INTIMATE AND FAMILIAL MURDER:

EXAMINING TRENDS IN DOMESTIC VIOLENCE

HOMICIDES IN OKLAHOMA

FROM 2010-2014

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Abstract: Domestic violence homicides, particularly involving intimate partners, have been the subject of research for many decades. What has been lacking in the literature, however, is an in-depth comparison of the many types of relationships that fall under the umbrella definition for domestic violence. Such relationships include parents, siblings, grandparents, and other family members, as well as roommates. This study focuses on the trends and characteristics of the domestic violence homicides that occurred in the state of Oklahoma from January 2010 through December 2014. A total of 1318 homicides were reviewed and 368 were determined to meet the definition of domestic violence homicide. For this study, domestic violence is defined by Title 22 of the Oklahoma State Statutes in the Protection from Domestic Abuse Act. For each domestic violence case, several pieces of information were collected. Data collected were: demographics of the victim and offender, relationship between victim and offender, the mechanism of injury that caused the death, the number of injuries to the victim, drug or alcohol use by either the victim or offender, and the county where the death occurred. The collected variables were then analyzed using 2-way contingency tables and Pearson's chi-square to test significant associations between the variables. Significant association were found between: offender type and the sex of the offender, offender type and sex of the victim, offender type and race of the offender, race of the offender and mechanism of injury, offender's age and mechanism of injury, offender type and mechanism of injury, offender type and number of injuries to the victim, mechanism of injury and sex of the victim, mechanism of injury and race of the victim, mechanism of injury and age of the victim, offender type and drug and/or alcohol use of the victim or offender, and mechanism of injury and drug and/or alcohol use of the victim or offender. The conclusions in this study do not match those reported in recent studies on national data in aspects concerning mechanism of injury and perpetrator types. Furthermore, this study illustrates the prevalence of family homicides despite their exclusion from the literature on domestic violence.

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CHAPTER I

INTRODUCTION

Outside of Oklahoma, the names David, April, Daniel, Christopher, and Victoria Bever might be heard without a second thought given to them. For Oklahomans, however, the names are recognized as those of the 5 victims brutally stabbed to death by 2 members of their own family--teenagers Michael and Robert Bever. On July 22, 2015, Michael and Robert stabbed their 5-year-old sister, 12- and 7-year-old brothers, and their mother and father to death. They also stabbed their 13-year-old sister, but she survived.[1] This tragedy is just one example of the dozens of domestic violence homicides that occur every year in the state of Oklahoma.[2-5]

Despite the continued occurrence of domestic violence homicides in the state, no correlative studies have been conducted to address underlying trends from the state's domestic homicide data. Such trends have the potential to be used in preventative measures because risk factors associated with these deaths can be identified.[6] The Oklahoma Domestic Violence Fatality Review Board (ODVFRB), as well as the Oklahoma Uniform Crime Report (UCR) publish annual statistics on domestic abuse homicides in the state. However, neither the ODVFRB nor the Oklahoma UCR include statistics that associate the multiple variables involved in these homicides.[2-5, 7]

The definition of domestic violence encompasses many relationship types. According to the Protection from Domestic Abuse Act within Title 22 of the Oklahoma State Statutes, domestic abuse is defined as physical harm against a family or household member, including people currently or previously in an intimate relationship.[8] This definition includes grandparents, cousins, parent's boyfriends or girlfriends, and roommates, among many other domestic relationships. To fully understand the risk factors associated with domestic violence homicides, researchers would need to evaluate the homicide details for each of these relationship types. For instance, the correlations within domestic homicides where sons kill their parents may differ from the homicides where girlfriends kill their boyfriends.

Despite the numerous types of domestic violence relationships, very little research has examined the differences among them. The ODVFRB publications include statistics for all of the domestic violence relationship types; however, the reports focus on intimate partner violence and recommendations for the prevention of these crimes. While intimate partner violence is a large part of domestic violence homicides, even the ODVFRB reports illustrate that the other types of domestic violence homicides occur every year in significant numbers.

The ODVFRB report analyzing 1231 domestic violence deaths between 1998 and 2010, states that 44% of the deaths were related to intimate partner violence, and 45% were related to other family violence.[2] The 2011 report noted that intimate partner violence totaled 47% of the domestic violence deaths, while other family violence homicides accounted for 45%.[3] For 2012, intimate partner homicides accounted for 45% of domestic violence deaths, but the number of family homicides was not reported.[4] The most recent report on data from 2013 states that 48% of the homicides were committed by intimate partners and 46% were committed by family members.[5] The trends reported by the ODVFFRB thus show that domestic violence homicides committed by family members is close to the percentage committed by intimate partners, and even greater in some years.

As many studies in the literature on domestic violence have expressed, the only way that the public can begin to address these homicides is to understand the who, the what, and the how of these crimes. The answers needed are: who are the perpetrators of these crimes (relationship to the victim), what trends are associated with their occurrence (i.e. demographics of those involved, drug use, location), and how have these homicides occurred (mechanism of injury). Thus, the purpose of this study was to use data from the Oklahoma Chief Medical Examiner's Office database to examine and determine the association between the answers to these three main questions.

Other studies have examined offender characteristics, trends, and mechanism of injury within domestic violence homicides. For instance, one study compared the differences between domestic and non-domestic homicides committed by 115 male perpetrators. The authors discovered significant differences in the perpetrator's age between the two types of homicides and the mechanism of injury inflicted in these homicides.[9] Nonetheless, this study was limited to studying only adult male offenders and therefore did not include a wide range of the different types of domestic homicide. A study examining these trends with Oklahoma data was not found in a literature search.

As previously mentioned, many of the studies in the literature focus on intimate partner homicides. Most research aims to identify possible trends, such as how the mechanism of injury varied in intimate partner homicides in general[10] or the differences between intimate partner homicides as they are committed by men versus women.[11] Other studies have looked at victim characteristics, such as race and employment, to determine personal factors that might impact a woman's risk of becoming a victim of intimate partner violence.[12] Additionally, studies have examined the risks of intimate partner homicide as a function of a woman's age. [13] A search of the literature did not produce any studies conducted on intimate partner homicides in the state of Oklahoma.

While extensive literature exists on intimate partner homicide, much less exists on the other types of domestic violence homicide. Several studies have examined the murder of children by family members. Similar to the research on intimate partner homicides, research was conducted to determine risk factors for child homicides in other countries,[14, 15] in addition to those in the United States. Much of the research examines trends in child homicides where the parents are the perpetrators of these crimes,[16] as well as differences in these homicides committed by biological versus stepparents.[17] Additional studies examine the characteristics of child homicides when committed by the boyfriends or girlfriends of a child's parent.[18,19] However, there are significant gaps in the literature on child homicides that are committed by other family members.

Other than the intimate partner and child homicide studies, the literature on domestic violence homicides becomes sparser. A literature search produces no studies examining trends or differences among the many types of domestic violence homicides in the country as a whole, or state-wide. The previously mentioned studies provide insight into some of these homicides individually for the locations covered by the research. However, as crime rates and trends differ from state to state, so do the trends associated with domestic violence homicides. Therefore, the literature is significantly lacking in providing enough information to completely understand the trends and correlations among the types of domestic violence homicides in Oklahoma.

The purpose of this research was to examine the trends and characteristics of domestic violence homicides in the state of Oklahoma from 2010 through 2014. Archived casefile data from a database of the Oklahoma Chief Medical Examiner's Office was used to gather information from domestic violence homicides over this 5-year period. The information collected for each case included the relationship between the victim and the offender, the demographics (age, sex, and race) of the victim and of the offender, the county where the crime occurred, the date of death, drug and/or alcohol use of the victim and of the offender at the time of the death, the number of injuries to the decedent, and the mechanism of injury leading to the death.

Beyond answering the 3 main questions of who, what, and how for each domestic violence homicide, the ultimate goal of this research is to establish whether significant associations exist between mechanism of injury and relationship type. Furthermore, the variables of age, sex, race, and drug/alcohol use will be examined for association with the mechanism of injury in these cases. If associations are found to exist, this information could potentially be used to determine risk factors that could be included in future preventative actions. The literature is filled with risk assessment for intimate partner homicides and exceptionally ignores the hundreds of other victims of domestic violence homicide. This research aims to address the victims from every type of domestic violence homicide to potentially support preventative actions in the state of Oklahoma.

CHAPTER II

REVIEW OF LITERATURE

A review of the literature on domestic violence homicides indicates that researchers attempted to learn about this devastating social problem for decades. To put prevention measures into place, the elements of the crime needing prevention must be understood. Therefore, many researchers have focused on identifying trends in past domestic violence homicides. Unfortunately, an overwhelming majority of this research focuses on only one segment of domestic violence homicide—intimate partner violence. While involving a large segment of domestic violence homicide, intimate partner violence is not the only type of domestic violence homicide deserving of attention and research.

Furthermore, as violence statistics vary among locations, domestic violence homicides need to be studied on a state-wide level to accurately identify trends for that state. Researchers have conducted such studies in some states, but no such studies exist in the state of Oklahoma. This literature review identifies gaps in the literature on domestic violence homicides and the need for studying these homicides in the state of Oklahoma. The purpose of the present study was to use archival casefile data from the Office of the Chief Medical Examiner (OCME) to examine the characteristics of all types of domestic violence homicides in Oklahoma from a situational perspective.

Definition and Categories of Domestic Violence

According to the Protection from Domestic Abuse Act within Title 22 of the Oklahoma State Statutes, domestic abuse is defined as any threat of or actual physical harm against a family or household member, including individuals in a current or previous intimate relationship. Thus, contrary to the popular thought that domestic violence only encompasses spousal or partner violence, this type of violence involves many relationship types. Included in the definition of "household" per Title 22 are grandparents, cousins, siblings, and any family relationship in addition to the nuclear family. Furthermore, this definition also includes individuals who live together (roommates) but who may not be family.[8] While the definition includes non-fatal violence, the purpose of this research is to only examine domestic violence homicide.

Before an accurate study of trends within domestic violence homicides can take place, there must be evidence that, as a whole, domestic violence homicides differ from non-domestic homicides. A 2014 study by Juodis et al[9] compared the patterns that exist among domestic homicides with those among non-domestic homicides in Canada. The authors found statistically significant differences between the victims and perpetrators of the two types of homicides. According to their study, domestic homicides were more likely to involve female victims as well as family members.[9] Additionally, children are often involved in domestic violence homicides while they are not directly involved in non-domestic or public violence.[20]

Despite the multiple relationships that exist under domestic violence, little research has been conducted on the violence that occurs between family members outside of intimate partner and child homicides. To thoroughly examine the problem in its entirety, each of these homicides should be examined independently to establish their own trends. This review of the literature establishes the scope of the research conducted on the different types of domestic violence homicides. For the purpose of this research, it is necessary to understand each of these homicides as individual events with distinct trends and patterns.

Intimate Partner Homicide

Intimate partner homicide includes the murder of a current or ex-spouse, boyfriend, or girlfriend, non-marital cohabitant, and common law marriage partner.[21,22] As previously stated, the majority of research concerning domestic violence homicides focuses on victims of this type of homicide. In order to assess intimate partner homicides, roughly every study looked at specific factors related to the homicide. The factors addressed included sex, age, race, weapon, relationship length and type, among others. National, international, state-wide, and city-wide data exist for many different locations. However, a literature search returned no studies conducted on intimate partner violence in Oklahoma specifically.

A study using data from the Chicago Women's Health Risk Study between 1995 and 1998 assessed the differences between intimate partner homicides committed by females versus those committed by males. The researchers examined homicides committed by 57 male and 28 female offenders. The results showed that female offenders were statistically more likely than male offenders to have pre-homicide injuries (within the year before the homicide). Additionally, female offenders were more likely than male offenders to use knives to commit their homicides.[11]

Other research has attempted to show the differences between male and female violence as a function of age by examining aggression in marriage through longitudinal studies. A 2005 study showed that younger adults were more prone to violent actions during fights with their spouses when compared to middle-aged and older adults.[23] Additionally, a 2008 study looking at over 50,000 cases of intimate partner homicides in the United States discovered that men were statistically more likely than women to kill their partners by beating them. Moreover, boyfriends and common-law or non-married cohabitant males were more likely to beat their significant others to death than were husbands.[10]

In addition to comparing intimate partner homicides committed by males versus those by females, other studies focus on just one or the other. One study examining over 71,000 cases where women were killed by their husbands in the U.S. found that younger women of reproductive age (younger than 45 years old) were more likely to be killed by a hands-on method than a more passive method, such as by gunfire.[13] The hands-on methods considered were deaths caused by cutting instruments, blunt objects, personal weapons, drowning, and asphyxiation. More specifically, women were found to be killed by stabbing injuries more than the other hands-on methods. Thus, the authors concluded that wives of reproductive age have a higher risk of becoming victims of more violent and personal types of homicides when compared to hands-off methods.[13]

There is much less literature available on men as victims of intimate partner violence. Nonetheless, a Canadian study examined 42 homicides committed by females over a 20-year period. The researchers discovered that similar to female victims of intimate partner homicides, males were more likely to be victims of intimate partner homicide in the 15-to 24-year-old range. The most common weapons used in these homicides were knives (55.2%), followed by firearms (35.7%), strangulation (4.8%), and then blunt objects (2.4%).[24]

Another study of non-U.S. data looked at male victims of non-fatal intimate partner violence in Portugal. Over 11% of 4646 victims from 2007 to 2009 were male. The most common injuries recorded in this study were scratches and blunt force injuries from fists and from blunt instruments. The head was the most common location of these injuries.[25]

Few U.S. studies examine males as intimate partner victims. Reckdenwald and Parker[25] looked at the different influences for male-victim and female-victim intimate partner homicides. The researchers found that in cities with increased available legal services, a significant decrease occurs in the number of both male and female victims.[25] Furthermore, one U.S. study analyzed

the risk of non-fatal intimate partner violence among victims with activity limitations (defined as "long term physical or mental conditions or health problems that reduce the amount or kind of activity that can be done at home, school, work...[26]"). This was the first study to address victims with these limitations. The results concluded that men with activity limitations were more victims of intimate partner violence more often than those without these limitations.[26]

While research does exist on both men and women as victims of intimate partner violence and homicide, there are significant gaps in the literature. No studies address intimate partner violence in Oklahoma specifically through statistical analysis of the state's data. Another factor misrepresented in the literature is intimate partner violence against men in same-sex relationships. Men continue to be the victims of all homicide types more often than females. The possibility exists that many homicides reported as a man murdering his friend are actually intimate partner homicides that have simply been misreported or mischaracterized for various reasons.[27] Furthermore, little to no studies exist that examine men as victims of intimate partner homicide through the lens of autopsy or medicolegal information.

Child Homicide

Violence against children is its own unique phenomenon. Many times this violence is committed in a home where previous domestic violence took place between the parents. Domestic violence in a household where a child is located is typically defined as a lethal risk factor for the child, even if the child is not the main target of the violence.[28]

A large-scale study by the Department of Justice on U.S. homicide trends from 1975 through 2005 noted that for children under the age of 5, the perpetrator was most likely to be a parent. The perpetrators of these homicides were as follows: 31% fathers, 29% mothers, 23% male acquaintances, 7% other relatives, and 3% strangers.[29]

Another large-scale study completed in 2013 analyzed over 94 000 cases of child homicides based on arrest report data from the FBI's Supplementary Homicide Reports. The majority of the victims were less than 1 year old. Female offenders were typically younger than male offenders. The most common causes of death were strangulation, beating, asphyxiation, drowning, and defenestration (being thrown out a window). Stepparents were not found to commit these homicides more often than biological parents; however, they were twice as likely to use a firearm to kill the victims. The researchers also discovered that the most common victim/offender relationship reported was biological fathers killing their sons, followed by biological mothers killing their sons.[17]

In 2010, a retrospective study conducted in Kansas examined child abuse homicides that occurred during from 1994 through 2007. Similar to the present study, the researchers examined trends within these homicides to use for future preventative endeavors. The results of the study showed a higher number of female victims, and the majority of the victims were in the 1-to 2-year-old age range. As in the results from the two previously mentioned studies,[29,17] biological fathers were the most likely perpetrators, followed by biological mothers, and the mother's significant other. The most common injury was head trauma, followed closely by asphyxia. A surprising find according to the researchers was the minimal difference between married and unmarried mothers and their risk for abusing their children.[30]

In contrast to the results in the U.S. studies, a study on the murders of 378 children under the age of 12 by stepparents versus biological parents in Canada showed that the majority of these homicides were committed by the biological mother, followed by non-kin, the biological father, the stepfather, and then the stepmother. The younger the child in these cases, the greater the likelihood that the mother was the perpetrator of the homicide.[16]

Despite what national statistics report, other local studies, such as one out of Iowa[18] in 1992 and another from central Indiana[19] in 2015, report that non-biologically related males (i.e., the mother's boyfriend) are more likely to commit child abuse as well as child homicide. The research from Iowa examined the "expected abuse" percentages for caregivers determined by the caregiver's total time spent watching the children. The researchers found that despite the mother's boyfriend spending the least amount of time watching the children (compared with nonrelative, grandparent, aunt/uncle, and sibling caregivers), the mother's boyfriend was the caregiver with the highest rates of abuse. The mother's boyfriend was more likely to abuse the child than any other male non-parental caregiver.[18]

Fewer studies exist on child homicides compared to intimate partner homicides, despite the fact that both are considered categories of domestic violence.[8] Prior research illustrates that parents are the typical offenders in these crimes. However, other individuals such as siblings and unrelated males are common offenders as well. Few studies examine the differences in these homicides as committed by the different types of offenders. A literature search provided no such studies pertaining to child homicides committed in Oklahoma. The present research aimed to fill this gap in the literature to address all medicolegal aspects of domestic violence homicides against children in Oklahoma for a 5-year period.

Parricide

Parricide is defined as the killing of a parent by the parent's child. In research, parricide is often delineated into patricide—the killing of one's father, and matricide—the killing of one's mother.[31] The present research examines the killing of biological parents, in addition to stepparents, as part of the definition of parricide.

A report published in 1998 by Hillbrand et al discussed the common characteristics of the victims and offenders of parricide.[31] The report illustrated that the most common offenders of

these crimes are white, middle-class, male youth and adults. According to the study, patricides outnumber matricides not only in the U.S. but also for most countries where data are available. Fathers were typically killed by children under the age of 30, whereas the average age of a mother's killer ranged from 20 to 50. The report noted some of the factors possibly associated with parricides including past child abuse, mental illness, and anti-social personality. However, none of these are definite causative factors, as many children with these issues do not murder their parents.[31]

Furthermore, a Canadian study compared the differences in parricides committed by adults versus those committed by adolescents.[32] The researchers found significant differences between the two; however, only 12 adolescent homicides were compared with 43 homicides committed by adults. Adolescent offenders were more likely to use a firearm and kill both of their parents in the incident. For adult offenders, they were more likely to only kill one parent, use a weapon other than a firearm, and have a history of severe mental disorder. Additionally, matricides were more likely to be committed by adults whereas patricides were more often committed by adolsecents.[32]

Another Canadian study comparing the differences between matricide and patricide used information from 64 cases of parricide between 1990 and 2005 in Quebec, Canada.[33] Of the 56 perpetrators of these crimes, 52 of the offenders were sons. The results of the analysis showed that the most common weapons in matricides were blunt instruments, whereas knives and firearms were more common in patricides. In both types of parricides, the average victim was between 60 and 70 years old. For almost all of these homicides, including those committed by adult children, the offenders and victims lived together.[33]

A retrospective study analyzing 7 parricides committed in Portugal yielded several characteristics associated with these homicides.[34] The researchers discovered that the majority of

these homicides involved males. Of the 7 perpetrators, 6 were male; similarly, 6 of the 7 victims were male. Only 2 of the perpetrators used firearms, while the remaining used sharp weapons. One of the adult perpetrators was diagnosed with schizophrenia, 2 of the perpetrators were clinically depressed, and 3 of the perpetrators had a history of domestic violence in the home with their parents.[34]

Siblicide

A term generally reserved for animal populations, siblicide is the act of killing one's sibling. [35] Because this type of homicide is relatively rare compared to the previously mentioned homicides, little research is available on this topic. The majority of the research in this area was conducted over 10 years ago. Furthermore, many of the studies took place in areas outside of the U.S.; however, these are included here for a complete review of the topic.

The Bureau of Justice Statistics issued a report in 1994 concerning the topic of murder in families. According to data on siblicide in the U.S. from 1998, both sisters and brothers were more likely to kill a brother when committing siblicide. Compared to perpetrators of other types of domestic homicides for this time, perpetrators of siblicide were more likely to have had a criminal history prior to the homicide.[36] Another U.S. study reviewed 5 cases of non-fatal child abuse by siblings to determine commonalities within this type of violence.[37] The researchers found that all of the 5 children found to abuse their siblings had been physically abused themselves. Despite the young ages of the children who committed the abuse (5, 4, 12, 12, and 11 years old), these older siblings were responsible for taking care of their younger siblings when the abusive incidents occurred.[37]

Siblicide characteristics were explored and compared across Canada, Great Britain, Japan and Chicago, U.S. in a study published in 2001.[38] Because of the inclusion of information from multiple locations, this study examined over 600 cases of siblicide. In all countries, except for

Japan, the perpetrator of the siblicide was generally younger than the victim. This trend only changes when the siblings involved were juveniles (less than 14 years old). For these cases, the older sibling was more likely to kill the younger sibling. In all four locations, the victim and the perpetrator were more likely to be male. The relationships for the siblicides in Chicago were (in descending order): brother killed brother, sister killed brother, brother killed sister, and sister killed sister.[38]

A final study on siblicide, also conducted in Canada, used data from coroner's files on siblicides that occurred over a 10-year period.[39] The researchers found that most of these cases involved adults, and only 1 involved an adolescent. For 70% of the cases, the cause of death was stabbing. Similar to the above research, the offenders in these cases were mostly male, and the offenders were typically younger than their victims. The results also showed that alcohol played a significant role in these homicides, as the offender was under the influence of alcohol in 60% of these cases.[39]

An attempt has been made to study the characteristics of many of the types of domestic violence homicide. However, although numerous studies have been named thus far, the literature is still lacking to describe additional types of domestic violence homicide that are included in the Title 22 definition.[8] For instance, the literature does not describe homicides among cousins, grandparents and their grandchildren, or even roommates. Furthermore, no studies have attempted to compare the differences among all of the types of domestic violence homicides that fall under the Title 22 definition. An analysis of such data for a specific location would be helpful in characterizing the homicides of that area. The present research aimed to fill this void in the literature by analyzing domestic violence homicides in Oklahoma.

Domestic Violence Statistics

National Data

According to annual reports published by the U.S. Department of Justice, the rate of domestic violence in the U.S. remained unchanged from 2011 to 2014. However, the overall homicide rate has steadily declined since the 1990s.[40-42] Such trends are indicative of the unwavering problem of domestic violence homicides.

In a report published in 2010, the Bureau of Justice Statistics reported on homicide trends in the U.S. from 1976 to 2005.[29] In the 30 years of data considered, 30% of the homicides were committed by intimate partners, 11.8% by other family members, 21.8% by acquaintances, and the remaining by strangers or an unknown individual. Additionally, the report found that homicides committed by family members or intimate partners were less likely to involve firearms than those committed by friends, acquaintances, and strangers.[29]

Another report looking at homicide trends in the U.S. examined those that occurred between 1980 and 2008.[43] For this segment of time, intimate partners committed 16.3% of homicides, other family members committed 12.4% of homicides, strangers committed 21.9% of homicides, and other acquaintances committed 49.4% of homicides. It is questionable, however, with such a large number for "other acquaintances" if ex-intimate partners are considered in this statistic. Just as the prior report stated, domestic violence homicides during this time were less likely to involve guns than the other types of homicides.[43]

Oklahoma Data

To better understand the demographics and situational factors associated with domestic violence fatalities, the National Domestic Violence Fatality Review Initiative was established in the 1990s. The group reports on most state and various city data concerning demographics and

trends associated with domestic violence homicides. The Domestic Violence Fatality Review Board (DVFRB) is the local group that works under the directive of the Domestic Violence Fatality Review Initiative. The DVFRB gathers information on domestic violence homicide deaths from medical examiner's offices and law enforcement offices for the purpose of illustrating trends to use for preventative measures.[44]

In the annual Oklahoma DVFRB (ODVFRB) reports, the percentage is noted for each type of domestic violence homicide that occurred in the reported year (except the report for 2012 where this information is excluded).[2-5] The ODVFRB report analyzing domestic violence deaths between 1998 and 2010 states that 44% of the deaths were related to intimate partner violence and that 45% were related to other family violence.[2] The 2011 report noted that intimate partner violence totaled 47% of the domestic violence deaths, while other family violence homicides accounted for 45%.[3] For 2012, intimate partner homicides accounted for 45% of domestic violence deaths, but the number of family homicides was not reported.[4] Finally, the most recent report on data from 2013 states that 48% of the homicides were committed by intimate partners and that 46% were committed by family members.[5]

These data illustrate that despite the significant difference in the literature on intimate partner homicide and other family homicides, the latter occur at almost the same rate as the former, at least in the state of Oklahoma. In fact, the ODVFRB report published in 2012 states that for the years 2000, 2005, 2007, 2008, and 2009, other family homicides accounted for a greater percentage of total domestic violence homicides than did intimate partner violence.[3]

Despite this knowledge, the Oklahoma DVFRB reports do not focus on the domestic violence homicides caused by family members. The majority of the data in these reports focus on the intimate partner homicides. Also, the recommendations placed at the end of the reports for law enforcement and policy makers are mostly aimed at preventing intimate partner homicides in

the state. These reports do not include any correlational or statistical significance studies and also do not break down the specifics seen in the different types of domestic violence homicides.

Situational Factors

Before prevention measures can be put into place to lessen the number of homicides, the type of homicide must be fully understood. While no amount of knowledge may stop homicides completely, an analysis of the characteristics of past homicides is important. Such knowledge helps investigators and prevention personnel to identify commonalities in these crimes.

In 1977, David Luckenbill developed the theory of homicide as a "situated transaction" after examining 70 homicide cases.[45] He determined that homicides are not haphazard events, but are instead transactions where the roles of the two individuals involved intersect to mold a fatal outcome. Aside from homicides of children, Luckenbill stated that most victims participate, to some extent, in the offender's decision to kill them. Therefore, because patterns exist within homicides, researchers can examine the situational factors associated with these homicides to better define them.

Demographics, Relationship, and Drug/Alcohol Use

In the discussion above of prior research on the topic of domestic violence homicides, all of the researchers decided upon certain characteristics, or variables, to analyze in their study. Included among these variables were the demographics of the individuals involved, the relationship between the individuals, the weapons used or injuries inflicted, and drug or alcohol use of the individuals. Ruth Lawrence described the need to classify homicides by typologies in a 2004 report analyzing the fatal assault of children. To accomplish this, the researchers must examine the "precipitating factors" which include the variables previously described here.[46]

To best characterize the domestic violence homicides of Oklahoma, the present research included the situational or precipitating factors that previous researchers have used. However, unlike previous research, this study looked at the demographics, relationships, injuries, and drug or alcohol use across all types of domestic violence homicides in Oklahoma.

Mechanisms of Injury

A specific characteristic that distinguishes domestic violence from non-domestic violence is the mechanism of injury, which includes the weapon used and the extent of the injuries. A common hypothesis in the literature is that certain methods for committing homicide, such as cutting/stabbing, beating, and strangulation, are considered more intimate as they require closer contact between the perpetrator and the victim.[47]

Klopfstein and Hofner indicate that typical domestic violence injuries in both male and female victims will most often consist of blunt force violence. According to their study, the majority of the injuries in domestic violence cases occur to the head, followed by self-defense injuries to the arms.[20] In contrast, more distant mechanisms of injury seen in homicides are firearm injuries, poisonings, or murder-for-hire situations.

However, a 2012 study conducted by the Violence Policy Center states that the most common weapon used by males to murder women in that year was a firearm. Although taking into account non-domestic homicides as well, the study notes that 62% of the firearm homicides were intimate partner homicides.[48] Additionally, the ODVFRB reports for the years 2001 through 2014 all state that the most common weapon for domestic violence homicides was firearms. However, the DVFRB includes homicides pertaining to love triangles (i.e., a current spouse shoots his wife's ex-spouse), homicides of individuals intervening in domestic violence situations, and suicides of the domestic violence offender.[2-5] The differences in statistics illustrate

that the most common mechanism of injury in domestic violence homicide will change depending on how domestic violence is defined.

Because of a lack of research, the mechanism of injury in all types of domestic violence homicides in Oklahoma is poorly understood. Also, because no studies exist that examine multiple types of domestic violence homicides as singular events, it is unknown how the mechanism of injury varies among them. The goal of the present research was to fill this void by studying the variation in the mechanisms of injury when compared to the demographics of the victim and offender, to the relationship (or type of domestic homicide), and to the drug/alcohol use of the victim and offender.

Summary of Literature Review

Overall, many gaps exist in the literature for domestic violence homicides. Many gaps are due to the lack of a consistent definition of domestic violence relationships and the one-sided emphasis on intimate partner homicides. National statistics report of trends and characteristics for the country as a whole. However, statistics for Oklahoma reveal that these characteristics may not be relevant on the state-wide level. Understanding the mechanism of injury in domestic violence homicides could be helpful in instances where the offender is unknown. My search of the literature did not return a single report on how the mechanisms of injury differ among types of domestic violence relationships in Oklahoma. A thorough understanding of the trends associated with mechanism of injury on a state-wide scale is necessary for preventative measures and risk assessment. This understanding is most crucial for the victims of family-member domestic violence homicides who are significantly ignored in the literature and in prevention research.

CHAPTER III

METHODOLOGY

An examination of domestic violence homicides in Oklahoma from 2010 through 2014 was completed using archived casefile data contained within a database of the Oklahoma Office of the Chief Medical Examiner (OCME). This database, along with police records and news articles, provided information on the cause of death of the decedents, their demographics, the relationship between victim and offender, and the offender's demographics. Each homicide was defined as such by the assigned Forensic Pathologist as a case where one person was killed at the hands of another. Approval from the Institutional Review Board was given before data collection ensued. (See Appendix A). Per the review board's approval, data collected did not include decedent or offender's names for confidentiality purposes.

Data on 368 cases of domestic violence homicide were entered into a spreadsheet and subsequently filtered and summed to obtain trend information. The purpose of the data collection was to obtain sufficient detail about each homicide to identify how the mechanism of injury varied among the different relationship types that fall under the umbrella definition of domestic violence. The details collected for each case were: cause of death, the number of injuries to the victim, relationship between the victim and the offender, demographics of the victim and of the offender (to include age, sex, and race), the county where the homicide occurred, alcohol and/or drug use of the victim and of the offender, and whether the homicide was considered a "murder by proxy" situation. These variables were statistically analyzed to determine their

independence or relatedness to one another.

Data Collection

Collecting decedent and offender information on the spreadsheet was the first step in this research. Data collection occurred at the Oklahoma Office of the Chief Medical Examiner, Eastern Division. This office is location at 1115 W 17th St., Tulsa, Oklahoma 74107. Written permission from the office was obtained before data collection began (See Appendix B). This portion of research began in August 2015 and ended in February 2016, as 1318 case files were searched to obtain the necessary information that could be compared in the data analysis portion of this research. For each case entered onto the spreadsheet, the OCME database was first searched to identify cases of domestic violence homicides, followed by the data collection process for each case.

Creating a Workable Spreadsheet

The Excel spreadsheet was the main tool for housing the data in the data collection portion of this research and thus had to be formatted in a particular fashion. An original spreadsheet of all homicide cases in the state of Oklahoma from 2000 to 2014 was obtained from the Eastern OCME office in Tulsa, Oklahoma, in August of 2015. The spreadsheet, extracted from the OCME database by Forensic Pathologist, Dr. Andrea Wiens, contained 12 columns of information for each homicide case. From this original spreadsheet, the information for 5 years of homicides (2010 through 2014) was retained and the rest deleted to obtain a manageable number of casefiles for the research. To ensure the privacy of the victims of these homicides, names of the decedents were removed from the spreadsheet by Dr. Wiens before data collection began.

Columns unnecessary for the purposes of this research were deleted. These columns contained the pathologist's name, secondary causes of death, and administrative codes. The original spreadsheet was further expanded to include columns for: OCME case number, domestic

violence classification, date of death, mechanism of death, number of injuries, offender's relation to decedent, offender's and victim's age, offender's and victim's race, offender's and victim's sex, offender and victim's drug/alcohol at the time of the homicide, county of death, and whether the homicide was a murder by proxy situation. The final spreadsheet included these 16 columns of data fields where information was entered about all 368 cases after a search of the OCME database. Figure 1 is an excerpt from the actual spreadsheet used for data collection.

Figure 1. Excerpt of Spreadsheet Used for Data Collection

	A	B	C	D	E	F	G	H
1	Case Number	DOD	Mechanism of Injury	# of External Injuries	Perpetrator's relation to victim	Perp Age	Vic Age	Age Text
108	1102777	7/15/2011	BLUNT FORCE TRAUMA	8	father	22	15	Month(s)
109	1102913	7/22/2011	BLUNT FORCE TRAUMA	n/a	boyfriend	uk	54	
110	1102993	7/27/2011	FIREARM	7	wife	23	38	
111	1103100	8/2/2011	FIREARM	3	wife	47	50	
112	1103103	8/2/2011	SHARP FORCE TRAUMA	42	parent's bf	32	16	
113	1103138	8/4/2011	BLUNT FORCE TRAUMA	40	son	48	81	
114	1103210	8/8/2011	SHARP FORCE TRAUMA	17	ex-boyfriend	32	34	

Recording Decedent Demographics

The first step in the data collection process was to enter a case number from the spreadsheet into the "case number search" entry box of the OCME database. The database would then open to display all information pertaining to the decedent associated with that case number. The OCME database contains decedent demographics and place of death, along with additional information concerning the death. The first item recorded on the spreadsheet from the database was the county in Oklahoma where the death occurred. In some instances, the county where the death occurred was marked as "unknown" because the decedent had been moved from the original location of death. For these cases, the spreadsheet was filled in as "uk" to designate an unknown county of death. Second, the race and sex of the decedent were added. The age of the decedent was already included in the original spreadsheet information.

Determining Domestic or Non-Domestic Homicides

The OCME database also includes a narrative written by the death investigator who attended the scene. The narrative contains information concerning the identity of the decedent, trauma to the decedent, crime scene information, as well as any information provided by law enforcement on the scene. The third step in the data collection process was to read the narrative for the case and identify if the death was a domestic violence homicide or not.

Many times, a case was easily distinguished as non-domestic violence because the narrative would state that the death resulted from gang violence, a police shooting, a robbery, or another non-domestic violence type death. For non-domestic violence homicides, "no" was recorded in the domestic violence classification column for that case number. Once a case was established as non-domestic homicide, no additional information was collected. The only information on the spreadsheet for each non-domestic homicide case is the mechanism of death, the decedent demographic information, and the county of death.

Other narratives identified the case as a domestic violence homicide. Table 1 indicates the relationship types defined as domestic violence for the purpose of this study. For each case identified as a domestic violence homicide according to the narrative, "yes" was recorded in the specified column for that case number. The narrative did not readily identify some cases as domestic or non-domestic homicides. For these cases, an Internet search was performed with the decedent's name to obtain the information from news articles pertaining to arrests or court proceedings.

For all domestic violence homicides, the offender type was recorded in the "Relation to Decedent" column of the spreadsheet. Also at this time, cases were recorded as instances of "murder by proxy." In cases where a domestic violence offender was found to have asked another person to kill the victim, these cases were marked "yes" under the heading "murder by proxy" on

the spreadsheet. For instances where both the narrative and the Internet search did not indicate whether the case was domestic or non-domestic violence related, the case was designated as non-domestic.

Table 1. Domestic Violence Relationship by Offender Type

Child	Current Partner	Ex-Partner	Family	Other	Parent	Parent's SO
Daughter	Boyfriend	Ex-Boyfriend	Brother	Foster parent	Father	Parent's boyfriend
Son	Girlfriend	Ex-Girlfriend	Cousin	In-laws	Mother	Parent's girlfriend
Stepson	Husband	Ex-Husband	Grandfather	Roommate	Stepparent	
	Wife	Ex-Wife	Grandson			
			Nephew			
			Sister			
			Uncle			

Identifying Cause of Death

Once a case was defined as a domestic violence homicide, the fourth step was to obtain information from the autopsy report on the cause of death for the decedent. The cause of death was necessary to establish the mechanism of injury used in each homicide case. Seven causes of death were initially identified for the 368 domestic violence homicides over the 5-year period. Causes of death included asphyxia, blunt force trauma, drowning, firearm, sharp force trauma, thermal injuries, and an "other" category which included homicides committed by unknown means, and homicides committed by multiple causes. Because the autopsy reports for the cases where multiple causes of death were noted (i.e. sharp force and firearm injuries) did not indicate which specific act of violence caused the death, these were categorized as "other."

A cause of death was included in the original spreadsheet provided by the medical examiner; however, the language was not always similar. Each autopsy report was reviewed to obtain a cause of death that was consistent with other similar causes. For example, one doctor may have recorded "multiple blunt force trauma to head and extremities" while another wrote

"sepsis from multiple blunt force injuries." To remain consistent in data collection, both causes of death would be written as "blunt force trauma."

Documenting Number of Injuries

The fifth step in the data collection process was to review the autopsy reports and record the number of injuries sustained by the decedent. The Forensic Pathologists were consistent in their detailing of the number of injuries to the decedent both externally and internally within their autopsy reports. Therefore, the number of injuries could be counted and totaled from each individual autopsy report.

Recording Offender Demographics

The sixth step in the data collection process was to collect information concerning the offender. Because demographic information of the offender was not in the OCME database, this information was supplemented with an Internet search by the decedent's name. Similar to the process for obtaining the relationship type between victim and offender, the demographic information was found in news articles about police arrests and court proceedings. If the information was found online, the offender's age, race, and sex was recorded in the appropriate columns on the spreadsheet. Typically, this information was found in an article concerning the sentencing of the guilty offender.

Reviewing Toxicology Reports

The final step in the data collection process was to collect information concerning drug or alcohol use of the victim or offender. The toxicology portion of the OCME database was checked for results from any toxicology testing using decedent samples. If this report indicated drug or alcohol use of the decedent at the time of death, "yes" was marked in the "Drug/Alcohol Use" column of the spreadsheet. Additionally, if the narrative indicated drug or alcohol use then a

"yes" was also marked in the column. In many cases, the police officer at the scene would report to the death investigator that the offender was under the influence of drugs or alcohol at the time of arrest. In instances with no information indicating drug use in the toxicology reports or in the narrative, "unknown" was marked in the "Drug/Alcohol Use" column of the spreadsheet.

Data Analysis

Obtaining Frequencies and Redefining Variables

The first step of the data analysis was to obtain the frequencies for the variables in the spreadsheet. The frequency tables were created using SAS Version 9.4, and included the frequency of each variable, the percentage of that variable in the total group, the cumulative frequency, and the cumulative percentage. Frequencies were calculated for the mechanism of injury, the offender's relation to the victim, and the race of the perpetrators and victims. The purpose for obtaining the frequencies of the variables was to check that all assumptions had been met for the statistical analysis. Because the data collected were categorical, the data required analysis with a chi-square test through a contingency table. A requirement for chi-square analysis is that no more than 20% of the cells in the table can have expected frequencies of less than 5.[49]

Therefore, the original relationship of the offender to the victim, recorded during the data collection phase, needed to be redefined. The original dataset included 28 total offender types, as can be seen with their respective frequencies in Table 2 below. Offender types were then redefined to encompass all of the 28 relationships within 7 categories. The final 7 categories for offender relationship types included: current partners, ex-partners, parents, children, family members, parent's significant other, and an "other" category which included roommates, in-laws, and distant family members (i.e. cousins, aunts and uncles, nephews and nieces). Table 3 below shows the frequencies for the redefined offender relationship types.

Table 2. Original Classifications of Offender Types

Perp Relation2Victim	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Boyfriend	44	11.96	44	11.96
Brother	21	5.71	65	17.66
Brother-in-law	4	1.09	69	18.75
Cousin	3	0.82	72	19.57
Daughter	3	0.82	75	20.38
Ex-boyfriend	13	3.53	88	23.91
Ex-girlfriend	4	1.09	92	25.00
Ex-husband	11	2.99	103	27.99
Ex-wife	1	0.27	104	28.26
Father	26	7.07	130	35.33
Foster mother	4	1.09	134	36.41
Girlfriend	26	7.07	160	43.48
Grandfather	5	1.36	165	44.84
Grandson	8	2.17	173	47.01
Husband	49	13.32	222	60.33
Mother	16	4.35	238	64.67
Nephew	5	1.36	243	66.03
Other	10	2.72	253	68.75
Parents bf	21	5.71	274	74.46
Parents gf	1	0.27	275	74.73
Roommate	14	3.80	289	78.53
Sister	1	0.27	290	78.80
Son	36	9.78	326	88.59
Son in law	1	0.27	327	88.86
Stepfather	7	1.90	334	90.76
Stepson	7	1.90	341	92.66
Uncle	4	1.09	345	93.75
Wife	23	6.25	368	100.00

(SAS version 9.4, SAS Institute, Cary NC)

Table 3. Redefined Classifications of Offender Types

PerpRelat	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Child	46	12.50	46	12.50
CurrPartner	142	38.59	188	51.09
ExPartner	29	7.88	217	58.97
Family	47	12.77	264	71.74
Other	33	8.97	297	80.71
Parent	49	13.32	346	94.02
ParentSO	22	5.98	368	100.00

(SAS version 9.4, SAS Institute, Cary NC)

Additionally, the frequencies obtained for the 7 mechanisms of injury did not meet the assumptions of the contingency table analysis. As Table 4 illustrates, drowning deaths only

accounted for three of the mechanisms of injury. Compared to the other mechanisms, thermal injuries and asphyxia also had low frequencies.

Table 4. Original Classifications of Mechanisms of Injury

Mech Injury	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Asphyxia	23	6.25	23	6.25
BluntFT	85	23.10	108	29.35
Drowning	3	0.82	111	30.16
Firearm	177	48.10	288	78.26
Other	11	2.99	299	81.25
SharpFT	60	16.30	359	97.55
Thermal	9	2.45	368	100.00

(SAS version 9.4, SAS Institute, Cary NC)

Asphyxia, drowning, other, and thermal mechanisms of injury were combined to create a new "other" category to meet the requirements of the contingency table analysis and ensure a stronger statistical result. This change created a total of 4 mechanisms of injury, each with higher frequencies. The 4 redefined classifications of mechanisms of injury used in the analysis portion of the research can be seen below with their frequencies in Table 5.

Table 5. Redefined Classifications of Mechanism of Injury

MECHINJURY2	Frequency	Percent	Cumulative Frequency	Cumulative Percent
BluntFT	85	23.10	85	23.10
Firearm	177	48.10	262	71.20
Other	46	12.50	308	83.70
SharpFT	60	16.30	368	100.00

(SAS version 9.4, SAS Institute, Cary NC)

Creating the Contingency Tables

Using SAS Version 9.4, the data collected on the spreadsheet were analyzed by producing 2-way contingency tables to compare the frequencies among the redefined variables for 11 of the 14 analyses. The additional 3 analyses were conducted at a separate time and location, using IBM SPSS Statistics Version 21. A contingency table produces a Pearson's chi-square statistic which is used to test whether two variables are independent from one another. A chi-square statistic with a *p*-value of < 0.05 is considered significant in that the distribution of one of the variables in the contingency table differs when distributed among the other variables in the contingency table.[48]

In total, 14 contingency tables were produced in the data analysis portion of this research, the results of which will be discussed in the "Findings" chapter of this research. The SAS contingency tables compared: mechanism of injury to the perpetrator type, the mechanism of injury to the sex of the perpetrator, the mechanism of injury to the sex of the victim, the mechanism of injury to the use of drugs and/or alcohol, the mechanism of injury and the race of the perpetrator, the mechanism of injury and the race of the victim, the perpetrator type and the sex of the perpetrator, the perpetrator type and the sex of the victim, the perpetrator type and the race of the victim, the perpetrator type and the race of the perpetrator, and the perpetrator type and the use of drugs and/or alcohol. The SPSS contingency tables compared: the perpetrator's age and the mechanism of injury, the victim's age and the mechanism of injury, and the number of injuries to the decedent and the perpetrator type.

Summary of Methods

The methods section of this research was divided into the data collection and the data analysis sections. An Excel spreadsheet allowed for the smooth collection of data from the OCME database as well as from the Internet, when necessary. Along with the victim's and

offender's demographic information, data on offender type, cause of death, the number of injuries to the decedent, the county where the homicide occurred, and drug and/or alcohol use were collected for each case from the database in a specific order.

After data collection was complete, some of the variables were redefined to obtain a stronger statistical analysis. Offender types and mechanisms of injury were redefined into fewer categories with similar frequencies. The age categories for victims and offenders were also grouped into age ranges with similar frequencies. Additionally, the number of injuries to the decedent were grouped into three categories (1, 2-10, and 10 and above) with similar frequencies.

Once the variables were redefined, data analysis ensued. Because the data were categorical, a chi-square test was conducted on 2-way contingency tables to analyze the independence or interaction between two variables at a time. In total, 11 statistical tests were run in SAS Version 9.4, and 3 statistical tests were run using IBM SPSS Statistics Version 21.

CHAPTER IV

FINDINGS

Breakdown of Total Results

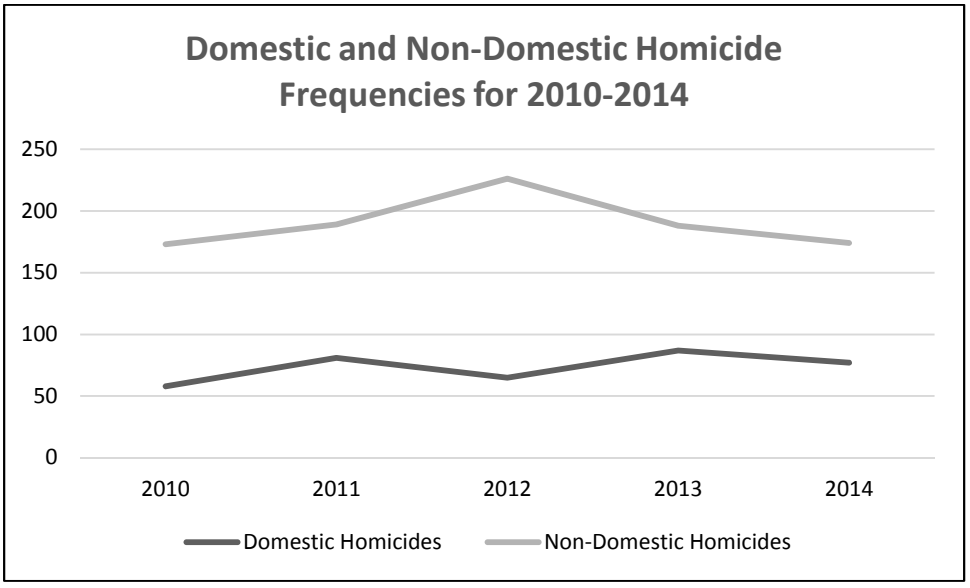
Domestic vs. Non-Domestic Homicides

From January 2010 through December 2014, a total of 1318 homicides occurred throughout the state of Oklahoma. Table 6 below shows the frequencies of domestic and non-domestic homicides for each year of interest. The overall trend showed an increase in all homicides from 2010 to 2011, as well as from 2011 to 2012, as can be seen in Figure 2 below. This increase was followed by a decrease in all homicides from 2012 to 2013 and again from 2013 to 2014.

The non-domestic homicides followed this trend; however, the domestic violence homicides for this time period did not. When the overall homicide rate increased from 2011 to 2012, domestic homicides actually decreased from 81 domestic homicides in 2011 to 65 in 2012. Additionally, when the overall homicide rate increased from 2012 to 2013, domestic homicides increased from 65 to 87.

Table 6. Five Year Frequency of Homicides		
	Domestic Homicides	**Non-Domestic Homicides**
2010	58	173
2011	81	189
2012	65	226
2013	87	188
2014	77	174
Total:	*368*	*950*

Figure 2. Line Chart Illustration of 5-Year Trend of Homicide Frequencies



As previously mentioned, limited information was collected on non-domestic violence homicides compared to domestic violence homicides. Of the total 1318 homicides in Oklahoma, 368 (or 28%) were determined to be domestic violence homicides, and 950 (or 72%) were either determined to be non-domestic violence homicides or could not be ruled positively as one or the other. For both domestic and non-domestic violence homicides, firearm injuries were the most common causes of death, followed by blunt force trauma, sharp force trauma, and other (which includes asphyxia, thermal injuries, drowning, and undetermined causes).

Regardless, the mechanisms were more evenly dispersed in domestic violence homicides than they were in non-domestic homicides. Firearm deaths accounted for 48% of domestic homicides and 71% of non-domestic homicides. The second most common mechanism of death, blunt force trauma, accounted for 23% of domestic homicides but only 11% of non-domestic homicides. Similarly, in 16% of domestic homicides, the mechanism of death was sharp force trauma. But, in non-domestic homicides, sharp force trauma only accounted for 10% of deaths. Finally, 13% of domestic homicides were caused by "other" mechanisms of death (which include asphyxia, drowning, thermal injuries, and combined mechanisms), while only 8% of non-domestic homicides were caused by these mechanisms.

The age of the victims in domestic violence homicides were compared with the ages of the victims in non-domestic homicides. The results can be seen in Table 7 below. In domestic violence homicides, the most common age group for victims was the 50 to 59 year old group. However, the frequencies of victims in the 8 different age groups were fairly similar in that the number of victims ranged from 47 individuals to 74 individuals for all of the age groups except for two. These two groups were 5 to 10 year olds (with 15 individuals) and 11 to 17 year olds (with 12 individuals).

For non-domestic homicides, however, the most common age group where victims fell was the 18 to 29 year old group. Almost 40% of the victims fell within this age group, compared to only 20% of the domestic violence victims in their most common age group (50 to 59 year olds). As the percentages in Table 7 illustrate, the ages of victims in domestic homicides were more evenly dispersed among the 8 age categories than in the non-domestic homicides. Another significant difference between the 2 groups is the number of victims in the youngest age category –those less than 5 years old. These victims represented 14% of the total number victims in the domestic violence homicide group. In the non-domestic violence homicide group, however, the under 5 year old age category was the second smallest category, representing only 1% of the

victims. This difference makes sense when considering the type of violence involved in domestic homicides (family/intimate) versus the violence in non-domestic homicides (public).

Table 7. Ages of Victims in Domestic and Non-Domestic Homicides

	Domestic Homicides	Non-Domestic Homicides
< 5	50 (14%)	14 (1%)
5-10	15 (4%)	1 (0.1%)
11-17	12 (3%)	36 (4%)
18-29	66 (18%)	373 (39%)
30-39	54 (15%)	230 (24%)
40-49	52 (14%)	135 (14%)
50-59	72 (20%)	105 (11%)
60 +	47 (13%)	52 (5%)

**Totals do not add to 100% because of rounding.*
***Age of victim unknown in 4 non-domestic homicides.*

Demographics for Domestic Violence Homicides

The ages of victims ranged from 0 to 91 years old. The youngest case was a 0 day-old fetus whose pregnant mother was beaten by the baby's father which resulted in the death of the fetus. The oldest victim was a 91 year old man who was killed by his son. In comparison, the ages of the perpetrators ranged from 12 to 97 years old. The youngest perpetrator was a 12 year old boy who killed his 10 year old brother with a firearm. The oldest perpetrator was a 97 year old man who killed his granddaughter, also with a firearm. The largest percentage (30%) of the perpetrators fell into the 18 to 29 age group, and a total of 55% of the perpetrators were between the ages of 18 and 39. The age of the perpetrator was undetermined in 40 of the domestic homicide cases.

The sex distribution between victims and perpetrators in domestic violence homicides differed significantly. Males accounted for 77% (283 total) of the perpetrators during this 5 year

time-period, while females accounted for only 23% (85 total) of the perpetrators. However, the sex of the victims was more evenly balanced. Males were victims in 48% of the cases (175 total) and females were victims just slightly more often in 52% of the cases (193 total). In cases where the perpetrator was a male, the victims were also males 37% of the time (104 total), and were females 63% of the time (179 total). Conversely, when the perpetrator was a female, the victims were males 84% of time (71 total), and were females 16% of the time (14 total). Therefore, the most common type of domestic violence cases (68%, 250 total cases) were between a victim and an offender of opposite genders.

The race of the victims and offenders were also collected, when available. For victims, a race was always indicated in the database; however, the race of the perpetrator was unknown in 31 of the cases. Categories of white, black, and other were used when indicating the race of the individuals. For perpetrators, 69% were white (233 total), 19% were black (63 total), and 12% were another race (41 total). Similarly, for victims, 70% were white (256 total), 16% were black (58 total), and 15% were another race (54 total).

When the perpetrators were white, their victims were also white 93% of the time (216 total). When the perpetrators were black, the victims were also black 75% of the time (47 total). Finally, when the perpetrators were another race, the victims were also of another race 71% of the time (29 total). Thus, in most cases of domestic violence homicide, the violence occurred between two individuals of the same race. Additionally, the victims and perpetrators of these domestic violence homicides are mostly white individuals, which corresponds to the most recent Oklahoma census, conducted in 2014. According to this census, the population of Oklahoma was 75% white, 8% black, and 17% mixed or other races.[50]

Relationship between Victim and Offender

During data collection, 28 different categories were created to define the offender's relationship with the victim in all 368 cases. In order to analyze these relationships statistically, the 28 categories were combined to create 7 distinct categories. These categories are: current partner, ex-partner, family member, parent, child, and parent's significant other. Table 8 below contains the frequencies for each of the offender types as well as the overall percentage that the offender type represents. Current partners were the most common offenders in all of the domestic violence homicides during this time period. Parents were the second most common offenders, followed closely by family members and children of the victims.

Table 8. Offender Type Frequencies

Offender Type	**Frequency**
Child	46 (13%)
Current Partner	142 (39%)
Ex-Partner	29 (8%)
Family	47 (13%)
Other	33 (9%)
Parent	49 (13%)
Parent's SO*	22 (6%)
Total	*368 (101%)***

**Parent's significant other*
***Total over 100% due to rounding*

In addition to being the most common offenders in general, current partners were also the most common offenders in the murder by proxy situations. In a total of 8 of the 368 cases, the offender was found guilty of directly hiring a third-party individual to kill the victim. Current partners accounted for 5 of these cases, ex-partners accounted for 2, and a child of the victim accounted for 1 case. The majority of these crimes (5 total) were committed by female offenders, and the most common mechanism of injury was firearm (6 total), with sharp force trauma used in the other 2 homicides.

Drug and/or Alcohol Use by Victim or Offender

Drug or alcohol use by either the victim or offender was determined by reading both the investigator narrative and the toxicology report for each case. A distinction was not made between whether the victim or the offender was the user of the drugs or alcohol. The use was instead recorded as a general situational factor. In 234 cases, drugs or alcohol were either not used by either individual, or the information was not provided by toxicology testing or by police at the scene. However, in 134 cases (approximately 36%) drugs and/or alcohol were used by either victim or offender around the time that the homicide occurred.

Analyses of Relationship between Victim and Offender

Association between sex and Offender Type

Contingency tables were created using SAS to determine the independence or association between two variables at a time (i.e. a 2-way contingency table). One of the demographic questions to be answered in this analysis was whether the sex of the victim or the offender was significantly associated with the offender type. In other words, what were the most common relationships between male versus female offenders and their victims, or, what were the most common relationships between male versus female victims and their perpetrators? To answer the first question, a contingency table was created to compare the statistical association between the perpetrator's sex and their relation to the victim (see Appendix C). There was a significant association between the offender type and whether they were male or female χ^2 (6) = 37.46, $p <$ 0.0001.

Table 9 below shows the frequency (in terms of total number) of offender types for both male and female offenders, in order from the highest frequency to the lowest. While current partners were the most common offender types for both genders, they differ significantly in the frequencies for the subsequent offender types. Male offenders were more likely than female

offenders to be family members of their victims. Furthermore, female offenders were more likely than male offenders to kill their children. However, it should be noted that the overall frequencies are much lower for the female offenders than for their male counterparts.

Table 9. Most Common to Least Common Offender Profiles

Male offenders are:	**Female offenders are:**
Current Partner, n=93	Current Partner, n=49
Family Member, n=46	Parent of Victim, n=16
Child of Victim, n=43	Other, n=10
Parent of Victim, n=33	Ex-Partner, n=5
Ex-Partner, n=5	Child of Victim, n=3
Other, n=23	Family Member, n=1
Parent's SO*, n=21	Parent's Significant Other, 1

**Parent's significant other*

To answer the second question of whether offenders were more likely to kill victims of one sex over the other, a contingency table was created to compare the association or independence of these 2 variables. This contingency table can be found in Appendix D. A significant association was found between the offender type and the sex of the victim χ^2 (6) = 34.39, $p < 0.0001$. While there were more female victims overall (193) than there were male victims (175), the only 2 offenders who were more likely to kill female victims than male victims were current or ex-partners. For the other 5 relationship types, male victims were more common.

Association between Race and Offender Type

Race of the victim and the offender were also analyzed to see whether they were associated with the offender type. The race of the victim was found to be not significantly associated with the offender type, χ^2 (12) = 13.74, $p = 0.3176$. However, there was a significant relationship between the race of the offender and the offender's relationship to the victim, χ^2 (12) = 21.87, $p = 0.0390$. White perpetrators were the most common for all relationship types, which,

as mentioned earlier, matches the statistics for the most recent 2014 census for the state of Oklahoma. However, a disproportionate number of black individuals were the offenders in cases where the offender was a child of the victim. These 2 contingency tables can be seen in Appendices E and F, respectively.

Analyses of Mechanism of Injury Characteristics

Association between Mechanism of Injury and Offender Characteristics

One of the goals of this research was to identify trends in the type of weapons used by the different offenders in domestic violence homicides. To find these trends, contingency tables were created for chi square analysis which compared the mechanisms of injury to the perpetrator's sex, race, age, and relation to the victim (i.e. offender type). Additionally, the number of injuries to the decedent was compared with the offender type. These contingency tables can be found in Appendices G, H, I, J, and K, respectively.

The first test compared the 4 redefined mechanisms of injury to the sex of the perpetrator. For both males and females, firearms were the most common mechanism of injury, followed by blunt force trauma, sharp force trauma, and all other mechanisms. Thus, the chi-square test showed that there was no significant association between males and females and their weapon of choice for these domestic violence homicides, χ^2 (3) = 2.30, p = 0.5127.

Additionally, the redefined race categories for offenders were compared to the mechanisms of injury to determine their association. Results showed the only difference between the two variables is that white perpetrators killed their victims with the "other" mechanisms of injury slightly more often than they used sharp force trauma. However, these results are not significant at the 5% level, χ^2 (6) = 12.25, p = 0.0567.

To analyze the association between the mechanism of injury and the offender's age, a chi-square test was run in SPSS with the age groups of 18-29, 30-39, 40-49, 50-59, and 60 plus. The age group of 12-17 was excluded because the expected frequencies for all mechanisms fell below 5. This group was not combined with the 18-29 age group because the latter was the largest age group already. Only 12 of the 368 offenders fell into the 12-17 age group. For blunt force trauma, firearm injuries, and other mechanisms, the majority of perpetrators fell into the 18-29 age group. However, perpetrators who killed their victims with sharp force trauma were more often in the 30-39 age group. Additionally, unlike the other mechanisms, firearm homicides were more evenly dispersed among the 5 age groups. The chi-square test resulted in a significant association between the offender's age and the mechanism of injury, χ^2 (12) = 30.33, p = 0.002.

A contingency table was created in SAS to test the association between the mechanism of injury and the offender type, using a chi-square statistical test. The results indicated a significant association between the offender type and the mechanism of injury, as the distribution was significantly different for all relations, χ^2 (18) = 71.09, $p < 0.0001$. For all offender types other than parents and parent's significant others, the most common mechanism of injury was firearm. However, for offenders that were parents of the victims or the significant other of the victim's parent, blunt force trauma was the most common mechanism of injury. The parent's significant other was also the only offender who was more likely to kill the victim with one of the "other" mechanisms of injury (which includes asphyxia, drowning, thermal injuries, or combined mechanisms) than they were to kill the victim with a firearm.

In only 1 case, a parent killed their child with sharp force trauma. In this particular incident, a stepfather killed his adult stepson. Thus, young children were never killed by their parents with sharp force trauma. Table 10 below lists the mechanisms of injury used by the offenders in order from most common to least common. To see the actual frequencies for each category, refer to the contingency table in Appendix J.

Table 10. Mechanisms of Injury for Domestic Violence Offender Types Listed from Most Common to Least Common

Child	Current Partner	Ex-Partner	Family	Other	Parent	Parent's SO
Firearm	Firearm	Firearm	Firearm	Firearm	Blunt FT	Blunt FT
Sharp FT	Sharp FT	Sharp FT	Blunt FT*	Blunt FT	Firearm	Other
Blunt FT	Other	Blunt FT*	Sharp FT*	Sharp FT	Other	Firearm*
Other	Blunt FT	Other*	Other	Other	Sharp FT	Sharp FT*

**Indicates tied frequencies*

Finally, a chi-square test was run in SPSS to determine the association between the number of injuries to the decedent and the offender type. The results indicate a significant association between the 2 variables, $\chi^2 = (12)\ 25.70$, $p = 0.012$. The number of injuries were split into 3 categories: 1 injury, 2-10 injuries, and greater than 10 injuries. When the offender was the significant other of the victim's parent, greater than 10 injuries were most commonly seen. Offenders who were parents and ex-partners were the second most likely to cause greater than 10 injuries to their victims. Taking into account the data in Table 10 above, parents and parents' significant others caused these multiple injuries through blunt force trauma. However, ex-partners likely caused these multiple injuries with firearms and sharp force trauma.

Association between Mechanism of Injury and Victim Characteristics

Further analysis was conducted to determine if there was an association between the victim's demographics and the mechanism of injury used in their murder. Contingency tables were created to compare the sex, race, and age of the victims to the mechanisms of injury, and subjected to chi-square analysis. Refer to Appendices L, M, and N, respectively, for these contingency tables.

While there was no significant difference in the weapon choice by male and female perpetrators, there was a significant association between the victim's sex and the mechanism of

injury used to kill them, χ^2 (3) = 9.96, p = 0.0189. Firearm was the most common mechanism used to kill both males and females, followed by blunt force trauma. However, female victims were much more likely than male victims to die of "other" mechanisms (such as asphyxia, drowning, thermal injuries, or combined mechanisms).

The race of the victim was also found to be significantly associated with the mechanism of injury used in the victim's homicide, χ^2 (6) = 17.47, p = 0.0077. Firearms were the most common mechanisms of injury used to kill black and white victims. However, for the victims of other races, blunt force trauma was the most common mechanism of injury.

Additionally, the ages of victims were compared to the mechanisms of injury using SPSS, to see if any association was present. The age groups used for this analysis were less than 5 years old, 5-17 years, 18-29 years, 30-39 years, 40-49 years, 50-59 years, and 60 plus years. The 5-10 and 11-17 age groups were combined in order to meet the minimum expected frequency count. For all victims 5 years and older, firearm was the most common mechanism of injury. For the victims less than 5 years old, blunt force trauma was the most common, followed by other mechanisms and firearms. There were no cases where a victim under the age of 5 was killed by sharp force trauma. Additionally, in all other age groups besides the youngest (less than 5) and the oldest (60 plus), sharp force trauma was more common than blunt force trauma. Conversely, in these 2 age groups, the victims were more likely to die from blunt force than sharp force trauma. Thus, the chi-square test showed an association between these 2 variables, χ^2 (18)= 121.94, $p < 0.0001$.

Analyses of Drug and/or Alcohol Use

Chi-square tests conducted in SAS questioned the association between drug and/or alcohol use by either the victim or offender and 2 other variables –offender type and mechanism of injury. The two following tests can be found in Appendices O and P, respectively. For 6 of the

7 offender types, a greater number of cases were either negative or unknown for drug or alcohol use than were positive. However, for offenders that were family members of their victims, there was a higher number of cases positive for drug or alcohol use than were unknown or negative. Thus, a significant association between drug/alcohol use and offender type was found, χ^2 (6) = 16.37, p = 0.0119.

Another significant association exists between drug and/or alcohol use of the victim or offender and the mechanism of injury used in the homicide, χ^2 (3) = 9.30, p = 0.0255. The cases involving drug/alcohol use are associated with a significant increase in sharp force trauma homicides. Firearm was still the most common for both known and unknown/negative drug or alcohol use, but sharp force trauma was the second most common in the homicides where drugs and/or alcohol were consumed at the time of the homicide. Conversely, in the unknown/negative cases, blunt force trauma was still the second most common mechanism of injury.

Locations of Domestic Violence Homicides in Oklahoma

In the state of Oklahoma, there are 77 counties. The OCME database holds the information for the county in which a death occurred, unless the decedent was moved postmortem and their original location of death could not be determined. For 12 of the 368 cases in this study, the county of death was unknown. To determine the counties where the majority of the domestic homicide deaths occurred, the collected data were compared to the 2012 Oklahoma census of residents per county. The 2012 census was used because it lies at the center of the data collected for this research, which is 2010 through 2014. Ranks were determined by the total number of domestic homicide deaths that occurred in each county.

Oklahoma and Tulsa counties are, respectively, the most populous counties in the state. Thus, it is not surprising that they also represented the first and second most common counties of death for domestic violence homicide victims. However, the remaining top counties where these

deaths occurred do not fall in line with the population size of the respective county. The top 10 counties can be seen in Table 11 below.

Table 11. Rankings for Counties by Total Population and Number of Domestic Homicide Deaths

County	Rank by Population	Rank by # of DV Homicides
Oklahoma	1	1
Tulsa	2	2
Comanche	4	3
Le Flore	15	4
Wagoner	8	5
Washington	14	5
Cleveland	3	6
Pottawatomie	9	7
Muskogee	11	8
Sequoyah	25	8
Cherokee	16	9
Stephens	21	9
McIntosh	42	9
Kay	19	10
Pontotoc	28	10
Lincoln	30	10
Garvin	35	10
Okfuskee	52	10

**Tied rankings occurred when the counties had the same number of domestic homicide deaths.*

The biggest outlier in the rankings is Okfuskee county. In 2012, Okfuskee county had a population of only 12 346 residents. However, this county had the same number of domestic homicide deaths as Kay, Pontotoc, Lincoln, and Garvin counties whose populations ranged from 27 259 to 45 779 residents in 2012.

CHAPTER V

CONCLUSIONS

The purpose of this study was to shed light on trends associated with domestic violence homicides in Oklahoma. Specifically, multiple variables for each of the 368 domestic homicide cases were tested to determine if significant statistical association exists between them. In addition to identifying differences between domestic and non-domestic homicides, this study compared the differences between 7 different types of domestic violence homicides (as broken down by "offender type"). Other variables tested for association included the mechanism of injury, demographics, and drug/alcohol use. The overall goal of this research was to fill in the gaps in the literature where non-intimate partner domestic violence is as thoroughly analyzed as intimate partner homicides. It is imperative to make public any information with the potential to create prevention measures to lessen domestic homicides.

Comparison to Results from Prior Research

As was previously mentioned, other studies analyzed the characteristics of domestic violence homicides in the United States as well as internationally. To understand where Oklahoma falls in comparison to the rest of the country, and other countries, the results of this study can be compared to some of these prior studies. These results were not statistically compared, but the differences or similarities can still be recognized.

Intimate Partner Homicide

According to one of the previously mentioned studies, domestic violence homicides committed by females were more likely to involve knives as the weapon of choice.[12] Another study on U.S. data also showed that men were more likely than women to kill their victims by blunt force.[11] The chi-square test on the data from Oklahoma, however, indicates that the sex of the perpetrator had no significant association with the mechanism of injury used in the homicide.

Younger spouses, aged 15-24, were recorded as being more prone to violence, and thus more likely to commit domestic violence in another study.[24] However, in the data from Oklahoma presented here, there were only 37 of 171 cases where the perpetrator was a young (less than 30 years old), current or ex-partner. Additionally, in another study, young women of reproductive age (less than 45 years old) were found to be killed by hands-on methods more often than by firearms.[13] The current data refute this statistic as only 46 of the 105 female victims of intimate partner homicide between the ages of 14 and 45 were killed by hands-on methods (blunt force, sharp force, asphyxia, and "other").

Child Homicide

According to a prior trend analysis on child homicides in the U.S., a perpetrator is statistically most likely to be a biological parent when the child is under the age of 5 years old. Also mentioned in this prior study, fathers were found to be the most common offender, followed by mothers, male acquaintances, and other relatives.[30] Interestingly, Oklahoma deaths do not follow this pattern at all. Of the 50 victims who were under the age of 5, 15 were killed by a parent's significant other, 13 were killed by biological mothers, and 11 were killed by biological fathers. The remaining 11 were killed by other family members. A study on child homicides in Kansas revealed that the majority of child homicide victims were female.[31] The data for

Oklahoma show that for homicides of children under the age of 18, the sex of the victims was evenly split. Of the 77 victims, 39 of them were female and 38 male.

Parricide

Only a few studies examined cases of parricide, or children killing their parents. In these prior studies, sons were found to be the more common killers of their parents, and typically killed their fathers more often than their mothers.[31,33] The data for Oklahoma follow these trends. A total of 43 sons and stepsons murdered their parents in the 5 year period that this research examined. In 24 of these cases the father was killed, and in 19 cases the mother was killed. Only 3 cases existed where a daughter killed her parent, and in all 3 cases the daughters killed their fathers.

Siblicide

In the prior studies on siblicides, researchers found that brothers were more often killed than sisters.[36] Also, in cases where the perpetrator was over the age of 14, the victim was typically older than the perpetrator.[38] Furthermore, in about 60% of the siblicide cases in a Canadian study, the offender was found to be under the influence of alcohol.[39] Similarly, in the current study, more brothers were killed than sisters. A total of 22 cases of siblicide occurred over the 5 year period, and in 17 of these cases the victim was a brother. However, the offender was only younger than the victim in 5 of the 15 known cases where a perpetrator was over the age of 14. Finally, like the third study mentioned, 64% (14 of 22) of the siblicide cases in Oklahoma were positive for drug and/or alcohol use by either the victim or the offender.

Mechanism of Injury

According to 2 studies on crime in the United States, domestic violence homicides are less likely to involve firearms.[29,42] As was previously mentioned, firearms were the most common

mechanism of injury for both domestic and non-domestic homicides in Oklahoma from 2010 through 2014. However, while firearms made up 71% of deaths in non-domestic homicides, they only accounted for 48% of deaths in domestic homicides. Thus, there is a greater dispersion among mechanisms of injury for the domestic violence homicides, even though firearms were the most common. Thus, the trends do fall in line with what the Violence Policy Center[20] and the ODVFB[2-5] stated in their respective reports.

Limitations of the Current Study

There were limitations to this study. First, the actual number of total domestic violence homicides for the 5 year period is likely more than 368. Some of the cases in the OCME database had not yet been cleared and a perpetrator could not be determined. There were cases where there was suspicion of domestic homicide, but the suspect was not arrested because of a lack of evidence. Another problem in defining domestic violence homicides is the underrepresentation of homosexual relationships. Likely, there were cases where individuals of the same sex were the victim and perpetrator. These individuals could then recorded by investigators as being friends and would thus not be included in this study. Or, these cases could be recorded as roommate situations and thus do not fall into the current or ex-partner category of domestic violence.

Additionally, there could be an error in the way ex-partners were identified by police or death investigators. The total number of ex-partners in this study was fairly low, despite the research indicating that partners attempting to separate from an abusive significant other are at the highest risk of violence towards them. Thus, the separation between the individuals might not be concrete enough (i.e. an actual filed divorce) to regard the perpetrator as an ex-partner of the victim, making these numbers lower than they should be.

Furthermore, the secondary data recorded in the spreadsheet regarding the offenders in this research were mostly obtained via an Internet search of the homicide. The offender's

demographics and, in some cases, their relationship with the victim was found in newspaper articles or publically-available court documents concerning the case. Validity remains a concern with this type of unverified data. However, when case information was incomplete or unknown, the case was excluded from the study. Access to police records for each case could have solved this limitation, but IRB approval and time allotted for research did not allow for the use of police records.

The applicability of the results of this study to other geographic areas is also limited. This study only examines Oklahoma data. Homicide rates vary across different regions of the country, as does the availability of weapons and cultural views on marriage, relationships, and child-rearing. Oklahoma data may not be representative of other geographic areas or jurisdictions.

A final limitation of this research is the inclusion of cases that might not fit the definition of other researchers. Cases where the death was ruled self-defense are included in this research. Additionally, cases where the offender was found not guilty by reason of insanity are included. These were included because there was no standardized way to effectively remove all of these cases as this information was not always available. Furthermore, these cases by definition of Title 22 of the Oklahoma State Statutes are considered domestic violence homicide, but may fall outside the definitions of other states or researchers.

Future Investigations

During this research, additional avenues for future studies became apparent. For example, more in-depth research into the backgrounds of the victims and perpetrators involved in these homicides could be helpful in identifying the behavioral patterns associated with these offenders. Such a study could include police records as well as any history with child welfare services (such as Department of Children and Families) for cases of child homicides. An additional avenue

could include studying the cases of murder/suicide. There was a prevalence of such cases in the OCME database, many of which were when women killed their children.

Further research into the prevention centers available to victims of domestic violence in Oklahoma would be greatly beneficial. The current study identifies the areas in the state where domestic violence homicides occur most frequently. The next avenue in protecting future victims would be to identify the areas that are most in need of prevention centers or safe houses. Determining whether these prevention centers and safe houses respond to victims of family violence is also a necessity. As this research highlights, intimate partner violence is not the only type of domestic violence homicide, and the victims of other types of family violence also deserve access to and help from these prevention centers.

Summary

While this research undoubtedly provides insight into the characteristics of domestic violence homicides in Oklahoma, there is still much to be done to lessen the number of these homicides in the state. The first step, however, is identifying where the problem lies and the situational factors that may precipitate this violence. The cases here are merely identified by their static information in the spreadsheet cells. But it is important to remember that there were 368 lives lost for this research to ensue. The goal of this project was to use the unfortunate details of these victim's murders to aid in the understanding and eventual prevention of future domestic violence homicides.

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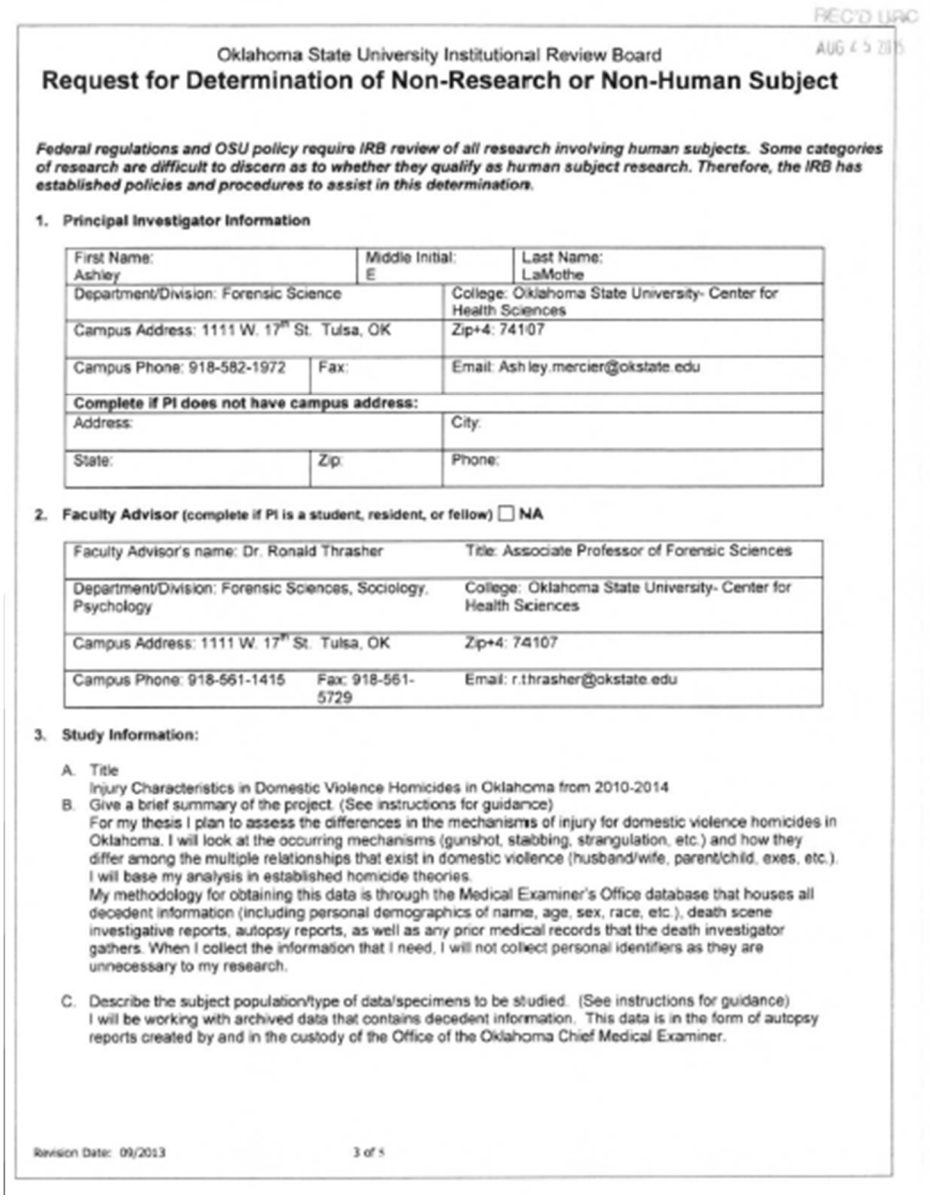
APPENDICES

Appendix A

IRB Approval for Non-Human Subject Research



RECD IRBC
AUG 4 5 2015

Oklahoma State University Institutional Review Board

Request for Determination of Non-Research or Non-Human Subject

Federal regulations and OSU policy require IRB review of all research involving human subjects. Some categories of research are difficult to discern as to whether they qualify as human subject research. Therefore, the IRB has established policies and procedures to assist in this determination.

1. Principal Investigator Information

First Name: Ashley	Middle Initial: E	Last Name: LaMothe
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Complete if PI does not have campus address:		
Address:		City:
State:	Zip:	Phone:

2. Faculty Advisor (complete if PI is a student, resident, or fellow) ☐ **NA**

Faculty Advisor's name: Dr. Ronald Thrasher		Title: Associate Professor of Forensic Sciences
Department/Division: Forensic Sciences, Sociology, Psychology		College: Oklahoma State University- Center for Health Sciences
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Campus Phone: 918-561-1415	Fax: 918-561-5729	Email: r.thrasher@okstate.edu

3. Study Information:

A. Title
Injury Characteristics in Domestic Violence Homicides in Oklahoma from 2010-2014

B. Give a brief summary of the project. (See instructions for guidance)
For my thesis I plan to assess the differences in the mechanisms of injury for domestic violence homicides in Oklahoma. I will look at the occurring mechanisms (gunshot, stabbing, strangulation, etc.) and how they differ among the multiple relationships that exist in domestic violence (husband/wife, parent/child, exes, etc.). I will base my analysis in established homicide theories.
My methodology for obtaining this data is through the Medical Examiner's Office database that houses all decedent information (including personal demographics of name, age, sex, race, etc.), death scene investigative reports, autopsy reports, as well as any prior medical records that the death investigator gathers. When I collect the information that I need, I will not collect personal identifiers as they are unnecessary to my research.

C. Describe the subject population/type of data/specimens to be studied. (See instructions for guidance)
I will be working with archived data that contains decedent information. This data is in the form of autopsy reports created by and in the custody of the Office of the Oklahoma Chief Medical Examiner.

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Oklahoma State University Institutional Review Board

Request for Determination of Non-Research or Non-Human Subject

4. **Determination of "Research".**
One of the following must be "no" to qualify as "non-research":

   A. Will the data/specimen(s) be obtained in a systematic manner?
   ☐ No ☒ Yes

   B. Will the intent of the data/specimen collection be for the purpose of contributing to generalizable knowledge (the results (or conclusions) of the activity are intended to be extended beyond a single individual or an internal program, i.e. widely or universally applicable)?
   ☐ No ☒ Yes

5. **Determination of "Human Subject".**
   A. Does the research involve obtaining information about living individuals?
   ☒ No ☐ Yes
   If no, then research does not involve human subjects, no other information is required.
   If yes, proceed to the following questions.

   All of the following must be "no" to qualify as "non-human subject":

   B. Does the study involve intervention or interaction with a "human subject"?
   ☒ No ☐ Yes

   C. Does the study involve access to identifiable private information?
   ☐ No ☒ Yes

   D. Are data/specimens received by the Investigator with identifiable private information?
   ☐ No ☒ Yes

   E. Are the data/specimen(s) coded such that a link exists that could allow the data/specimen(s) to be re-identified?
   ☒ No ☐ Yes
   If "Yes," is there a written agreement that prohibits the PI and his/her staff access to the link?
   ☐ No ☐ Yes

6. **Signatures**

Signature of PI Ashley LaMothe **Date** 8/25/15

Signature of Faculty Advisor [signature] **Date** 8-25-15
(If PI is a student)

☒ Based on the information provided, the OSU-Stillwater IRB has determined that this project **does not** qualify as human subject research as defined in 45 CFR 46.102(d) and (f) and **is not subject to oversight by the OSU IRB.**

☐ Based on the information provided, the OSU-Stillwater IRB has determined that this research **does** qualify as human subject research and **submission of an application for review by the IRB is required.**

Oklahoma State University Institutional Review Board

Request for Determination of Non-Research or Non-Human Subject

Dr. Hugh Crethar, IRB Chair

8/25/15
Date

Appendix B

Letter of Approval to Use OCME Database

SCHOOL OF
Forensic Sciences

CENTER FOR HEALTH SCIENCES

1111 West 17th Street
Tulsa, Oklahoma 74107-1898
(918) 561-1100
Fax: (918) 561-8799

August 27, 2015

Andrea Wiens, DO
Forensic Pathologist
Oklahoma Office of the Chief Medical Examiner
1115 W. 17th St.
Tulsa, OK 74107

RE: Student Research

Dear Dr. Wiens,

Please accept this letter as information and request for assistance with collecting graduate level research data. The research will support my thesis work within the Oklahoma State University, Center for Health Sciences, School of Forensic Sciences leading to a Master of Science degree in Forensic Sciences specializing in death scene investigation. I hope to review Medical Examiner reports involving domestic death cases and correlate the weapons used and injuries sustained.

With this letter, I ask for your permission to access the Medical Examiner's database of decedent information. I will not remove any record or files from the Medical Examiner's Office. I will neither collect nor record any personal identifiable information from any individual file. My research is supervised by OSU Associate Professor Ronald Thrasher, Ph.D. and will not begin without review from the Oklahoma State University Institutional Review Board (IRB Board).

Thank you for considering this request and please contact myself or Dr. Thrasher with any questions or concerns.

Respectfully,

Ashley LaMothe
Graduate Student
Oklahoma State University

Ronald R. Thrasher, Ph.D.
Director, Forensic Psychology Program
Oklahoma State University

Agreed.
A. Wiens, DO
9-1-2015

Appendix C

Contingency Table and Chi-Square Test for Perpetrator's sex and Perpetrator Type (SAS)

Table of PerpRelat by PerpSex

PerpRelat	PerpSex		
Frequency, Row Pct, Col Pct	f	m	Total
Child	3 6.52 3.53	43 93.48 15.19	46
CurrPartner	49 34.51 57.65	93 65.49 32.86	142
ExPartner	5 17.24 5.88	24 82.76 8.48	29
Family	1 2.13 1.18	46 97.87 16.25	47
Other	10 30.30 11.76	23 69.70 8.13	33
Parent	16 32.65 18.82	33 67.35 11.66	49
ParentSO	1 4.55 1.18	21 95.45 7.42	22
Total	85	283	368

Statistics for Table of PerpRelat by PerpSex

Statistic	DF	Value	Prob
Chi-Square	6	37.4635	<.0001

Appendix D

Contingency Table and Chi-Square Test for Victim's sex and Perpetrator Type (SAS)

Table of PerpRelat by VicSex

PerpRelat	VicSex		
Frequency, Row Pct, Col Pct	f	m	Total
Child	19 41.30 9.84	27 58.70 15.43	46
CurrPartner	91 64.08 47.15	51 35.92 29.14	142
ExPartner	24 82.76 12.44	5 17.24 2.86	29
Family	18 38.30 9.33	29 61.70 16.57	47
Other	9 27.27 4.66	24 72.73 13.71	33
Parent	22 44.90 11.40	27 55.10 15.43	49
ParentSO	10 45.45 5.18	12 54.55 6.86	22
Total	193	175	368

Statistics for Table of PerpRelat by VicSex

Statistic	DF	Value	Prob
Chi-Square	6	34.3937	<.0001

Appendix E

Contingency Table and Chi-Square Test for Victim's Race and Perpetrator Type (SAS)

Table of PerpRelat by VICRACE2

PerpRelat	VICRACE2			
Frequency Row Pct Col Pct	Other	black	white	Total
Child	2 4.35 3.70	6 13.04 10.34	38 82.61 14.84	46
CurrPartner	22 15.49 40.74	29 20.42 50.00	91 64.08 35.55	142
ExPartner	5 17.24 9.26	3 10.34 5.17	21 72.41 8.20	29
Family	7 14.89 12.96	6 12.77 10.34	34 72.34 13.28	47
Other	3 9.09 5.56	4 12.12 6.90	26 78.79 10.16	33
Parent	9 18.37 16.67	6 12.24 10.34	34 69.39 13.28	49
ParentSO	6 27.27 11.11	4 18.18 6.90	12 54.55 4.69	22
Total	54	58	256	368

Statistics for Table of PerpRelat by VICRACE2

Statistic	DF	Value	Prob
Chi-Square	12	13.7409	0.3176

Appendix F

Contingency Table and Chi-Square Test for Perpetrator's Race and Perpetrator Type (SAS)

Table of PerpRelat by PERPRACE2

PerpRelat	PERPRACE2			
Frequency Row Pct Col Pct	Other	black	white	Total
Child	3 6.52 4.17	6 13.04 9.52	37 80.43 15.88	46
CurrPartner	31 21.83 43.06	30 21.13 47.62	81 57.04 34.76	142
ExPartner	10 34.48 13.89	6 20.69 9.52	13 44.83 5.58	29
Family	6 12.77 8.33	6 12.77 9.52	35 74.47 15.02	47
Other	6 18.18 8.33	4 12.12 6.35	23 69.70 9.87	33
Parent	8 16.33 11.11	8 16.33 12.70	33 67.35 14.16	49
ParentSO	8 36.36 11.11	3 13.64 4.76	11 50.00 4.72	22
Total	72	63	233	368

Statistics for Table of PerpRelat by PERPRACE2

Statistic	DF	Value	Prob
Chi-Square	12	21.8745	0.0390

Appendix G

Contingency Table and Chi-Square Test for Mechanism of Injury and Perpetrator's sex (SAS)

Table of MECHINJURY2 by PerpSex

MECHINJURY2	PerpSex		
Frequency, Row Pct, Col Pct	f	m	Total
BluntFT	23	62	85
	27.06	72.94	
	27.06	21.91	
Firearm	35	142	177
	19.77	80.23	
	41.18	50.18	
Other	11	35	46
	23.91	76.09	
	12.94	12.37	
SharpFT	16	44	60
	26.67	73.33	
	18.82	15.55	
Total	85	283	368

Statistics for Table of MECHINJURY2 by PerpSex

Statistic	DF	Value	Prob
Chi-Square	3	2.2991	0.5127

Appendix H

Contingency Table and Chi-Square Test for Mechanism of Injury and Perpetrator's Race (SAS)

Table of MECHINJURY2 by PERPRACE2

MECHINJURY2 / PERPRACE2	Other	black	white	Total
BluntFT	18	21	46	85
	21.18	24.71	54.12	
	25.00	33.33	19.74	
Firearm	33	24	120	177
	18.64	13.56	67.80	
	45.83	38.10	51.50	
Other	5	6	35	46
	10.87	13.04	76.09	
	6.94	9.52	15.02	
SharpFT	16	12	32	60
	26.67	20.00	53.33	
	22.22	19.05	13.73	
Total	72	63	233	368

Statistics for Table of MECHINJURY2 by PERPRACE2

Statistic	DF	Value	Prob
Chi-Square	6	12.2455	0.0567

Appendix I

Contingency Table and Chi-Square Test for Mechanism of Injury and Perpetrator's Age (SPSS)

Age of Perpetrator * Mechanism of Injury Crosstabulation

			Mechanism of Injury				Total
			BluntFT	Firearm	Other	SharpFT	
Age of Perpetrator	18-29	Count	33	38	12	15	98
		Expected Count	20.8	46.8	14.0	16.4	98.0
		% of Total	10.4%	12.0%	3.8%	4.7%	31.0%
	30-39	Count	16	33	12	22	83
		Expected Count	17.6	39.7	11.8	13.9	83.0
		% of Total	5.1%	10.4%	3.8%	7.0%	26.3%
	40-49	Count	10	32	12	7	61
		Expected Count	12.9	29.1	8.7	10.2	61.0
		% of Total	3.2%	10.1%	3.8%	2.2%	19.3%
	50-59	Count	5	27	7	7	46
		Expected Count	9.8	22.0	6.6	7.7	46.0
		% of Total	1.6%	8.5%	2.2%	2.2%	14.6%
	60+	Count	3	21	2	2	28
		Expected Count	5.9	13.4	4.0	4.7	28.0
		% of Total	0.9%	6.6%	0.6%	0.6%	8.9%
Total		Count	67	151	45	53	316
		Expected Count	67.0	151.0	45.0	53.0	316.0
		% of Total	21.2%	47.8%	14.2%	16.8%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	30.327[a]	12	.002
Likelihood Ratio	29.527	12	.003
N of Valid Cases	316		

a. 2 cells (10.0%) have expected count less than 5. The minimum expected count is 3.99.

Appendix J

Contingency Table and Chi-Square Test for Mechanism of Injury and Perpetrator Type (SAS)

Table of MECHINJURY2 by PerpRelat

MECHINJURY2 / PerpRelat Frequency, Row Pct , Col Pct	Child	CurrPartner	ExPartner	Family	Other	Parent	ParentSO	Total
BluntFT	9	15	3	8	11	25	14	85
	10.59	17.65	3.53	9.41	12.94	29.41	16.47	
	19.57	10.56	10.34	17.02	33.33	51.02	63.64	
Firearm	22	81	16	27	13	16	2	177
	12.43	45.76	9.04	15.25	7.34	9.04	1.13	
	47.83	57.04	55.17	57.45	39.39	32.65	9.09	
Other	5	20	3	4	3	7	4	46
	10.87	43.48	6.52	8.70	6.52	15.22	8.70	
	10.87	14.08	10.34	8.51	9.09	14.29	18.18	
SharpFT	10	26	7	8	6	1	2	60
	16.67	43.33	11.67	13.33	10.00	1.67	3.33	
	21.74	18.31	24.14	17.02	18.18	2.04	9.09	
Total	46	142	29	47	33	49	22	368

Statistics for Table of MECHINJURY2 by PerpRelat

Statistic	DF	Value	Prob
Chi-Square	18	71.0851	<.0001

Appendix K

Contingency Table and Chi-Square Test for Number of Injuries and Perpetrator Type (SPSS)

Number of Injuries * Offender Type Crosstabulation

			Offender Type							Total
			Child	CurrPartner	ExPartner	Family	Other	Parent	ParentSO	
Number of Injuries	1	Count	10	54	5	15	13	12	2	111
		Expected Count	11.0	44.5	9.2	15.4	13.6	10.3	7.0	111.0
		% within Number of Injuries	9.0%	48.6%	4.5%	13.5%	11.7%	10.8%	1.8%	100.0%
		% within Offender Type	33.3%	44.6%	20.0%	35.7%	35.1%	42.9%	10.5%	36.8%
		% of Total	3.3%	17.9%	1.7%	5.0%	4.3%	4.0%	0.7%	36.8%
	2-10	Count	13	49	13	15	13	7	6	116
		Expected Count	11.5	46.5	9.6	16.1	14.2	10.8	7.3	116.0
		% within Number of Injuries	11.2%	42.2%	11.2%	12.9%	11.2%	6.0%	5.2%	100.0%
		% within Offender Type	43.3%	40.5%	52.0%	35.7%	35.1%	25.0%	31.6%	38.4%
		% of Total	4.3%	16.2%	4.3%	5.0%	4.3%	2.3%	2.0%	38.4%
	>10	Count	7	18	7	12	11	9	11	75
		Expected Count	7.5	30.0	6.2	10.4	9.2	7.0	4.7	75.0
		% within Number of Injuries	9.3%	24.0%	9.3%	16.0%	14.7%	12.0%	14.7%	100.0%
		% within Offender Type	23.3%	14.9%	28.0%	28.6%	29.7%	32.1%	57.9%	24.8%
		% of Total	2.3%	6.0%	2.3%	4.0%	3.6%	3.0%	3.6%	24.8%
Total		Count	30	121	25	42	37	28	19	302
		Expected Count	30.0	121.0	25.0	42.0	37.0	28.0	19.0	302.0
		% within Number of Injuries	9.9%	40.1%	8.3%	13.9%	12.3%	9.3%	6.3%	100.0%
		% within Offender Type	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	9.9%	40.1%	8.3%	13.9%	12.3%	9.3%	6.3%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	25.695[a]	12	.012
Likelihood Ratio	25.846	12	.011
N of Valid Cases	302		

a. 1 cells (4.8%) have expected count less than 5. The minimum

Appendix L

Contingency Table and Chi-Square Test for Mechanism of Injury and Victim's sex (SAS)

Table of MECHINJURY2 by VicSex

MECHINJURY2	VicSex		
Frequency, Row Pct, Col Pct	f	m	Total
BluntFT	40	45	85
	47.06	52.94	
	20.73	25.71	
Firearm	89	88	177
	50.28	49.72	
	46.11	50.29	
Other	34	12	46
	73.91	26.09	
	17.62	6.86	
SharpFT	30	30	60
	50.00	50.00	
	15.54	17.14	
Total	193	175	368

Statistics for Table of MECHINJURY2 by VicSex

Statistic	DF	Value	Prob
Chi-Square	3	9.9649	0.0189

Appendix M

Contingency Table and Chi-Square Test for Mechanism of Injury and Victim's Race (SAS)

Table of MECHINJURY2 by VICRACE2

MECHINJURY2 / VICRACE2	Other	black	white	Total
BluntFT	16	18	51	85
	18.82	21.18	60.00	
	29.63	31.03	19.92	
Firearm	15	24	138	177
	8.47	13.56	77.97	
	27.78	41.38	53.91	
Other	10	4	32	46
	21.74	8.70	69.57	
	18.52	6.90	12.50	
SharpFT	13	12	35	60
	21.67	20.00	58.33	
	24.07	20.69	13.67	
Total	54	58	256	368

Statistics for Table of MECHINJURY2 by VICRACE2

Statistic	DF	Value	Prob
Chi-Square	6	17.4662	0.0077

Appendix N

Contingency Table and Chi-Square Test for Mechanism of Injury and Victim's Age (SPSS)

Age of Victims * Mechanism of Injury Crosstabulation

			Mechanism of Injury				Total
			BluntFT	Firearm	Other	SharpFT	
Age of Victims	<5	Count	40	3	7	0	50
		Expected Count	11.5	24.0	6.3	8.2	50.0
		% of Total	10.9%	0.8%	1.9%	0.0%	13.6%
	5-17	Count	4	12	6	5	27
		Expected Count	6.2	13.0	3.4	4.4	27.0
		% of Total	1.1%	3.3%	1.6%	1.4%	7.3%
	18-29	Count	8	38	8	12	66
		Expected Count	15.2	31.7	8.3	10.8	66.0
		% of Total	2.2%	10.3%	2.2%	3.3%	17.9%
	30-39	Count	8	30	5	11	54
		Expected Count	12.5	26.0	6.8	8.8	54.0
		% of Total	2.2%	8.2%	1.4%	3.0%	14.7%
	40-49	Count	4	29	9	10	52
		Expected Count	12.0	25.0	6.5	8.5	52.0
		% of Total	1.1%	7.9%	2.4%	2.7%	14.1%
	50-59	Count	10	43	5	14	72
		Expected Count	16.6	34.6	9.0	11.7	72.0
		% of Total	2.7%	11.7%	1.4%	3.8%	19.6%
	60+	Count	11	22	6	8	47
		Expected Count	10.9	22.6	5.9	7.7	47.0
		% of Total	3.0%	6.0%	1.6%	2.2%	12.8%
Total		Count	85	177	46	60	368
		Expected Count	85.0	177.0	46.0	60.0	368.0
		% of Total	23.1%	48.1%	12.5%	16.3%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	121.940[a]	18	.000
Likelihood Ratio	116.605	18	.000
N of Valid Cases	368		

a. 2 cells (7.1%) have expected count less than 5. The minimum expected count is 3.38.

Appendix O

Contingency Table and Chi-Square Test for Drug/Alcohol Use and Perpetrator Type (SAS)

Table of PerpRelat by DrugAlcUse

PerpRelat	DrugAlcUse		
Frequency / Row Pct / Col Pct	uk	yes	Total
Child	28 60.87 11.97	18 39.13 13.43	46
CurrPartner	86 60.56 36.75	56 39.44 41.79	142
ExPartner	22 75.86 9.40	7 24.14 5.22	29
Family	22 46.81 9.40	25 53.19 18.66	47
Other	20 60.61 8.55	13 39.39 9.70	33
Parent	37 75.51 15.81	12 24.49 8.96	49
ParentSO	19 86.36 8.12	3 13.64 2.24	22
Total	234	134	368

Statistics for Table of PerpRelat by DrugAlcUse

Statistic	DF	Value	Prob
Chi-Square	6	16.3735	0.0119

Appendix P

Contingency Table and Chi-Square Test for Drug/Alcohol Use and Mechanism of Injury

Table of MECHINJURY2 by DrugAlcUse

MECHINJURY2	DrugAlcUse		
Frequency, Row Pct, Col Pct	uk	yes	Total
BluntFT	63	22	85
	74.12	25.88	
	26.92	16.42	
Firearm	110	67	177
	62.15	37.85	
	47.01	50.00	
Other	31	15	46
	67.39	32.61	
	13.25	11.19	
SharpFT	30	30	60
	50.00	50.00	
	12.82	22.39	
Total	234	134	368

Statistics for Table of MECHINJURY2 by DrugAlcUse

Statistic	DF	Value	Prob
Chi-Square	3	9.3009	0.0255

VITA

Ashley E. LaMothe

Candidate for the Degree of

Master of Science

Thesis: INTIMATE AND FAMILIAL MURDER: EXAMINING TRENDS IN DOMESTIC VIOLENCE HOMICIDES IN OKLAHOMA FROM 2010-2014

Major Field: Forensic Sciences

Biographical:

Education:

Completed the requirements for the Master of Science in Forensic Science at Oklahoma State University, Tulsa, Oklahoma in July, 2016.

Completed the requirements for the Bachelor of Arts in Anthropology at The University of West Florida, Pensacola, Florida in May, 2013.

Professional Memberships:

Phi Kappa Phi