In addition, Table 7 presents a test for the equality of maximum-likelihood regression coefficients (Brame, Paternoster, Mazerolle, & Piquero, 1998). This test helps to determine whether or not the observed differences in the effects of specific ACE mitigators between youthful offenders and non-youthful offenders are substantively meaningful; z-scores of 1.96 or greater indicate statistical equality in effect size. Across these thirteen models, a number of differences in the effects of the ACE mitigators are noteworthy. First, the effect of the ACE mitigator on capital sentencing was greater for youthful offenders with regard to offender's drug abuse history (b=–.319 vs. b=–.168) and witnessing parental misconduct (b=.523 vs. b=–.173).

In addition, the effect of each individual/health ACE factor accepted by the jury was nearly identical for youthful and non-youthful offenders (b=–.338 vs. b=–.332). For all other ACE indicators, the mitigating effects were stronger in the non-youthful offender model than in the youthful offender model. However, only 2 of these were substantially different: the mitigating effect of the experience of sexual abuse (b=-1.151 vs. b=.580) and the experience of living in a broken home (b=–1.087 vs. b=.509) were substantially greater in the non-youthful offender than in the youthful offender model. But for these two mitigating factors, the test for the equality of the maximum-likelihood coefficients regarding the effects of the remaining ACE factors were not substantively different between youthful offenders and non-youthful offenders.

Overall, it seems that although youthful capital offenders are less likely to be sentenced to death than adult capital offenders and ACE variables do mitigate against a death sentence, ACEs do not mitigate more effectively for youthful offenders than non-youthful offenders. ACEs, in fact, mitigate less for youthful offenders than non-youthful offenders.

DISCUSSION

This study sought to contribute to the extant literature on the topic of capital sentencing and youthful offenders by exploring how adverse childhood experiences work as mitigators within capital sentencing cases, whether or not they work as intended, and whether they are more effective mitigators for adult or youthful offenders. It was hypothesized that these ACE mitigators would be more effective for youthful offenders. This was attributed to the evolving standards of decency that have been cited many times by U.S. Supreme Court rulings regarding the juvenile death penalty. Taken in conjunction with the fact that North Carolina identifies youthful offenders as those offenders aged 18-25, and the plethora of literature regarding brain development in individuals 25 years of age and younger, it was posited that youthful offenders would be seen as less deserving of the death penalty if ACE mitigators were presented on their behalf.

Evolving standards of decency seem to be applicable to the concept of youthful offenders, as youthful offenders are less likely to be sentenced to death than adult capital offenders. ACE mitigators were also found to mitigate against a death sentence. The effect of ACE mitigators on capital sentencing outcomes does vary by youthful vs. non-youthful offender status; however, the effects of these ACE mitigators are stronger for non-youthful offenders.

There also seemed to be a counter-mitigation effect for many of the presented but rejected ACE mitigators. These findings correspond to a study by Bjerregarrd, Smith, Fogel, and Palacios (2009), which obtained similar results: a drug use mitigator that was either accepted or rejected by a capital jury was associated with an increased risk of receiving a death sentence. The acceptance of a foster care mitigator seemed to aggravate, and increased the odds of a death

sentence for both youthful and non-youthful offenders. In most cases, ACE mitigators mitigated less for youthful offenders than non-youthful offenders.

To answer our three research questions: youthful capital offenders are less likely to be sentenced to death than adult capital offenders, ACE variables do mitigate against a death sentence, and the effect of ACE mitigators on capital sentencing outcomes does vary by youthful versus non-youthful offender status. While the first two hypotheses for this study were supported, the final hypothesis was not supported. ACEs did not mitigate more effectively for youthful offenders than non-youthful offenders. Instead, these results show that ACEs mitigate more effectively for non-youthful offenders. The aggregate indexes of ACE mitigators (family/environment, individual/health, and the total accepted ACE mitigators) did not greatly differ in their magnitude or direction from the rest of the findings. Also, these results did not support the idea that co-occurring ACEs would be more powerful mitigators.

Studies such as the present one are vital in order to evaluate how mitigators are applied to youthful offenders and to ensure that mitigation is working as intended in capital sentencing. There are certain mitigators that do not work for youthful or non-youthful offenders, and the acceptance of some mitigators actually increases the odds of a death sentence. Mitigators are only intended, per statute, to mitigate against a death sentence. Mitigators should never increase the perception of culpability of the offender.

With everything that is known about childhood trauma, adverse childhood experiences, and the effects of these experiences on the sentencing of youthful and non-youthful offenders, it is important to advocate for better consideration of these circumstances on the part of the jury. The jury, in these situations, is making a life or death decision and it is vital to be able to give full life to the case by presenting all aggravating and mitigating factors. Heide and Solomon

(2006) point out that "the criminal justice system is based on the foundation of a rational man who makes conscious decisions before acting" (p. 230) and suggest that the range of choices supposedly available to human beings may be compromised in certain situations for some individuals who have sustained severe trauma and been significantly affected by it. These individuals who have experienced adverse childhood experiences may find their range of choices compromised, especially if they have experienced co-occurring ACEs.

Implications

Given the results of this study, implications need to be further discussed. First, it may be that there is a counter-mitigation effect for certain mitigators when they are presented but rejected. There is important advice, then, that can be given to defense counsel on how to present (or not present) mitigating circumstances to the jury. If the defense counsel believes that there is a chance that a mitigator could be rejected, they should not present it. This study has shown that defendants may pay a price for a rejected mitigator. A well-documented or well-evidenced mitigator may endure in the minds of jurors, but a rejected one could have serious repercussions for a defendant. Jurors that are over-stimulated with mitigators presented to them may recommend a sentence of death.

Mitigation investigations related to childhood trauma will inform interviewing strategies with clients and family members, and provides a framework for presenting the psychological significance of this information to juries (Wayland, 2008). It is important to establish rapport with defendants when they are being tried capitally, and even more essential to make the jury aware of any mitigating circumstances that the defendant may have. Developing trauma histories for defendants may truly mean the difference between a life sentence and a death sentence. Crocker (1999) posits that "a detailed presentation of the defendant's childhood

experience and a cogent explanation of its long-term repercussions will enable the jury to understand why the defendant committed the crime, perhaps allowing the jury to sympathize or empathize with the defendant" (p. 1143).

There are implications for the jury, as well. Juries should be better educated about the enduring effects of adverse childhood experiences. These results indicate that some mitigators, such as sexual abuse, may be much more powerful for adult offenders than they are for youthful offenders. The hypothesis that close proximity to the event would make a jury more sympathetic towards the defendant was not supported by the results of this study. Adverse childhood experiences have lasting detrimental effects that cannot be understated for youthful and non-youthful offenders. The question is how best to disseminate this information to the general public, since they make up potential jury pools. Jury education could play a pivotal role in ensuring that mitigating circumstances work the way that they were intended to.

One post-hoc hypothesis as to why the sexual abuse mitigator had an aggravating effect when accepted is that the totality of the case and other mitigators and aggravators may have offset that one mitigator. For example, a defendant may have sexually abused the victim in conjunction with the capital crime that they are on trial for – in this case, the jury may not be sympathetic towards the defendant's experience of sexual abuse as a child. For sexual abuse specifically, a small *n,* as noted in Table 3, could also be the cause for these findings.

As referenced in previous literature, a mitigation expert could be particularly beneficial to the defense team. When financially feasible, mitigation specialists are used in capital trials. However, it would be wise to include them on the defense team as often as possible. These specialists are dedicated to researching the offender's past and presenting any adverse experience the defendant may have experienced to the court. Because this specialist is well versed in

mitigation, they are able to explain the importance of mitigators to the jury (Stetler, 2007). It is also believed that a social worker could have a potentially powerful influence on the proceedings during the sentencing phase of a capital trial (Andrews, 1991).

Prior research has shown that female offenders are more likely to have experienced adverse childhood experiences. Therefore, there may be room for more appropriate gender-specific approaches to explaining female criminality. Models explaining female criminal behavior could be developed to for instrumentation in treatment plans and intervention strategies for female offenders (Rossegger, Wetli, Urbaniok, Elbert, Cortoni, & Endrass, 2009). Further research should also explore the provision of early intervention strategies targeted at high risk-families to enable the prevention of delinquency and the development of suitable treatment programs (Gregory, 2004).

This study was not without limitations. Each defense counsel decides, with the judge's approval, what to present on behalf of the defendant. Therefore, it is impossible to know if a potential mitigator was not presented. For example, the defense counsel could have chosen not to present the defendant's sexual abuse during childhood as a mitigator. The nature of this data set, and of case briefs in general, means that this information would not be provided to the jury or the court. Similarly, it is not known what is going on in the jury room, which implies that it is unknown how widely accepted a mitigator was within the jury pool and what weight the jury gave to each particular mitigator. Prosecutors may also challenge the defense team's presentation of mitigators, and thus neutralize them. In addition, the quality of the presentation of mitigation may affect a mitigator's acceptance.

In addition, the NCCSP data includes a defendant age mitigator, which could be absorbing some of the effects of other ACE mitigators. In a post-hoc analysis, it was discovered

that age was an accepted mitigator for 108 youthful offenders and 13 non-youthful offenders. The ages of these defendants ranged from 16 to 56 years of age at the time of trial. The jury could be giving defendants a break on the basis of age itself, and this could skew the impact of other mitigators. The cases utilized may also overstate the imposition of death sentences due to exclusion of cases that did not have a full contingency of variables.

Future Research

In conclusion, future research should explore the juries and their thought processes by using exit interviews, in order to see what weight the jury gives to each mitigator, how mitigators are interpreted in the jury room, and how a presented but rejected mitigator may become an unintended aggravator. One example is the work that the Capital Jury Project is doing (Bowers, 1995; Hans, 1995). Through exit interviews with capital jury members, they are able to capture the decision-making process of a capital jury. Jurors could specifically be asked whether or not they believe individual ACEs have an effect on the future of an individual. Future research should also explore ACEs not just in death penalty sentencing but also in sentencing more broadly, especially for youthful offenders. This research may also be more qualitative in nature, and a mixed-methods approach may be beneficial.

The role of mitigators in the prosecutorial decision to seek the death penalty should also be explored, as well as the role of adverse childhood experiences throughout the criminal justice system, including arrest decisions and other sentencing decisions. Research should be done working cooperatively with other disciplines to develop strategies to combat ineffective mitigators. Jury education, especially, would be well informed by legal mitigation specialists and social workers. With the abundance of literature supporting the idea that childhood events impact future behaviors, it is incumbent on professors and experts in their respective disciplines

to organize and develop an interdisciplinary method of disseminating this information so that each discipline can be better informed. Social scientists should continue to identify the causes and correlates of these adverse childhood experiences as well as identify model programs for treatment and prevention. Schroeder, Guin, Pogue, and Bordelon (2006) present an evidence-based conceptual model of the problems surrounding mitigation and propose that social work mitigation strategies could be used to form a set of best practices that "more effectively ensure jurors' careful consideration of mitigation evidence" (p. 355).

A better understanding of these consequences is also needed throughout the criminal justice system. There is a cost to society of not intervening in the lives of those affected by adverse childhood experiences, and it is less costly to intervene effectively than to not intervene at all. Child abuse and neglect alone costs the United States approximately $124 billion a year, according to a 2012 study disseminated by the Center for Disease Control and Prevention. This includes health care and medical costs, productivity losses, child welfare costs, criminal justice costs, and special education costs (Fang, Brown, Florence, & Mercy, 2011). Prior literature also concludes that those affected by ACEs are more likely to be involved with the criminal justice system later on in life. This study should also be replicated in other states. These data are only representative of North Carolina from 1990 to 2009. Future studies would benefit from more recent data collection and a different population.

If public opinion informs the evolving standards of decency cited by the U.S. Supreme Court, then consideration should also be given to the methods utilized to measure public opinion on this topic. The U.S. Supreme Court has regained its conservative tilt (Kendall & Tau, 2017) and this may have implications for capital punishment and youthful offenders.

Table 1. Summary Statistics for all Dependent, Independent, and Control Variables (n=837)

	Mean	Standard Deviation	Min.	Max.
Capital sentencing outcome (1= death)	.477	.500	0	1
Youthful offender	.466	.499	0	1
Alcohol abuse	.201	.401	0	1
Drug abuse	.237	.425	0	1
Physical abuse	.201	.401	0	1
Sexual abuse	.066	.248	0	1
Broken home	.123	.329	0	1
Missing dad	.214	.410	0	1
Missing mom	.087	.282	0	1
Foster care	.027	.164	0	1
Parental misconduct	.240	.427	0	1
Mental illness	.205	.404	0	1
Family/environment: index of physical abuse, sexual abuse, broken home, missing mom, missing dad, foster care, witnessed parental misconduct	.951	1.250	0	6
Individual/health: index of mental or emotional disturbance, capacity of the defendant to appreciate the criminality of their conduct, alcohol abuse, drug abuse, and mental illness	1.551	1.386	0	5
Total ACE mitigators: this includes all ACE mitigators enumerated in the NCCSP data	1.590	1.735	0	9
Total number of aggravators accepted	2.178	1.239	1	9
Total number of non-ACE mitigators accepted	.757	.859	0	4

Table 2. Frequency Table of Death Sentences (with column percentages) by Youthful Offender Status

	Life Sentence	Death Penalty	Total	t-test**
Non-Youthful Offenders	204 46.58%	243 60.90%	447 53.41%	4.150*
Youthful Offenders	234 53.42%	156 39.10%	390 46.59%	
Total	438 100.00%	399 100.00%	837 100.00%	

**t-test is for difference in proportions

Table 3. Percentage of Death Sentences by ACE Mitigators and Youthful Offender Status (n)

ACE Mitigators	Not Presented	Presented but Rejected	Accepted
Alcohol abuse			
Youthful	36.6 (104)	77.8 (28)	34.3 (24)
Non Youthful	53.9 (159)	72.2 (39)	45.9 (45)
Total	45.4 (263)	74.4 (67)	41.1 (69)
Drug abuse			
Youthful	36.2 (97)	71.8 (28)	37.4 (31)
Non Youthful	50.2 (144)	75.6 (34)	56.5 (65)
Total	43.4 (241)	73.8 (62)	48.5 (96)
Physical abuse			
Youthful	37.7 (109)	83.3 (20)	35.1 (27)
Non Youthful	51.9 (174)	90.5 (19)	55.0 (50)
Total	45.4 (283)	86.7 (39)	45.8 (77)
Sexual abuse			
Youthful	39.7 (145)	33.3 (2)	47.4 (9)
Non Youthful	54.3 (216)	75.0 (9)	47.2 (17)
Total	47.3 (361)	61.1 (11)	47.3 (26)
Broken home			
Youthful	37.1 (114)	61.5 (16)	45.6 (26)
Non Youthful	54.6 (204)	88.5 (23)	32.6 (15)
Total	46.7 (318)	75.0 (39)	39.8 (41)
Absent mother			
Youthful	38.3 (126)	62.5 (10)	44.4 (20)
Non Youthful	53.9 (214)	72.7 (16)	46.4 (13)
Total	46.8 (340)	68.4 (26)	45.2 (33)
Absent father			
Youthful	37.9 (92)	68.8 (33)	31.3 (31)
Non Youthful	53.5 (169)	68.6 (35)	48.8 (39)
Total	46.7 (261)	68.7 (68)	39.1 (70)
Foster care			
Youthful	39.0 (142)	53.9 (7)	53.9 (7)
Non Youthful	53.9 (231)	87.5 (7)	50.0 (5)
Total	47.0 (373)	66.7 (14)	52.2 (12)
Parental misconduct			
Youthful	41.0 (109)	68.8 (11)	33.0 (35)
Non Youthful	53.3 (170)	78.1 (25)	50.6 (48)
Total	47.6 (279)	75.0 (36)	41.3 (83)
Mental illness			
Youthful	36.6 (101)	81.0 (34)	29.2 (21)
Non Youthful	53.9 (167)	83.8 (31)	45.0 (45)
Total	45.7 (268)	82.3 (65)	38.4 (66)

Table 4. Zero-Order Correlations for ACE Mitigators and Capital Sentences by Youthful Offender Status

ACE Mitigators Accepted	Presented vs. Not Presented	t-test**	Accepted vs. Rejected	t-test**
Alcohol abuse				
Youthful	0.113*	1.44	-0.412*	-2.58*
Non Youthful	0.013		-0.253*	
Total	0.067		-0.319*	
Drug abuse				
Youthful	0.115*	0.03	-0.321*	-2.23*
Non Youthful	0.113*		-0.176*	
Total	0.119*		-0.233*	
Physical abuse				
Youthful	0.079	-0.07	-0.412*	-2.08*
Non Youthful	0.084		-0.285*	
Total	0.079*		-0.335*	
Sexual abuse				
Youthful	0.021	0.03	-0.218	2.35*
Non Youthful	0.000		-0.367*	
Total	0.019		-0.115	
Broken home				
Youthful	0.113*	1.82	-0.148	6.48*
Non Youthful	-0.013		-0.537*	
Total	0.038		-0.333*	
Absent mother				
Youthful	0.081	0.79	-0.159	1.60
Non Youthful	0.026		-0.265	
Total	0.043		-0.221*	
Absent father				
Youthful	0.056	0.69	-0.354*	-2.47*
Non Youthful	0.028		-0.196*	
Total	0.028		-0.283*	
Foster care				
Youthful	0.076	0.36	0.000	6.01*
Non Youthful	0.051		-0.395	
Total	0.054		-0.147	
Parental misconduct				
Youthful	-0.030	-0.98	-0.249*	-0.11
Non Youthful	0.038		-0.242*	
Total	0.002		-0.266*	
Mental Illness				
Youthful	0.108*	1.34	-0.500*	-2.69*
Non Youthful	0.015		-0.347*	
Total	0.075*		-0.408*	

*$p < .05$

**See note after Table 5.

Table 5. Zero-Order Correlations for Number of ACE Mitigators Accepted and Capital Sentences by Youthful Offender Status

	Number of ACE Mitigators Accepted	t-test
Total ACE mitigators index		
Youthful	-0.076	0.49
Non Youthful	-0.110*	
Total	-0.097*	
Family/environment index		
Youthful	-0.047	0.69
Non Youthful	-0.095*	
Total	-0.084*	
Individual/health index		
Youthful	-0.220*	-0.45
Non Youthful	-0.190*	
Total	-0.190*	

*p < .05

Note: In Table 4, the t-tests are testing the difference in proportions between youthful and non-youthful offenders. For example, the t-test for alcohol abuse is testing the difference in the correlation of the mitigator between the youthful offender and non-youthful offender subsample. The t-test tells us that there is a significant difference between the two groups (youthful offenders and non-youthful offenders) for this mitigator. In Table 5, the t-tests are also testing the difference in proportions for youthful and non-youthful offenders.

Table 6. Logistic Regression Models Examining the Effects of Youthful Offender Status and ACE Mitigators on Capital Sentencing Outcomes

	Relative Effects Models			Conditional Effects Models		
	B	se (b)	OR	b	se (b)	OR
Model 1 (n=835)						
Youthful Offender	-.600*	.156	.549	-.648*	.173	.523
Alcohol abuse	-.491*	.193	.612	-.594*	.251	.552
YO * Alcohol abuse	-	-	-	.253	.390	1.288
Constant	-.616*	-	-	-.588*	-	-
Pseudo R^2	.145	-	-	.145	-	-
Model 2 (n=835)						
Youthful Offender	-.585*	.155	.557	-.565*	.177	.568
Drug abuse	-.238	.182	.788	-.202	.241	.817
YO * Drug abuse	-	-	-	-.082	.364	.921
Constant	-.665*	-	-	-.673*	-	-
Pseudo R^2	.141	-	-	.141	-	-
Model 3 (n=835)						
Youthful Offender	-.580*	.155	.560	-.627*	.173	.534
Physical abuse	-.283*	.196	.753	-.394	.265	.674
YO * Physical abuse	-	-	-	.243	.392	1.276
Constant	-.677*	-	-	-.661*	-	-
Pseudo R^2	.141	-	-	.141	-	-
Model 4 (n=834)						
Youthful Offender	-.596*	.156	.551	-.691*	.161	.501
Sexual abuse	-.621	.334	.537	-1.207*	.407	.299
YO * Sexual abuse	-	-	-	1.713*	.680	5.548
Constant	-0.706*	-	-	-.683*	-	-
Pseudo R^2	.145	-	-	.147	-	-
Model 5 (n=834)						
Youthful Offender	-.567*	.155	.567	-.755*	.167	.470
Broken home	-.262	.239	.770	-1.102*	.363	.332
YO * Broken home	-	-	-	1.581*	.487	4.858
Constant	-.688*	-	-	-.624*	-	-
Pseudo R^2	.140	-	-	.149	-	-

*p < .05

Table 6. Continued

	Relative Effects Models			Conditional Effects Models		
	B	se (b)	OR	b	se (b)	OR
Model 6 (n=835)						
Youthful Offender	-.564*	.155	.569	-.610*	.162	.543
Absent mother	-.257	.274	.774	-.593	.433	.553
YO * Absent mother	-	-	-	.559	.555	1.749
Constant	-.707*	-	-	-.681*	-	-
Pseudo R^2	.140	-	-	.141	-	-
Model 7 (n=835)						
Youthful Offender	-.547*	.156	.579	-.606*	.175	.546
Absent father	-.511*	.195	.600	-.660*	.279	.517
YO * Absent father	-	-	-	.291	.388	1.338
Constant	-.661*	-	-	-.642*	-	-
Pseudo R^2	.145	-	-	.146	-	-
Model 8 (n=835)						
Youthful Offender	-.581*	.155	.559	-.591*	.157	.554
Foster care	.374	.457	1.453	.178	.690	1.195
YO * Foster care	-	-	-	.347	.921	1.415
Constant	-.714*	-	-	-.709*	-	-
Pseudo R^2	.140	-	-	.140	-	-
Model 9 (n=835)						
Youthful Offender	-.559*	.155	.572	-.481*	.178	.618
Parental misconduct	-.331	.179	.718	-.176	.250	.839
YO * Parental misconduct	-	-	-	-.318	.360	.728
Constant	-.643*	-	-	-.678*	-	-
Pseudo R^2	.142	-	-	.143	-	-
Model 10 (n=835)						
Youthful Offender	-.612*	.157	.542	-.634*	.175	.531
Mental illness	-.699*	.195	.497	-.743*	.252	.476
YO * Mental illness	-	-	-	.110	.398	1.117
Constant	-.572*	-	-	-.566*	-	-
Pseudo R^2	.151	-	-	.151	-	-
Model 11 (n=833)						
Youthful Offender	-.563*	.156	.570	-.788*	.213	.455
Total ACE Accepted Index	-.175*	.046	.839	-.241*	.063	.786
YO * Total ACE	-	-	-	.144	.091	1.155
Constant	-.525*	-	-	-.437*	-	-
Pseudo R^2	.151	-	-	.153	-	-

*p < .05

Table 6. Continued

	Relative Effects Models			Conditional Effects Models		
	b	se (b)	OR	b	se (b)	OR
Model 12 (n=834)						
Youthful Offender	-.678*	.160	.508	-.681*	.236	.506
Individual/Health Index	-.334*	.359	.716	-.335*	.078	.715
YO * Individual/Health	-	-	-	.002	.118	1.002
Constant	-.215	-	-	-.214*	-	-
Pseudo R^2	.171	-	-	.171	-	-
Model 13 (n=833)						
Youthful Offender	-.539*	.157	.583	-.752*	.197	.472
Family/Environment Index	-.179*	.064	.836	-.286*	.088	.751
YO * Family/Environment	-	-	-	.226	.125	1.253
Constant	-.624*	-	-	-.547*	-	-
Pseudo R^2	.145	-	-	.148	-	-

*p < .05

Table 7. Logistic Regression Models Examining the Effects of ACE Mitigators on Capital Sentencing Outcomes by Youthful Offender Status

	Youthful Offender Model			Non Youthful Offender Model			z-score
	b	se (b)	OR	b	se (b)	OR	
Model 1 & 2							
Alcohol abuse	-.349	.305	.706	-.564*	.248	.569	.547
Constant	-1.292*	-	-	-.560	-	-	
Pseudo R^2	.165	-	-	.109	-	-	
n = 338 and n = 447							
Model 3 & 4							
Drug abuse	-.319	.281	.727	-.168	.238	.845	-.410
Constant	-1.276*	-	-	-.660*	-	-	
Pseudo R^2	.164	-	-	.101	-	-	
n = 338 and n = 447							
Model 5 & 6							
Physical abuse	-.135	.295	.874	-.361	.263	.697	.572
Constant	-1.308*	-	-	-.666*	-	-	
Pseudo R^2	.162	-	-	.103	-	-	
n = 338 and n = 447							
Model 7 & 8							
Sexual abuse	.580	.560	1.786	-1.151*	.413	.316	2.488*
Constant	-1.343*	-	-	-.727*	-	-	
Pseudo R^2	.164	-	-	.113	-	-	
n = 338 and n = 446							
Model 9 & 10							
Broken home	.509	.334	1.664	-1.087*	.358	.337	3.260*
Constant	-1.407*	-	-	-.620*	-	-	
Pseudo R^2	.166	-	-	.115	-	-	
n = 338 and n = 446							
Model 11 & 12							
Absent mother	-.067	.360	.935	-.554	.426	.574	.873
Constant	-1.330*	-	-	-.665*	-	-	
Pseudo R^2	.162	-	-	.103	-	-	
n = 338 and n = 447							
Model 13 & 14							
Absent father	-.359	.275	.698	-.628*	.278	.533	.688
Constant	-1.260*	-	-	-.650*	-	-	
Pseudo R^2	.165	-	-	.108	-	-	
n = 338 and n = 447							
Model 15 & 16							
Foster care	.538	.623	1.712	.114	.679	1.120	.460
Constant	-1.343*	-	-	-.690*	-	-	
Pseudo R^2	.163	-	-	.100	-	-	
n = 338 and n = 447							

*p< .05

Table 7. Continued

	Youthful Offender Model			Non Youthful Offender Model			z-score
	b	se (b)	OR	b	se (b)	OR	
Model 17 & 18							
Parental misconduct	-.523*	.265	.593	-.173	.246	.841	-.968
Constant	-1.204*	-	-	-.654*	-	-	
Pseudo R^2	.170	-	-	.101	-	-	
n = 338 and n = 447							
Model 19 & 20							
Mental illness	-.654*	.313	.520	-.720*	.251	.487	.165
Constant	-1.175*	-	-	-.602*	-	-	
Pseudo R^2	0.171	-	-	.114	-	-	
n = 338 and n = 447							
Model 21 & 22							
Total ACE	-.098	.068	.906	-.234*	.063	.792	1.467
Constant	-1.198*	-	-	-.483	-	-	
Pseudo R^2	.166	-	-	.123	-	-	
n = 338 and n = 445							
Model 23 & 24							
Individual/ Health Index	-.338*	.091	.713	-.332*	.077	.718	-.050
Constant	-.876*	-	-	-.252	-	-	
Pseudo R^2	.190	-	-	.134	-	-	
n = 338 and n = 446							
Model 25 & 26							
Family/ Environment	-.058	.092	.943	-.278*	.088	.757	1.728
Constant	-1.283*	-	-	-.585*	-	-	
Pseudo R^2	.163	-	-	.116	-	-	
n = 338 and n = 445							

*p< .05

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