

Analysis of the Main Characteristics of Infanticide  
In the United States from 1999 to 2013

by

Ximena Mantilla Villegas, MD, M.Sc.

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Robert Paine, PhD  
Chair of Committee

Kathy Sperry, PhD

Mark Sheridan  
Dean of the Graduate School

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### **Abstract**

Infanticide is the killing of a child under 1 year of age. The term includes neonaticide, which is the killing of a baby under 1 day old. Both phenomena appeared since the prehistoric era and have been practiced across the globe. Over time, societies' evolution has led to the criminalization of infanticide and neonaticide. However, infanticide and neonaticide are still committed, but are statistically underreported. In the United States infanticide and neonaticide are still legally controversial and no penal code has specifically addressed these crimes. In this study the causes of infanticide were divided into biological and non-biological causes as a means of describing more clearly the most common reasons that lead to infanticide. Neonaticide causes are related to denial of pregnancy and their subtypes.

This study analyzes some main characteristics regarding neonaticide and infanticide: sex, race, relationship between the victim and the offender, and weapon used. Total number of murder cases and total infanticide cases are correlated to determine how one affects the other. The analysis was performed utilizing data from 1999 through 2013. The data for this study was obtained from the Uniform Crime Report (UCR). The results of this study will show which children are at greater risk to become victim of neonaticide or infanticide, who are the common offenders, and by what method the offender will kill the infant.

*Keywords:* infanticide, neonaticide, postpartum depression, denial of pregnancy.

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## **Chapter I**

### **Introduction**

Infanticide is one of the most heinous criminal acts against humanity. This is because of the young age of the child, and because the victim is helpless. Unfortunately, infanticide is not a new crime; historians and writers have documented cases of infanticide in various parts of the world, dating back to prehistory (Moseley, 1986; Wen Chen Wu, 2003; Spinelli, 2005; Corrales, 2009; Loughnan, 2012). This crime has existed in different eras as a cultural or religious practice, not only in the United States, but also in other developed and developing countries. There have been various causes leading to infanticide, but researchers have noted poverty and single-parent households have been, and still are, common factors in a majority of cases throughout history (Moseley, 1986; Wen Chen Wu, 2003; Rapaport, 2005; Spinelli, 2005; Corrales, 2009; Friedman, Cavney, & Resnick, 2012; Loughnan, 2012; Berraondo Piudo, 2013; Malmquist, 2013).

Researchers have found that infanticide includes 3 subtypes: Infanticide, neonaticide and filicide (Oberman, 2003; Davies, 2008; & Loughnan, 2012; Friedman et al., 2012; Ryznar, 2013). *Infanticide* is defined as the killing of a child during his/her first year of life (Lightwood, 1938; Brewis, 1992; Friedman & Resnick, 2007; Krischer, Stone, Sevecke, & Steinmeyer, 2007; Schwartz & Isser, 2007; Isser & Schwartz, 2008; Shelton, Muirhead, & Canning, 2010; Friedman et al., 2012; Loughnan, 2012; Malmquist, 2013). Historically, some scholars have assumed infanticide is committed by the child's mother (Rapaport, 2005; Shelton et al, 2010; Williams, 2011; Friedman et al., 2012; Loughnan, 2012; Berraondo Piudo, 2013; Ryznar, 2013). However, since there are

fathers who kill their children, this theory cannot be validated. *Neonaticide*, a term coined by Dr. Resnick in the 1970's, is defined as the killing of a child during his/her first day of life (Oberman, 2003; Wills, 2004; Krischer et al., 2007; Schwartz & Isser, 2007; Isser & Schwartz, 2008; Shelton et al., 2010; Friedman et al., 2012; Vellut, Cook & Tursz, 2012; Malmquist, 2013; Ryznar, 2013; Shelton, Hoffer, & Muirhead, 2015). This type of crime has typically been linked solely with the mother as the perpetrator. This is due to the bond between the mother and her newborn. The term *filicide* refers to a broader concept which includes neonaticide and infanticide (Putkonen et al., 2007). The victim of filicide must be a child; however the age of the victim is not clearly defined, and the killing must be committed by either his/her mother or father (Friedman et al., 2012). According to Davies (2008) filicide includes the killing of a stepchild and even the murder of an adult child. However, other authors assert that filicide is the killing of a child older than 1 year (Krischer et al., 2007; Schwartz and Isser, 2007; Debowska, Boduszek, & Dhingra, 2015).

In reference to the victims' age, this study will only consider cases that meet the definitions of neonaticide and infanticide. Thus, the study will solely include cases related to the killing of a child during his/her first year of life (which includes the first day of life). Currently UCR data (Federal Bureau of Investigation [FBI], 2015) reports a large variety of offenders who may be involved in an infant death and it is not limited to infant death via a mother or father. This study will include cases of infanticide committed by family members, another known person(s) and stranger(s).

According to the World Health Organization, in 2013 the total cases of violent deaths of children under 5 years of age in the United States, was 7.3% of the total population (2014). The data from the WHO corresponded to children who were 27-day-old or younger. Despite advanced resources and infanticide prevention in well developed countries (i.e. support for single mothers, government funding for low income families and support classes for single mothers) infanticide numbers have not changed. A brief review of elevated infanticide numbers indicates the importance of the infanticide research, not only for forensic sciences, but also for the United States government.

Currently, there is no defined infanticide data for each state or regional levels. This absence in research indicates the necessity for further research pertaining to cases of infanticide. Analyzing the evolution of this phenomenon in the United States may assist the judicial system in fully appreciating the development of the crime from 1999 to 2013. Ideally, the results of this study may lead to the creation of specialized national prevention policies. Data obtained from this study will emphasize how important infanticide is on both federal and national levels. Infanticide is one of the most underreported criminal acts in the United States (Spinelli, 2005). This study may promote more thorough investigations concerning infanticide in Texas as well as across the United States.

## **Chapter II**

### **Background**

#### **Infanticide in World History: from pre-history to renaissance**

Infanticide has been a common worldwide practice, which dates back thousands of years ago. Beginning with prehistoric societies, killing newborns was caused by the scarcity of resources and population control (Brewis, 1992; Schwartz & Isser, 2007). The more common victims were disabled and female children (Meyer et al., 2001). In 4000 to 2000 B.C., in Babylonian and Chaldean cultures, infanticide was linked to the belief that disabled children were omens from their gods, which could indicate good or bad events. However, not all disabled newborns were killed (Moseley, 1986; Meyer et al., 2001). Egyptians viewed disabled babies as “sacred animals” and placed them in a higher echelon of society, due to this infanticide was lower in their society (Moseley, 1986). In 1600 B.C., Phoenicians committed infanticide as a sign of sacrifice for their gods. However, it is unknown what specific age range or gender of children they killed (Wen Chen Wu, 2003).

In the Greek – Roman Imperial time span, infanticide was common and morally accepted. The specific causes varied from population control to eugenic motives, which included a continuous search for beauty and physical perfection, and a desire to eliminate children which did not fall within their societal standards (Moseley, 1986; Oberman, 2003; Spinelli, 2005; Schwartz & Isser, 2007; Shelton et al., 2010). The victims could be disabled and able-bodied children; however, disabled infants were more commonly chosen. These children were often placed overnight in an exposed area, a method

supported by Aristotle as the best way to control overpopulation (Schwartz & Isser, 2007). The children who survived until next morning would be allowed to live with their families again (Moseley, 1986; Meyer, 2001; Wen Chen Wu, 2003; Oberman, 2003).

In the pre-Islamic Arabia infanticide victims were solely female babies. This was attributed to a lower social status for women, who did not have equal inheritance or legal rights as men, and were quickly considered a burden to their families (Meyer et al., 2001). Women were treated as “property” and as such mothers killed them as an act of compassion (Meyer et al., 2001; Oberman, 2003). The Muslim dowry system and its influence on Hindu cultures (with the invasion of India in the 13<sup>th</sup> and 14<sup>th</sup> centuries) led over time to the persistence of female infanticide (Milner, 1998; Meyer et al., 2001). This is reflected even today with the practice of female infanticide particularly in poor families. Members of poor families prefer to commit female infanticide instead of the future social pressure for giving a dowry they cannot afford (Oberman, 2003; Schwartz & Isser, 2007).

In regards to Judaism, it has continuously defended human life and condemns any practice of homicide, including infanticide. This belief was transmitted to the Christian, Catholic and Protestant doctrines (Wen Chen Wu, 2003; Schwartz & Isser, 2007). Interestingly, the Roman Empire adopted Christianity in 318 A.D. due to Emperor Constantine. During this time he established infanticide was as punishable a crime (Moseley, 1986). However, when the Emperor was deposed the practice was reestablished.

In Eastern cultures, specifically in China, by 2000 B.C. infanticide was already practiced (Wen Chen Wu, 2003). Due to Chinese social customs, and economic conditions, female children were the most common victims of infanticide in poor as well as in wealthy families (Oberman, 2003; Schwartz & Isser, 2007). Men were considered more valuable due to their ability to work in the field and their capability to continue the family line and glorify their ancestors (Meyer, 2001). On the other hand, women were considered as mere consumers and a financial burden (Milner, 1998; Schwartz & Isser, 2007). The situation did not change even when the Revolution occurred in China, but worsened when in 1979 the policy of “one child per family” was adopted (Meyer et al., 2001). In Japan, infanticide was viewed from a different point of view. Having fewer children could improve the standard of living, thus infanticide was not considered an option to reduce the growing population (Wen Chen Wu, 2003; Schwartz & Isser, 2007). Thus, Japanese coined their own terms to refer and differentiate infanticide: oya-ko shinju (the parent-child suicide) and kogoroshi (child-kill) (Wen Chen Wu, 2003; Schwartz & Isser, 2007; Davies, 2008). Both types were considered different from each other, because oya-ko shinju was not a crime but kogoroshi was.

In the middle ages, infanticide was initiated by economic and social pressures upon single mothers (Moseley, 1986). Mothers were forced to kill their newborns in order to hide their embarrassing and stigmatized situation from the rest of the people. Society did not look favorably upon unwed women’s bastard children, but infanticide committed by married women was acceptable (Oberman, 2003). In Judeo-Christian

Europe the profound religiosity led to an aggressive behavior against “illegitimate” children and their mothers (Meyer et al., 2001; Spinelli, 2005).

During the inquisition era, European society believed only witches were able to commit infanticide (Meyer et al, 2001). Additionally, handicapped children were considered nothing more than the product of a relationship between a witch and the devil (Moseley, 1986; Oberman, 2003). In 500-100 A.D., when agrarian society developed in the middle age, there was an increase in societal pressure for having male children (Moseley, 1986). It was believed that an increase in male children would allow for more work in the field in the future. Therefore, female and disabled babies were the common victims of infanticide. Considering most people depended upon soil-work during the Renaissance and Reformation eras, female and handicapped children remained victims of infanticide because they were useless for field work (Moseley, 1986).

### **Infanticide in World History: from modern era to the contemporary era**

In 1647, Russia was the first country which recognized infanticide as a crime. By 1888, the rest of European countries (except England) established a legal distinction between infanticide and murder (Spinelli, 2005). Although they assigned indulgent punishments for committing infanticide. In the 19<sup>th</sup> century, infanticide was still an accepted practice. However, a movement against infanticide began and included authorities offering rewards for information of any infanticide cases (Moseley, 1986). Furthermore, theories concerning the relationship among pregnancy, childbirth, and the postpartum mental disorder (since French psychiatrists Esquirol and Marce) appeared as possible explanations for infanticide (Meyer et al., 2001; Oberman, 2003).

In England, thanks to the social protest, infanticide was recognized in 1922 and 1938 statutes as a unique form of homicide (Meyer et al., 2001; Spinelli, 2005; Brennan, 2007; Schwartz & Isser, 2007). Thus, infanticide was criminalized and legally banned. Moreover, infanticide was related to special circumstances due to the mental status of women in their post-partum period (Shelton et al., 2010). At the beginning of the 20<sup>th</sup> century, Judeo-Christians considered that only desperate and/or immoral women could commit infanticide (Meyer et al., 2001; Oberman, 2003). During late 20<sup>th</sup> century infanticide was mostly related to single mothers who were victims of social isolation or those women who considered their pregnancy as a threat to their life conditions (Oberman, 2003).

### **Infanticide in the history of the United States**

Historically, Kawaiisu tribe practiced infanticide of one child in twin births, especially in times of shortage (Zigmond, 1986). In the area of California, the Sinkyone and Lassik tribes killed illegitimate children (Elsasser, 1978). People from the Wailaki tribe used to kill one child in twin births in order to avoid a deadly destination for both of them (Elsasser, 1978). Couples from the Yurok tribe, another California group, committed infanticide in the interest of limit their progeny (Pilling, 1978). Members of the Cahto tribe used to kill twins and babies with deformities as soon as they were born (Myers, 1978).

In the 16<sup>th</sup> century, during the missionization performed by Spanish people, many native women were forced to cohabitate with Spanish priests or soldiers (Castillo, 1978). Thus, white children born from women in the tribe were killed as a result of hatred



generated in Californian Indians for abuses committed by Spanish (Castillo, 1978). It was mentioned that during the 18<sup>th</sup> century some groups from the Western Shoshone tribes, the Death Valley and the Big Smoky groups, used to kill one child in twin births (Thomas, Pendleton, & Cappannari, 1986). In the same century, members of the Nambe Pueblo tribe committed infanticide, but causes for the killing were not clarified (Speirs, 1979)

Schwartz and Isser (2007) refer that in the 19<sup>th</sup> century, the main cause for infanticide in the United States was poverty. As in other countries, in colonial America's rural areas women were more at risk at becoming victims of infanticide and filicide, since "boy's labor contributed to the cash crop economy while daughter's work had no monetary value" (Schwartz & Isser, 2007, p. 33). However, in urban locations female and male had the same risk.

Oberman (2003) performed a study analyzing 185 cases of neonaticide and infanticide committed in Chicago. Those cases were registered from 1870 to 1930. Most of the crimes registered in that period of time in Chicago were committed by asphyxiating the baby and the most common victims of infanticide were illegitimate children (Oberman, 2003).

### **Etiology of infanticide**

It should be noted that the etiology referred in this chapter regards to the causes which lead the offenders to commit infanticide, not the specific causes of infant death. Since the etiology of infanticide has multiple associations, the causes will be divided in two groups: biological and non-biological causes related to the offender. Additionally,

and due to its relevance in cases of neonaticide, *denial of pregnancy* will be discussed as a part of the biological causes as well.

**Biological causes.** These causes are described only for women as the offender in a case of infanticide. As the name implies, biological causes are only linked to changes in a woman's body after giving birth. These changes are commonly related to variations triggered by pregnancy and/or lactation (Brennan, 2007; Schwartz & Isser, 2007; Friedman et al., 2012). Typically, biological mother-related symptoms derived in infanticide are included in the theory known as "medicalization theory", which states that authors of infanticide are "mad" and not "bad". Therefore, they deserve medical treatment instead of legal punishment (Loughnan, 2012).

The most accepted medical-based theory about why a mother could kill her child is the *postpartum depression*. According to Wisner et al. (2003), from their second day of postpartum women with postpartum depression have lower estradiol levels. From that day on those levels will tend to decrease (Wisner et al., 2003). Symptoms of postpartum depression are similar as those found on other types of depression (such as eating and sleeping problems, anxiety, feelings of anguish and incapacity, lack of endurance, inability to perform common everyday activities, and suicidal thinking) (Schwartz & Isser, 2007; Friedman et al., 2012). However, according to the International Classification of Diseases (ICD-10), the patient must fulfill some requirements to be diagnosed with postpartum depression: her disorders must have started within the first 6 weeks after giving birth and the patient must not have criteria for other disorders (Wisner et al., 2003). While, the fifth version of the Diagnostic and Statistical Manual of Mental

Disorders (DSM-V) asserts that postpartum depression must start within the first 4 weeks after the child's birth (American Psychiatric Association, 2013).

In addition to the hormonal variations, Wisner et al. (2003) suggests that postpartum depression could be related to a disregard of the serotonin function in the postpartum period. This would explain the more aggressive and obsessive thoughts of the mother regarding her baby. At this point, it is important to differentiate postpartum depression from the "baby blues", which is a temporary condition (it lasts just 10 days after giving birth), and it is presented by almost 50% to 80% women in postpartum period (Wisner et al., 2003; Brennan, 2007; Schwartz & Isser, 2007; Shelton et al., 2015). The "baby blues" is characterized by presenting with a mild mood disturbance, without the pervasive dysphoria which is present in major depression (Wisner et al., 2003), and it does not need medical treatment to be resolved (Shelton et al., 2015).

Another biological cause of infanticide, but in a lower frequency than postpartum depression, is the *postpartum psychosis*. This pathology is characterized by hallucinations or delusions, and the patient also suffers from confusion and alterations in cognition (Wisner et al., 2003; Schwartz & Isser, 2007; Isser & Schwartz, 2008). The woman often shows bizarre behavior, disorganization of thoughts, ideas of grandiosity, suspiciousness, delusions of reference, impaired sensorium/orientation, and self-neglect (Wisner et al., 2003; Brennan, 2007; Friedman et al., 2012). A different kind of psychosis, also referred as a biological cause of infanticide, is the "altruism cause related to psychosis", in which the mother believes his baby could be better in death (Friedman et al., 2012).

According to Rapaport (2005), a large number of fathers who commit infanticide suffer from psychosis and severe depression. However, unfortunately for those men suffering from psychotic illnesses, these pathologies are far more difficult to be presented as a defense factor during a trial of a man who committed infanticide (Friedman et al., 2012). It is even more difficult to try to demonstrate that a man was diagnosed with a form of psychosis when he is involved in an infanticide crime (Rapaport, 2005, Friedman & Resnick, 2007; Friedman et al., 2012).

***Denial of pregnancy.*** As its name implies, denial of pregnancy is a state of negation of pregnancy by the woman involved. Sometimes, wrongfully, denial of pregnancy is related to concealment of pregnancy. However, the concealment of pregnancy refers to a woman who mentally, emotionally and physically acknowledges her condition, and due to that she tries to hide her pregnancy (Miller, 2003; Friedman et al., 2012; Vellut et al., 2012).

On the other hand, denial of pregnancy may involve a conscious acknowledgment of the pregnancy, but not an emotional acceptance of it (Miller, 2003). Therefore, both terms are not related. Denial of pregnancy has been divided in three subcategories: pervasive denial, affective denial, and psychotic denial (Friedman et al., 2012).

***Pervasive denial.*** Physically and emotionally the woman does not know about her pregnancy condition. In this way, she is surprised by the birth of her child (Friedman et al., 2012). In these cases, physical manifestations in the woman are not usually present or they are misinterpreted (Wills, 2004; Vellut et al., 2012). This misinterpretations, according to Miller (2003), may be women having “fewer and less intense physical

symptoms than do other women...little or no weight gain... When weight gain does occur, it may be attributed to other factors” (p. 84). Those women might even present their normal menstruation, or if this is not normal, they explain amenorrhea by saying that is due to situations of their daily lives, such as stress (Miller, 2003).

*Affective denial.* The woman is mentally conscious about her pregnancy but not emotionally (Friedman et al., 2012). According to Miller (2003) women with affective denial behave as if they were not pregnant, as well as not feeling as if they are pregnant. Vellut et al. (2012) assert that “affective denial is associated with feelings of detachment from the infant” (p. 554).

*Psychotic denial.* This kind of denial may appear and disappear during the course of the pregnancy (Miller, 2003). According to Friedman et al. (2012) this subtype is rare. The woman denies her pregnancy in a delusional way (Miller, 2003). The woman has been usually diagnosed with schizophrenia and, at times, she is conscious of her pregnancy or she could find strange reasons to her physical changes (Friedman et al., 2012). For example, she may say that those sensations caused by the fetus are just intestinal gas, or that her abdomen is distended due to an internal tumor or water retention (Miller, 2003; Wills, 2004; Schwartz & Isser, 2007). Thus, the denial of pregnancy leads the woman to commit neonaticide once the child has born.

**Non-biological causes.** Non-biological causes include sociological reasons that could lead the offender to commit infanticide or neonaticide. These are: family economy (poverty), single/young mothering, sex of the child, unwanted child (Friedman & Resnick, 2007; Friedman et al., 2012; Loughnan, 2012), mothers as victims of violence,

altruism, and culture/religious beliefs. Partner revenge is also mentioned by some scholars, but the occurrence of this form of infanticide is very low. As risk factors, it is important to consider that child neglect and child abuse are usually a step prior infanticide, however they cannot be considered as causes for it. Next, the most important non-biological causes will be explained in detail.

***Family economy (poverty).*** Living in poverty constitutes an important reason for a woman who commits infanticide or neonaticide. She feels her child is an unwanted financial burden, and she could escape from this situation by killing him/her (Wills, 2004; Harris et al., 2007; Schwartz & Isser, 2007; Schurman-Kauflin, 2010). A study conducted by Shelton et al. (2010) in the United States shows, among the highest results, from the 45 women who committed infanticide, 34% were considered lower class and 29.5% of them belonged to the lower-middle class. Only 4.5% of those offenders came from the upper class. This demonstrates how poverty could be a strong influence for committing infanticide (Wen Chen Wu, 2003). Logically, this factor could be important regardless of the gender of the offender.

***Single/young mothering.*** A study performed by Shelton et al. (2010), including 45 cases of infanticide committed by women, determined that the mean age of the offenders was 20.91 years old. According to Friedman et al. (2012), single/young mothering is one of the most common reasons for committing infanticide. A young woman who is single might consider her baby a burden, and this increases the chance of her killing her child. Friedman et al. (2012) also assert that women who are young, undereducated and did not receive prenatal care, are more likely to commit infanticide.

These women are usually isolated from economic support provided by family, friends, or community (Oberman, 2003; Krischer et al., 2007; Schwartz & Isser, 2007; Isser & Schwartz, 2008). Isolation becomes a very strong stress factor that often leads to commit infanticide (Krischer et al., 2007).

***Sex of the child.*** During history, and even today, the sex of the child has been pivotal in determining if the infant lives or dies. The prejudice against females remains in some countries, usually in those characterized by cultures dominated by men (World Health Organization, 2012). This prejudice against female babies leads to female infanticide (Milner, 1998; Friedman et al., 2012). Countries such as India have an alarming incidence of female infanticide due to the fact that their culture views girls as undesirable (Spinelli, 2005; Schwartz & Isser, 2007). However, in the United States, according to a study conducted by Fox and Zawitz (2007), male children are more commonly victims of infanticide than females.

***Unwanted child.*** An unwanted child linked to a single and young woman often is associated with infanticide. However, an unwanted child could happen with married couples with low economic resources, to having too many children to raise, or marriages with domestic violence background. The more children in a poor family the higher risk for infanticide. Children with some kind of disability that requires extensive care and financial investment will be at a higher risk to be killed (Friedman et al., 2012). According to Krischer et al. (2007) being an unwanted child represents an important risk factor in cases of neonaticide.

***Mothers as victims of violence.*** Cases where the mother is the victim of violence, are typically associated with an abusive partner. According to the U.S. Department of Health and Human Services (1995) domestic violence “begins with the battering of a spouse, then escalates to include the children” (p.12). When the infanticide is committed by the partner (usually a male), the mother might act as accomplice. In these cases, women who are victims of violence are not able to protect themselves or their children from the abuser (Oberman, 2003).

***Altruism.*** It is based on the offender’s belief that he/she is committing the crime for the victim’s sake by saving him/her from future pain or suffering. Friedman et al. (2012) suggest that reasons for altruism could be divided in three subgroups, depending on the origin of the altruistic belief: psychotic (mentioned before, but not considered in this study as non-biological cause), the mother’s extended suicide (the woman commits suicide after the homicide of her baby), and non-psychotic euthanasia-like (the child is actually sick, therefore the parent has a real reason to believe his/her child is suffering).

***Culture/Religious beliefs.*** Unmarried women who have children are still not tolerated in Indonesia and Vietnam. This leads to high numbers of infanticide in those areas (Spinelli, 2005). In the same vein, in South American countries, like Bolivia, native populations do not condemn infanticide. For example, people from aymara ethnicity, those strongly rooted in old customs, consider that killing an illegitimate baby has a social justification (De Hilari, Condori, & Dearden, 2009). They also believe that children with deformities or twin births (male and female) are bad omens for the family, therefore they should be killed (De Hilari et al., 2009). Among the Ayoreos, a tribal



group settled in some areas of Bolivia and Paraguay, practicing infanticide is still very common. Deformed children, twin births, a recent divorce of the baby's parents, and women too young to bear motherhood responsibilities are some of the main reasons that lead to infanticide (Bugos & McCarthy, 1984).

Spinelli (2005) refers to cases of infanticide due to religious beliefs, which occurred in the Alto de Cruzeiro (northeast of Brazil). There, stigmatized children, those whom they consider "want to die", are left to die from hunger. Once they die, they are "angels" offered to Jesus and his mother. Thus, they can help the rest of the inhabitants to preserve their scarce resources and food.

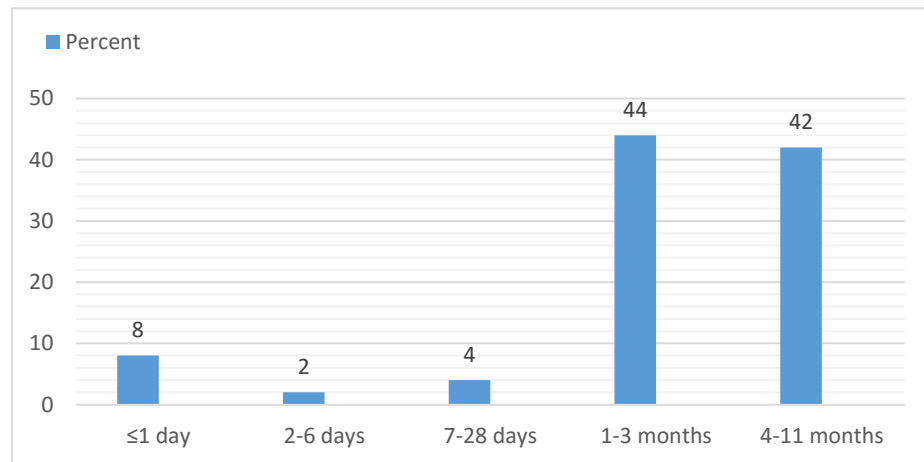
### **Epidemiology**

According to the World Health Organization (2014), in 2000 approximately 57,000 children died as victims of homicide. In 2013, 4.6 million worldwide infant deaths occurred (seventy four percent of all under-five-year-old deaths) were 12 months old or less. Even when the number has been decreasing since 1990, it is still alarmingly high. In Africa and South Asia deaths of children under 1 year of age are still high (WHO, 2014).

Even when the number of infanticide cases are high, many authors state that number does not fully represent the reality. Specifically, since infanticide is an underreported crime (HHS, 1995; Overpeck, 2003; Friedman & Resnick, 2007; Schwartz & Isser, 2007). Underreporting might be due to the inaccuracy of the coroners and medical examiners' rulings when determining a case as infanticide (HHS, 1995; Friedman & Resnick, 2007; Schwartz & Isser, 2007). This might be due to the lack of

experience of many medical examiners and coroners when identifying and giving proper diagnosis of signs of violence in newborns and infants (HHS, 1995).

Moreover, in some cases of alleged infanticide the main evidence of the crime, the victim's body, has disappeared (Friedman & Resnick, 2007; Schwartz & Isser, 2007). Thus, it is not possible to record the case as infanticide. According to a report done by the National Center for Health Statistics (U.S. Department of Health, Education and Welfare [HEW], 1967), in 1964 cases of infanticide in the United States represented 2.2% of the total murders. The rate of infanticide increased from 3 per 100,000 persons in 1956 to 5.4 per 100,000 persons in 1964. The same report mentioned that nonwhite infants were more commonly victims of infanticide (HEW, 1967).



*Figure 1.* Age at death for infants dying from intentional or suspicious causes, United States, from 1990 to 1997

Data comes from Overpeck, 2003

A study conducted by Overpeck (2003), determined that from 1990 to 1997 in the United States the ages of the infants with higher numbers of death due to intentional or suspicious causes were 1-3 months and 4-11 months (Fig. 1). Even when data compiled by the WHO (2014) from 2005 to 2013, which is not age specific, still exemplifies a

higher number of infants between 0 to 27 days of age died due to birth asphyxia and trauma. Meanwhile, between the ages of 1 month – 59 months, children died as a result of some injury (Table 1) (WHO, 2014). However, it was not established how many of those cases, in both age ranges, were homicide.

*Table 1.* Distribution of violent causes of death among children aged less than 5 years (total) in the United States, from 2005 to 2013\*

Year	Birth asphyxia and birth trauma			Injuries		
	0-27 days	1-59 months	Total 0-4 years	0-27 days	1-59 months	Total 0-4 years
<b>2013</b>	1232	99	1332	196	3141	3337
<b>2012</b>	1247	102	1349	198	3215	3413
<b>2011</b>	1236	105	1341	197	3268	3465
<b>2010</b>	1263	111	1374	201	3364	3565
<b>2009</b>	1169	103	1271	170	3415	3584
<b>2008</b>	1215	133	1348	178	3485	3663
<b>2007</b>	1238	110	1348	185	3524	3709
<b>2006</b>	1217	143	1359	174	3651	3825
<b>2005</b>	1383	116	1499	185	3531	3716

\*Data comes from World Health Organization (2014)

A report done by Fox and Zawitz (2007), for the Bureau of Justice Statistics, including data from 1976 through 2005, showed that from victims under 5 years of age, children under 1 year of age constitute at least one-third of the total cases (Table 2). Furthermore, infanticide was mostly committed by a known person (more than 80% of the cases) (Table 3) (Fox & Zawitz, 2007). Fox and Zawitz’s report indicates that in homicide cases of children under 5 years of age, fathers were the offenders in 31% of the cases and mothers in 29% of them.

Table 2. Infanticide by victim age, from 1999 to 2005, according to Fox and Zawitz\*

<b>Year</b>	<b>Less than 1</b>	<b>Total under 5</b>	<b>Percentage of victims under 1</b>
1999	260	613	42.40%
2000	266	603	44.10%
2001	260	641	40.50%
2002	210	594	35.40%
2003	258	610	42.20%
2004	201	578	34.70%
2005	205	575	35.70%

\*Data comes from Fox and Zawitz (2007). Their report includes data from 1976 through 2005. Period from 1999 through 2005 was selected in order to obtain more specific data for further comparison.

Table 3. Percent of homicides of children under age 5 by relationship with the offender, from 1999 to 2005, according to Fox and Zawitz\*

<b>Year</b>	<b>Parent</b>	<b>Family</b>	<b>Friend/Acquaintance</b>	<b>Stranger</b>	<b>Unknown</b>
1999	57.0%	7.8%	23.0%	1.9%	10.3%
2000	52.1%	8.0%	25.8%	1.2%	12.9%
2001	54.0%	5.9%	25.9%	3.6%	10.7%
2002	52.4%	6.5%	24.7%	3.6%	12.8%
2003	56.3%	7.5%	21.4%	2.1%	12.8%
2004	53.6%	5.3%	26.4%	1.6%	13.0%
2005	51.3%	7.4%	27.1%	2.7%	11.5%

\*Data comes from Fox and Zawitz (2007). Their report includes data from 1976 through 2005. Period from 1999 through 2005 was selected in order to obtain more specific data for further comparison.

Cooper and Smith (2011), in their report including data from 1980 through 2008, corroborated findings done by Fox and Zawitz. Children under 1 year of age represented

the age with the highest homicide victimization proportion of all children less than 5 years of age. In 63% of all cases, children were killed by a parent (33% by fathers, 30% by mothers). In at least 90% of the homicide cases of children under 5 years of age, the offender was a known person.

The WHO published in its report “Child abuse and neglect” (2012) that many of the children’s deaths are not properly investigated or autopsied. Thus, it is difficult to define the real number of infanticide cases because it is not possible to determine if the child death was infanticide or not (Shelton et al., 2010). This especially happens in cases not investigated or/nor autopsied. Furthermore, WHO’s publication mentions the most frequent cause of death among children under 4 years of age is related to head injury, followed by abdominal injuries and intentional suffocation (WHO, 2012).

All the numbers considered and mentioned before do not include all the millions of children dying every day due to abuse and/or negligence around the world but not catalogued as homicide cases (WHO, 2012). This is especially concerning in the case of neonaticide, due to a low prevalence rate and a high level of concealed criminality (Spinelli, 2005; Shelton et al., 2010). The concealed criminality would lead infanticide to be an underreported crime, even in the United States. Causes for underreporting include poor documentation, cases reported as sudden infant death syndrome (SIDS) deaths, lack of death certificates, undocumented birth (for concealed pregnancies), and corpses which are not found (Spinelli, 2005).

## Killing methods

In the United States the cause of death of a person is determined by medical examiners and coroners, based on the international classification of diseases - Ninth revision (ICD-9). On this classification, infanticide appears in the section of traumatic deaths according to external cause (Overpeck, 2013). This category includes deaths produced by suffocation or asphyxiation and fatal injury. Fatal injury could have been produced by battering, suffocation, strangulation, drowning, criminal neglect, firearms, arson, cuts and stabbing, assault or other specified causes (Table 4) (Overpeck, 2003).

*Table 4.* Infant injury deaths classified by intent and cause of homicides: United States, from 1990 to 1997\*

<b>Cause of homicide</b>	<b>Number</b>	<b>Proportion</b>
<b>Total</b>	3,077	100.0
<b>Battering, other maltreatment</b>	1,054	31.3
<b>Assault, unspecified means</b>	859	27.9
<b>Suffocation/strangulation</b>	387	12.6
<b>Drowning</b>	118	3.8
<b>Criminal neglect</b>	96	3.1
<b>Firearms</b>	90	2.9
<b>Arson</b>	39	1.3
<b>Cuts and stabbing</b>	39	1.3
<b>Other specified causes</b>	395	12.8

\*Data comes from Overpeck, 2003, p. 22.

In general, the most common methods to commit neonaticide are suffocation and drowning (Krischer et al., 2007; Shelton et al., 2015), meanwhile head trauma and asphyxiation are most common to commit infanticide (Milner, 1998; Smithey, 1998;

Shelton et al., 2015). For this latter, suffocation is the mechanism most commonly used, being provoked by using the hands or by using some soft object (e.g. pillow). According to Douglas and Vanderminden (2014) children are more commonly killed by “personal weapons, asphyxiation, drowning and household objects” (p.758). The shaken baby syndrome is also referred as a trauma related cause of death in cases of neonaticide and infanticide. This syndrome consists on severe shaking of the child which can produce cerebral edema and hemorrhage (Smithey, 1998).

### **Killers in cases of infanticide**

In infanticide, the relationship between the victim and the offender is particularly close. According to researchers, traumatic deaths of infants would be mostly caused by parents, stepparents or an adult in a role of caretaker (Smithey, 1998; Overpeck, 2003; Rapaport, 2005). In general, cases of murder men are the usual offenders, in infanticide the mother has the leading role as the killer (Milner, 1998). According to Douglas and Vanderminden (2014) most of the children under 5 years are killed by a parent, more commonly the mother.

Schurman-Kauflin (2000) asserts that women are child killers more frequently than men. This phenomenon is suggested to be related to the overwhelming responsibilities women have as mothers with the raising of their children. Thus, in a moment of anger and stress the death of their children can occur. However, infanticide committed by women could be also related to the “women’s ancestral reproductive fitness” (Harris et al., 2007, p. 87) which leads them to kill a child in order to reduce the family income’s beneficiaries. Therefore, those women would be acting for the sake of

their families. Nevertheless, Debowska et al. (2015) assert that such adaptive strategy would be applicable only in cases of neonaticide.

According to Rapaport (2005), men commit more infanticide than women, but, since they are not as attractive to the media and public, these cases are not considered important to be exposed. Friedman, McCue, and Resnick (2005) agree with Rapaport's conclusions, stating that during the last 25 years of the 20<sup>th</sup> century, from the total cases of murder of children under 5 years, 61% was committed by their parents (31% by the fathers, and 30% by the mothers). Harris et al. (2007) explain that fathers commit infanticide more frequently than mothers, and that the killing by a man is an act of vengeance against his couple which might be caused by "sexual jealousy, marital discord, marital separation, and even uxoricide (killing one's wife)" (p. 86). Rapaport (2005) also details that men are the main killers of children less than one year of age as well as of those under five years of age; meanwhile, mothers are the predominant murderers just in cases of newborns and babies less than one week old of age.

According to Smithey (1998) neonaticide is, *par excellence*, a crime committed by the child's mother. It is a rare case when neonaticide is committed by the baby's father (Isser & Schwartz, 2008; Shelton, 2010). This might be because of the fathers have less access to the newborn babies than the mothers. Furthermore, factors who may lead women to commit neonaticide cannot be applied to men (Shelton, 2010). Krischer et al. (2007) refer that preexisting mental illnesses diagnosed in mothers who commit neonaticide are not as common as in those who commit infanticide or filicide.



## **Penal regulation of infanticide in the United States**

Not much is known about when infanticide became a crime in the United States. However, Gottlieb (2005) refers that in the 17<sup>th</sup> century in Massachusetts, Pennsylvania, South Carolina, and Philadelphia, infanticide was considered a severe crime punishable by death. From the 18<sup>th</sup> century until today a clear regulation for infanticide in the United States has not been mentioned.

Between the later 19<sup>th</sup> and early 20<sup>th</sup> century a “medical model” was received and established by countries such as England and France (Spinelli, 2005; Brennan, 2007; Shelton, et al., 2010). However, the United States remained indifferent to establish this differentiation (Rapaport, 2005). During this time, testimonies from various medical experts admitted that a postpartum disorder could exist in women who commit infanticide, but they also asserted that the disorder was very uncommon (Oberman, 2003; Brennan, 2007).

The model penal code of the United States establishes parameters which serve as a basis for the penal code of each state (Weschler, 1968). The model penal code does not include a specific article regarding infanticide. Even when all 50 states in the United States have specific laws regarding child abuse, there is no a specific law for infanticide (Friedman & Resnick, 2007; Malmquist, 2013; Ryznar, 2013). This crime would be included in the topic about homicide, which is defined as the act of “causing the death of another human being either purposely, knowingly, recklessly or negligently” (Weschler, 1968).

Since each state has its own penal code, the crime of infanticide does not have a uniform way for being defined and/or punished (Rapaport, 2005; Spinelli, 2005; Friedman & Resnick, 2007; & Malmquist, 2013). So the infanticide jurisprudence might result arbitrary and incoherent (Oberman, 2003). In some cases infanticide is judged as a first degree murder, in others of second degree, or even as a manslaughter (Malmquist, 2013; Ryznar, 2013) (Table 5).

*Table 5. Charges against neonaticidal mothers, from 1990 to 2005\**

<b>Charge</b>	<b>Total cases</b>
Misdemeanor	2
Injury to child/child abuse	5
Manslaughter	24
Homicide	66
Other	4
<b>Total</b>	<b>101</b>

\*Data comes from Schwartz and Isser, 2007, p. 82.

In cases of neonaticide the offenders are judged following the general homicide laws. American medical and legal experts do not accept postpartum mental disorders as a cause of a newborn's murder (Shelton et al., 2010). Neonaticide cases are usually determined as a result of stillbirths, malnutrition, seizures or SIDS (Malmquist, 2013). If the defense lawyer tries to use the alleged mental disorder of the woman when committing neonaticide or infanticide, he/she will find that theories regarding

neonaticide-infanticide and postpartum depression do not meet Frye nor Daubert tests, so they could not be admissible in courtroom (Schwartz & Isser, 2007).

Legally, sentences in cases of neonaticide and infanticide are variable and have no differentiation between them or from other types of homicide (Wills, 2004; Schwartz & Isser, 2007; Malmquist, 2013). Different sentences may be applied to infanticide offenders. These punishments vary from probation, to a few years in prison, or life imprisonment, to the death penalty (Oberman, 2003; Spinelli, 2005; Shelton et al., 2010; Friedman et al., 2012). However, many female infant murderesses have avoided jail or harder punishments using the justification of “postpartum depression” or “the good mother defense”. The good mother defense is a legal resource used to assert that the death of a child occurred in the hands of a virtuous woman and sacrificed mother who suffers from some kind of mental disturbance (Rapaport, 2005). However, when the offender is a man that allegation is not considered. Thus, in cases of infanticide men usually receive harder sentences than women (Friedman et al., 2012).

To reinforce this statement, Friedman et al. (2012) refers to a study conducted by Friedman, Hrouda, Holden, Noffsinger, and Resnick, in 2005, concerning filicide cases that occurred in Michigan and Ohio. The study demonstrated that just one man was diagnosed as insane, compared with other 39 women who also committed filicide and obtained the insanity diagnosis. On the other hand, post-partum syndromes are broadly accepted in the American Court during civil proceedings (Spinelli, 2005). These syndromes are considered in civil actions since they could affect the woman’s interests in situations related to child custody or adoption decisions (Spinelli, 2005).

## **Chapter III**

### **Methods and materials**

#### **Objectives**

- Analyze the main characteristics in victims of infanticide in the United States from 1999 to 2013.
- Determine the proportion of infanticide cases based on the total cases of murder in the United States from 1999 to 2013.
- Examine the fluctuation of cases of infanticide from 1999 to 2013.

#### **Hypothesis**

H1: There is no difference among main characteristics of infanticide reported in the United States from 1999 to 2013.

H2: There is no relationship between total number of murder cases and total number of infanticide cases reported in the United States from 1999 to 2013.

#### **Methods, materials and equipment**

The data will be extracted from the Uniform Crime Reports (UCR) of the Federal Bureau of Investigation (FBI). Data will include: year, total number of murders, total infanticide cases, sex, race, relationship between the victim and the offender, and weapon(s) used. Cases of death of people who are more than 1 year of age will not be considered. The information will be collected electronically on a Excel sheet, which includes all the variables mentioned, and analyzed using SPSS-IBM software. Other materials include one portable computer (laptop), one printer, and one flash drive of 4GB.

To establish the comparison and significance among data from each year from 1999 to 2013, chi square will be applied to nominal variables [sex, race, relationship between the victim and the offender, and weapon(s) used]; and correlation to total amounts of murder and infanticide. Thus, the significance among variable groups will be also determined. Furthermore, central tendency measures will be applied to all of the variables: mode to ordinal and nominal variables [year, sex, race, relationship between the victim and the offender, and weapon(s) used]; mean, median and mode to interval variables (total number of murders and total infanticide cases). Since year is the independent variable, other analysis will depend on the dependent variable being analyzed.

**Analysis of variables**

Variables’ data will be collected and analyzed as follows:

<b>Variable</b>	<b>Type</b>	<b>Description</b>	<b>Statistical test applied</b>
<b>Year</b>	Ordinal	1999	Chi square
		2000	Central tendency measures (mode)
		2001	
		2002	
		2003	
		2004	
		2005	
		2006	
		2007	
		2008	
2009			

		2010 2011 2012 2013	
<b>Total number of murders</b>	Interval	Total number of murder cases	Correlation Central tendency measures (mean, median, mode)
<b>Total infanticide cases</b>	Interval	Total number of infanticide cases	Correlation Central tendency measures (mean, median, mode)
<b>Sex</b>	Nominal	1 Male 2 Female 88 Unknown (missing)	Chi square Central tendency measures (mode)
<b>Race</b>	Nominal	1 White 2 Black or African American 3 Other 88 Unknown (missing)	Chi square Central tendency measures (mode)
<b>Relationship victim/offender</b>	Nominal	1 Family member 2 Another known person 3 Stranger 88 Not determined 89 Unknown (missing)	Chi square Central tendency measures (mode)
<b>Weapon(s) used</b>	Nominal	1 Firearms 2 Knives or cutting instruments 3 Blunt objects	Chi square Central tendency measures (mode)

		4 Personal weapons 5 Poison 6 Explosives 7 Fire 8 Narcotics 9 Strangulation 10 Asphyxiation 11 Other weapon or weapon not stated	
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**Ethical issues**

Since the data origin is the UCR, results show only de-identified data. Thus, data only refers to year, total number of murder cases, total infanticide cases, sex, race, relationship between the victim and the offender, and weapon(s) used. UCR data does not include personal identification information. This study has obtained the approval form from the Institutional Review Board (IRB) (see Appendix).

## **Chapter IV**

### **Results**

Results show that from 1999 through 2013, the average number of total number of murder cases is 13917.47, the median is 13752, and the mode is 12253. Regarding cases of infanticide, the average is 194.67, the median is 196, and the mode is 144. Central tendency measures (mode) applied to nominal variables show that the mode of sex of the victims is male, mode of race of the victim is white, mode of relationship between the victim and the offender is other known person, and finally that mode of year of occurrence is 2003.

Correlation applied to total number of murders and total infanticide cases shows that the R (correlation coefficient) is 0.162. This means that there is a positive correlation between both variables: if total number of murders increases, so will the total infanticide cases. Thus, we reject the null hypothesis 2, which states that there is no relationship between total number of murder cases and total number of infanticide cases reported in the United States from 1999 to 2013.

Chi square results show that with regard to variables year, sex, and relationship between the victim and the offender, chi square is not significant. Thus, we accept the null hypothesis 1 for these variables, which states that there is no difference among these characteristics of infanticide reported in the United States from 1999 to 2013. However, regarding variables race and weapon used, chi square is significant, so we reject the null hypothesis 1, because there is a difference among those characteristics of infanticide reported in the United States from 1999 to 2013.



**Total number of murders and total infanticide cases by year.** The total cases of murder registered by the UCR from 1999 to 2013 were 208762. From this total, 2920 were cases of infanticide (1.4%). There were more murder cases in 2003 and 2004 (16043 and 16137 cases, respectively). From 2005 murder cases began to decrease. In 2013 there were 12253 cases of murder, which constitute less cases than in other years in the period 1999-2013 (Fig. 2). Total infanticide cases varied from 1.09% to 1.68% of the total number of murders from 1999 through 2013 (Fig. 3 and 4). There were more cases of infanticide in 2000, 2001, 2003 and 2008 (217, 220, 225, and 221 cases, respectively). From 2003 to 2004 cases of infanticide decreased, from 225 to 176 cases, but from 2005 they increased year by year until 2008 (from 182 to 221 cases). From 2009 to 2012, even when a small increase in 2011, infanticide cases decreased. In 2009 there were 193 cases of infanticide, 186 cases in 2010, 196 cases in 2011, and 144 cases in 2012. In 2013 there was a slight increase of infanticide cases (162 cases) (Fig. 5).

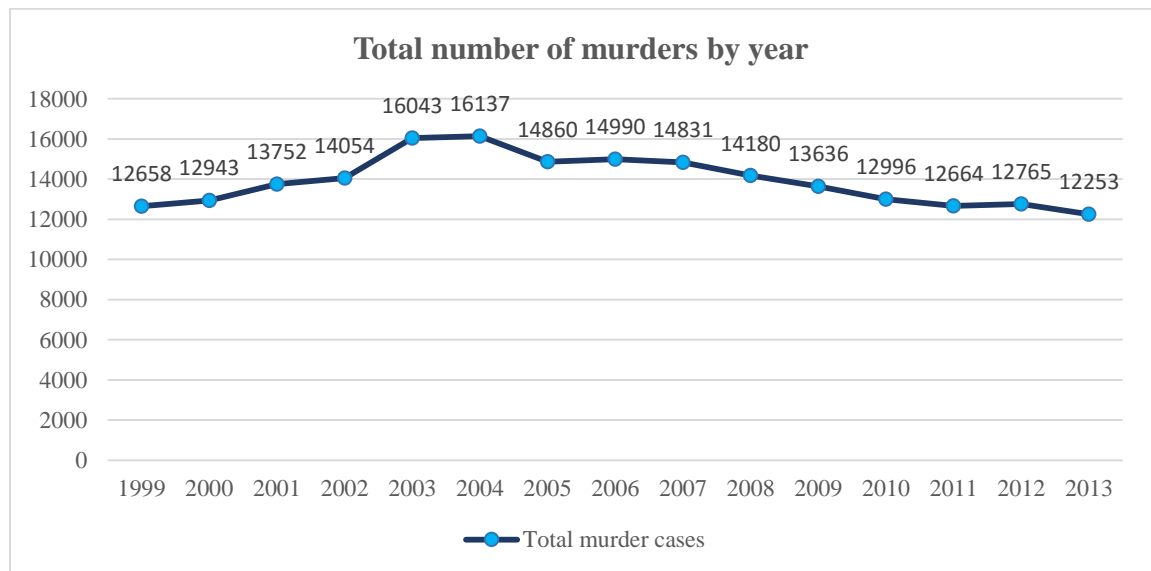


Figure 2. Total number of murders by year  
Data comes from the Federal Bureau of Investigation (2015)

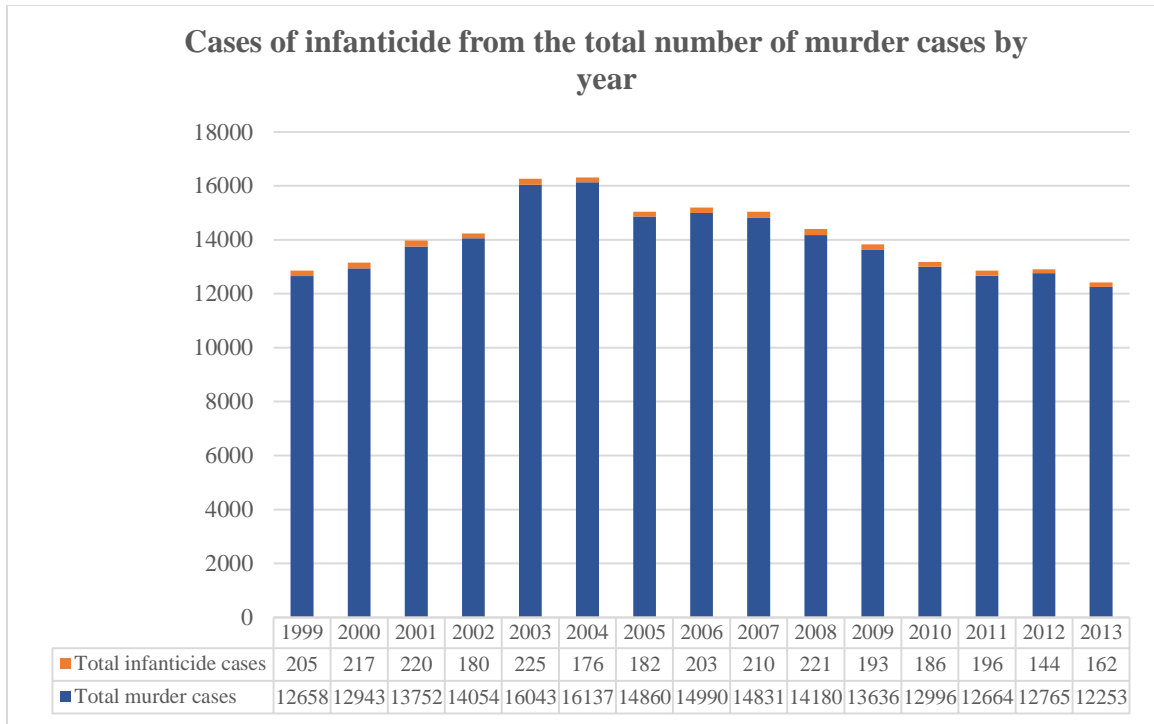


Figure 3. Cases of infanticide from the total number of murder cases by year  
Data comes from the Federal Bureau of Investigation (2015)

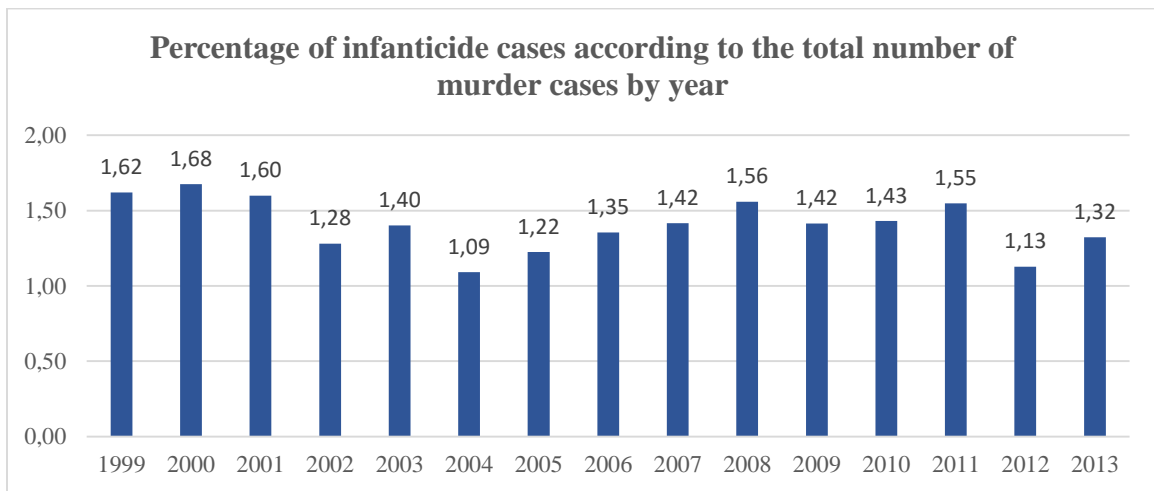


Figure 4. Percentage of infanticide cases according to the total number of murders cases by year  
Data comes from the Federal Bureau of Investigation (2015)

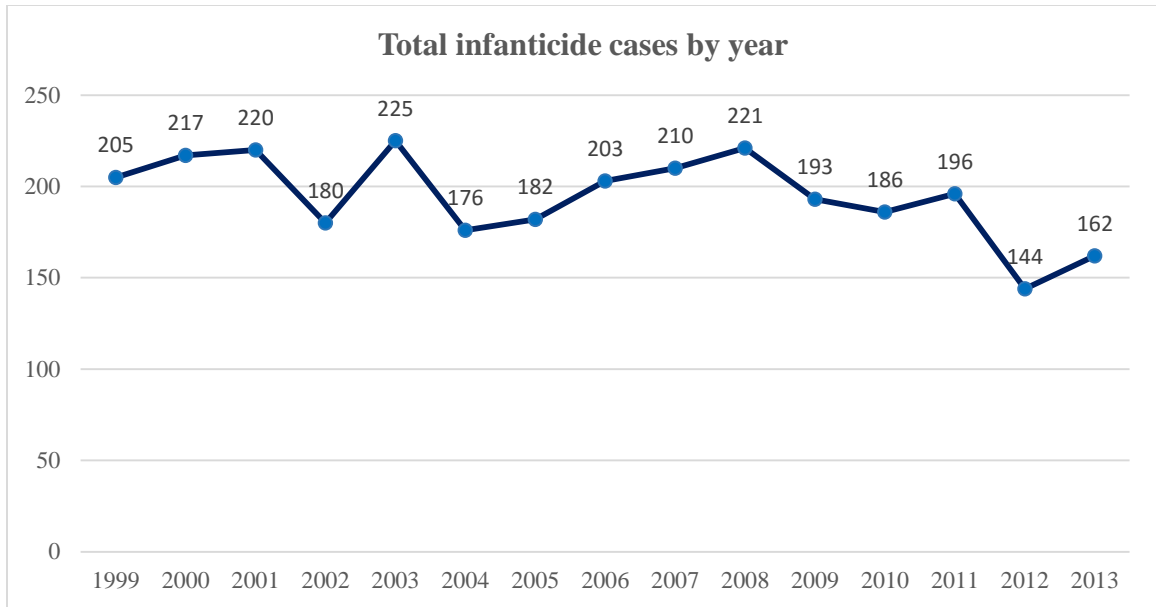


Figure 5. Total infanticide cases by year  
Data comes from the Federal Bureau of Investigation (2015)

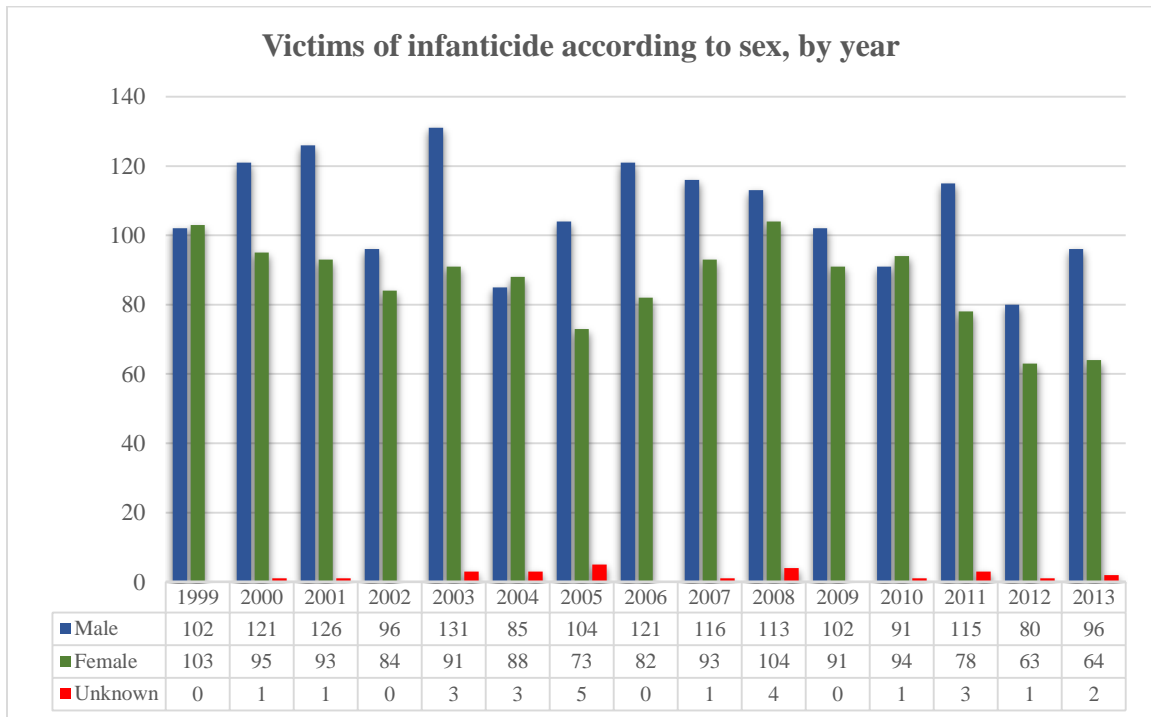


Figure 6. Victims of infanticide according to sex, by year  
Data comes from the Federal Bureau of Investigation (2015)

**Sex of the victims.** Figure 6 shows the prevalence of male victims in cases of infanticide from 1999 through 2013. Difference between male and female victims is more prevalent in 2003, 2005, 2006, 2011 and 2013. In those years variation between male and female children victims of infanticide were as follow (the first number corresponds to number of males and the second to number of female victims): 131 and 91 in 2003, 104 and 73 in 2005, 121 and 82 in 2006, 115 and 78 in 2011; and 96 and 64 in 2013. In 1999, 2004 and 2010 female victims exceeded male victims (again, the first number corresponds to number of males and the second to number of female victims): 102 and 103 in 1999, 85 and 88 in 2004, and 92 and 93 in 2010.

**Race of the victims.** From 1999 through 2013 most of the victims of infanticide were white (1785 cases), showing a considerable difference in comparison to the next most affected racial group, which was black or African American (960 cases) (Fig. 7). Cases of other racial group were minimum (85 cases).

**Relationship between the victim and the offender.** From 1999 to 2013 most of the cases of infanticide (398 cases) were committed by a known person who was not part of the victim's family. A lesser number of infanticide cases (64 cases) were committed by a family member. There was only one case, in 2002, on which a stranger killed an infant (Fig. 8). However, it should be noted that the relationship between victim and offender was defined only in 16.47% of the total cases of infanticide, since UCR report does not specify that information for all of the infanticide cases that were registered (Table 6).

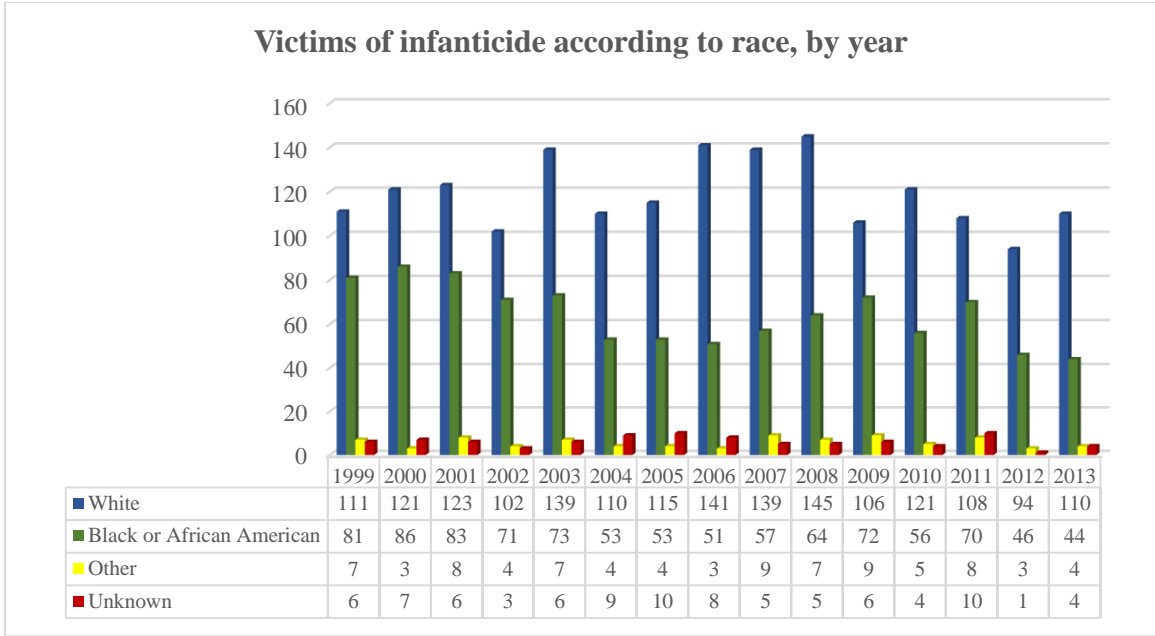


Figure 7. Victims of infanticide according to race, by year  
Data comes from the Federal Bureau of Investigation (2015)

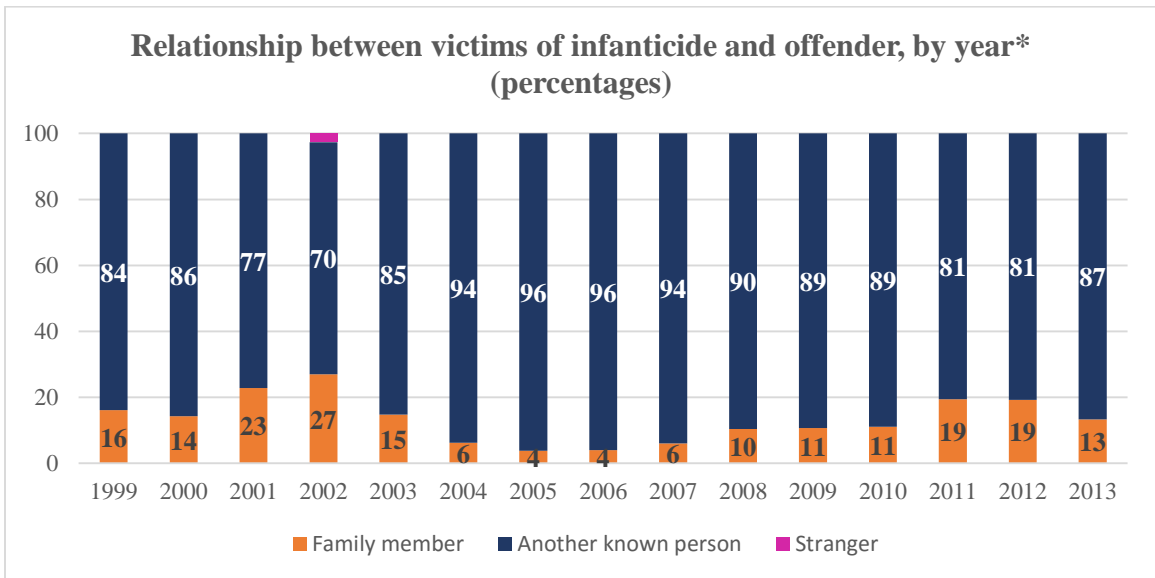


Figure 8. Relationship between victim and offender, by year  
\* Only includes cases labeled as "Children killed by babysitter", in the UCR table about Murder circumstances by relationship. It does not include missing cases (not determined nor unknown).  
Data comes from the Federal Bureau of Investigation (2015)

Table 6. Relationship between the victim and the offender\*\*<sup>a</sup>

Year	Family member	Another known person	Stranger	Not determined**	Unknown
1999	5	26	0	173	1
2000	4	24	0	187	2
2001	8	27	0	183	2
2002	10	26	1	142	1
2003	4	23	0	196	2
2004	1	15	0	159	1
2005	1	25	0	156	0
2006	1	24	0	176	2
2007	2	31	0	176	1
2008	5	43	0	170	3
2009	3	25	0	165	0
2010	4	32	0	150	0
2011	7	29	0	157	3
2012	5	21	0	118	0
2013	4	26	0	132	0

\*Only includes cases labeled as "Children killed by babysitter", in the UCR table about Murder circumstances by relationship.

\*\*Includes those cases not labeled as "Child killed by babysitter" in the UCR data. Therefore, the relationship cannot be determined.

<sup>a</sup> Data comes from the Federal Bureau of Investigation (2015)

**Weapon used.** From 1999 through 2013 infanticide was mostly committed by using some kind of personal weapon (hands, feet, fists, knees). The total number of infanticide cases committed with personal weapons was 1538. Other weapons or weapon not stated appear as the second most common weapons (used in 653 cases). Asphyxiation

and blunt objects (clubs, hammers, and similar) were used in 226 and 209 cases, respectively. Poison, explosion, and fire were the least used weapons when committing infanticide (11, 3, and 21 cases, respectively). Firearms (115 cases), knives or cutting instruments (66 cases), narcotics (47 cases) and strangulation (31 cases) were also less common (Fig. 9).

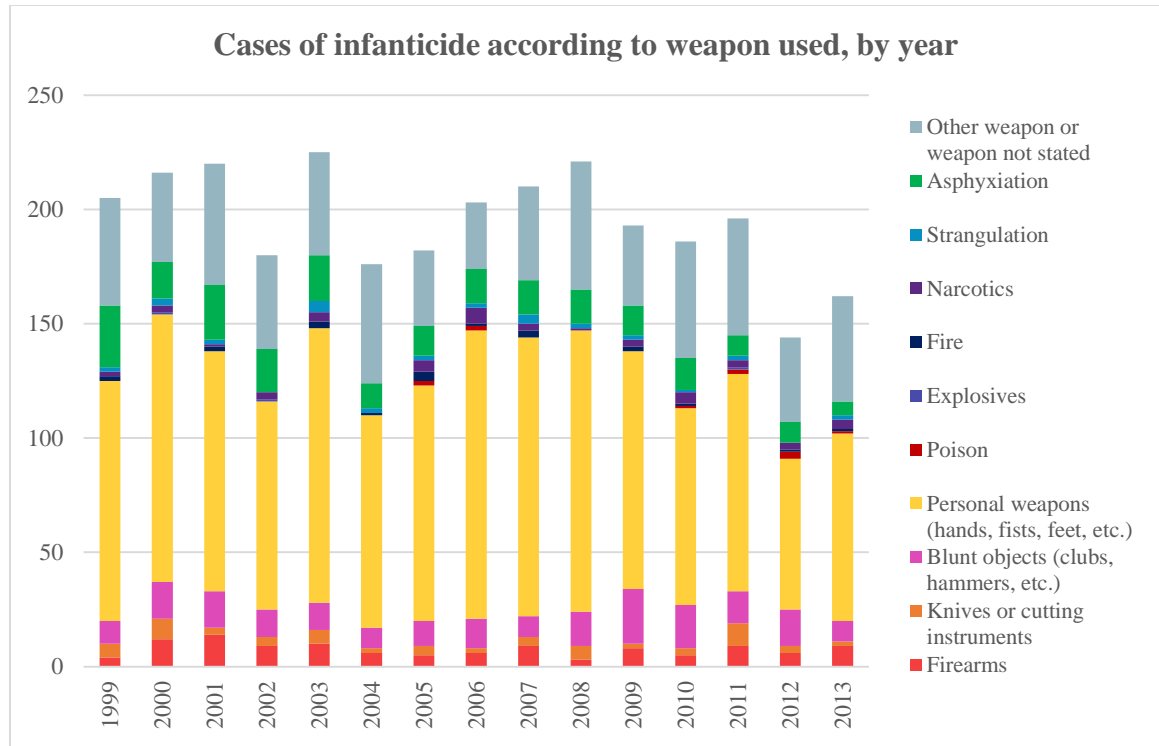


Figure 9. Cases of infanticide according to weapon used, by year  
Data comes from the Federal Bureau of Investigation (2015)

## **Chapter V**

### **Discussion**

#### **Interpretation**

Historically, neonaticide and infanticide have been mentioned in different cultures, countries and periods of time. Mostly, regardless of the culture, the most affected used to be female babies, unwanted children, and disabled infants (Moseley, 1986; Milner, 1998; Meyer et al., 2001; Oberman, 2003; Schwartz & Isser, 2007). Unfortunately, even today these individuals mostly predominate. Neonaticide and infanticide have been poorly documented in the United States. However, some authors have mentioned that, historically, infanticide was a common crime among diverse Native American tribes (Castillo, 1978; Elsasser, 1978; Myers, 1978; Pilling, 1978; Speirs, 1979; Thomas, Pendleton, & Cappannari, 1986; Zigmond, 1986). Nonetheless, those authors did not refer whether sex of the child was a relevant factor for native tribes when deciding the killing of an infant. On those tribes, from the 16<sup>th</sup> to the 18<sup>th</sup> century infanticide was commonly committed against twins as well as against illegitimate babies (Elsasser, 1978; Myers, 1978; Thomas, Pendleton, & Cappannari, 1986; Zigmond, 1986). Nowadays, it is not known if tribes that committed infanticide in the past still persist with that practice.

Schwartz and Isser (2007) assert that during colonial America female children were the most common victims of infanticide. The explanation of this is similar to that of Chinese and European renaissance and reformation: female babies were killed because they would not be useful for working the land (Moseley, 1986; Meyer, 2001). Oberman



(2003) refers that from 1870 to 1930 there were many cases of infanticide committed in Chicago. Illegitimate children were the most common victims of those cases, and they were usually killed by asphyxiation (Oberman, 2003). In the 19<sup>th</sup> and 20<sup>th</sup> centuries some countries, like England, established a specific law regulation for infanticide (Meyer et al., 2001; Spinelli, 2005; Brennan, 2007; Schwartz & Isser, 2007). Nevertheless, neonaticide and infanticide in the United States are not recognized as a crime distinct from homicide and its subtypes (manslaughter, first degree murder, second degree murder, etc.) (Schwartz & Isser, 2007), not even today.

Undoubtedly, child neglect and child abuse are the first steps to precede infanticide. However, according to the U.S. Department of Health and Human Services (1995) in many cases infanticide is the result of a first attack against the victim. This means that there was no pre-existing abuse against the victim. Therefore, the victim is killed after the first violent act against him/her.

Neonaticide and infanticide are likely the result of the conjunction of two or more stressors (Krischer et al., 2007). The general and most common formula for a child to become a victim of infanticide is having a single and young mother, who is poor, without any support (especially economic). This does not mean that infanticide, or neonaticide, does not happen in wealthy families, because it does (Shelton et al., 2010; Douglas & Vanderminden, 2014). Furthermore, married woman may also commit neonaticide or infanticide, although their reasons might be different. Despite this, poverty might also be an important cause of infanticide in married women, because the new child is an economic burden.

The sex of the child murdered in the United States is now different from that which was reported as the most common hundreds years ago. While in colonial America the female child was the common victim of infanticide, now male infants are more commonly the victims of infanticide. Shelton et al. (2015) suggest that male children have a higher risk to become victims of infanticide due to the way they are seen by their parents, specifically by their mothers. These mothers might unconsciously consider that “boy babies are indeed more assertive and vocal and, hence, more likely to elicit a more aggressive response” (Shelton et al., 2015, p. 72). Although, Shelton et al. (2015) also assert that the woman might kill her male baby in order to eliminate such reminder of the infant’s father. Both explanations seem very logical, but they need to be confirmed by further studies regarding this issue.

In general, African Americans are more common victims of murder in the United States than white people or people of other races. According to the UCR data (FBI, 2015), from 1999 to 2013, there were 207280 cases of murder in the United States, 47.6% represented African American victims, 46.3% were white victims, 2.5% were victims of other races, and 3.6% were victims of unknown race. These numbers contradict those found by this study and other research’s results (Tables 7 and 8) regarding cases of infanticide which showed that white children are more common victims of this type of crime than children of other races (Fox & Zawitz, 2007; Davies, 2008; Smith & Cooper, 2013). However, there are no studies or theories mentioning reasons for this predominance. Research to explain factors related to why white children are the most common victims of infanticide is necessary.

With regard to the relationship between the victim and the offender, UCR data did not constitute a specific or accurate data to determine and analyze this variable results on this study. Because of that, results about this factor will be compared and analyzed with other studies below (Tables 7 and 8). Thus, we might understand more about this characteristic presented in cases of infanticide.

*Table 7.* Comparison among the highest results of the main characteristics of infanticide obtained by different authors and this study

<b>Characteristic</b>	<b>Fox &amp; Zawitz<sup>a</sup></b>	<b>Davies<sup>b</sup></b>	<b>Smith &amp; Cooper<sup>c</sup></b>	<b>This study<sup>d</sup></b>
<b>Period of time</b>	1976-2005	1976-2002	2002-2011	1999-2013
<b>Age considered</b>	Under 5 years	Under 5 years	Under 1 year	Under 1 year
<b>Sex</b>	Male	Male	Male	Male
<b>Race</b>	White	White	Black	White
<b>Relationship victim/offender</b>	Parent (father)	Parent (father)	Not determined	Another known person
<b>Weapon used</b>	Not determined	Personal weapons	Not determined	Personal weapons

<sup>a</sup> Data comes from Fox and Zawitz (2007)

<sup>b</sup> Data comes from Davies (2008)

<sup>c</sup> Data comes from Smith and Cooper (2013)

<sup>d</sup> Data comes from the Federal Bureau of Investigation (2015)

It is important to clarify that when an offender uses a personal weapon to kill, this means that he/she commits the crime using some part of his/her body. For instance, he/she might use his/her hands to suffocate, drown, beat or strangulate the victim, as well as to use his/her feet to kick the victim to death (Chan & Beauregard, 2014). It is also possible for him/her to use other parts of his/her body, or to combine two or more parts of

his/her body to commit the crime. Being weaker and smaller than their offender, and being unable to defend themselves might constitute the main reasons of why personal weapons are more frequently used to commit neonaticide and infanticide. When the offender wants to attack a child under 1 year of age, he/she does not need to buy or look for a weapon since he/she has his/her own hands, feet, or another part of his/her own body to commit the crime at any time. An adult woman or man of any age or size will always be stronger than an infant.

For further analysis, results of this study have been compared to results from other three studies with similar variables to those chosen for this study. As it can be seen in Tables 7 and 8, even when only Smith and Cooper (2013) had a sample of children under 1 year of age, results of children under 5 years of age, considered by Davies (2008) and Fox and Zawitz (2007) are also interesting to be compared with and analyzed. The four studies showed that more male children were killed.

With regard to the race of the victim, Smith and Cooper (2013) determined that there were more black victims of infanticide (Table 7). However, the other three studies agreed that white victims were more common than victims of other races in cases of infanticide. This discrepancy could be related to the considerations referred to by Smith and Cooper (2013), since they warned of their methodology being different from other reports of the Bureau of Justice Statistics. However, they did not clarify how their methodology was dissimilar. Fox and Zawitz (2007), Davies (2008) and this study showed that the highest numbers of infanticide cases involve victims of white race. Only

Smith and Cooper’s (2013) study concluded that there were more black children as victims of infanticide.

*Table 8.* Comparison among the quantities of the highest results of the main characteristics of infanticide, regarding sex, race, and relationship victim/offender; obtained by different authors and this study

<b>Characteristic</b>	<b>Fox &amp; Zawitz<sup>a</sup></b>	<b>Davies<sup>b</sup></b>	<b>Smith &amp; Cooper<sup>c</sup></b>	<b>This study<sup>d</sup></b>
<b>Period of time</b>	1976-2005	1976-2002	2002-2011	1999-2013
<b>Age considered</b>	Under 5 years	Under 5 years	Under 1 year	Under 1 year
<b>Total cases</b>	18962	2330	Not specified	2920***
<b>Cases of infanticide</b>	7456	225	Not specified	2920***
<b>Sex</b>	Not specified	Male (135=60%)**	Not specified	Male (1600=54.8%)
<b>Race</b>	Not specified	White (139=61.78%)**	Not specified	White (1785=61.1%)
<b>Relationship victim/offender</b>	Father (10331=31%)*	Father and stepfather (722=31%)*	Not specified	Another known person (398=13.6%)

\*Calculated from the total cases of murder of children under 5 years

\*\*Calculated from the total cases of murder of children under 1 year (infanticide)

\*\*\*Total cases and cases of infanticide are the same quantity because this study considered only cases of murder of children under 1 year (infanticide)

<sup>a</sup> Data comes from Fox and Zawitz (2007)

<sup>b</sup> Data comes from Davies (2008)

<sup>c</sup> Data comes from Smith and Cooper (2013)

<sup>d</sup> Data comes from the Federal Bureau of Investigation (2015)

Results of this study determined that a person who is not part of the victim’s family, but known by the victim’s family (friend, neighbor or acquaintance) -labeled as another known person- was more commonly the offender in cases of infanticide from 1999 through 2013. Meanwhile, other studies determined that a family member, usually

the father of the victim, is the most common offender in cases of infanticide (Friedman, McCue, & Resnick, 2005; Rapaport, 2005; Fox & Zawitz, 2007; Harris et al., 2007; Davies, 2008). Nevertheless, there is no study denying that mothers commit neonaticide more commonly, and that a neonaticide offender different from the mother of the baby - father or another person- is very rare (Smithey, 1998; Rapaport, 2005; Isser & Schwartz, 2008; Shelton, 2010).

Weapons used in cases of infanticide were not considered in Fox and Zawitz' (2007) nor in Smith and Cooper' (2013) results. However, Davies' results and the results of this study agree with personal weapons mostly used to commit infanticide. Other studies determined that personal weapons are the most common weapon used to commit infanticide (Douglas & Vanderminden, 2014), and that most of the infants are killed by battering or other types of maltreatment and assault (Overpeck, 2003). These findings support the findings found by this study, since personal weapons are used for battering, maltreatment and assault.

Even though the total cases of infanticide constitutes no more than 2% of the total cases of murder of each year, these numbers do not include those cases reported as child abuse, natural death, or cases not reported at all. Two percent may not seem like a high value, but it needs to be accounted for since it does have an impact on those victims under 1 year of age, so this value is really concerning. One of the most important issues in cases of infanticide is that many people around the victim act as unintentional accomplices. Some members of the baby's family may know that the baby was suffering

from child abuse, or that the baby was unwanted, and suddenly died, but they do not say anything, they prefer to keep silent.

If the child is taken to a hospital, the medical personnel might determine that his/her death was due natural causes, such as sudden infant death. This misdiagnosis might be due to the lack of awareness of signs of violence in the child's body (HHS, 1995). It might also be due to the belief that those signs were produced when the child received treatment from paramedics while going in the ambulance (HHS, 1995). In cases when the paramedic or medical personnel call the police for having found some signs of violence on the baby's body, it might happen that police determine that the death was an accident. Sometimes the death might be suspicious, but it is not reported as a violent death, or it is misreported. In one way or another there are many people involved in a case of infanticide.

This study demonstrated that even having been fluctuating, infanticide persists with slight changes. That is not a good sign, since society has changed during the last 15 years, but infanticide has persisted the same. American society, as well as other societies around the world, knows that killing a baby is a heinous act. Many programs to support poor families, as well as programs to help single and young mothers, have been created. However, these have not been enough because, according to the U.S. Department of Health and Human Services (1995), prevention programs should also be directed to fathers and other males not only to mothers and women.

Infanticide numbers are still high for a country like the United States, which has such great technological advances. Infanticide is a crime which might be prevented if it is

considered as the real public health problem which it is. Even when high numbers of infanticide cases are presented in low socioeconomic strata, this does not mean that infanticide cases could not be found in wealthy families. Surprisingly, infanticide is not a more common crime in minority groups. The difference of the numbers of infanticide cases found in white and in African American and other race victims is remarkable. Unfortunately, there is no data in the UCR dataset to determine the socioeconomic level of those victims.

The American Academy of Pediatrics (1999) suggested that a child death requires intervention of many types of professionals working to ensure a good investigation process as well to determine accurately the cause and manner of death. In this way, prevention policies might be created as well. The group of professionals should include “medical examiners, public health officials, physicians, and personnel from agencies involved with child welfare, education, social services, law enforcement, the judicial system, and mental health” (American Academy of Pediatrics, 1999, p. 1158). Therefore, studies about infanticide are required not only in the forensic field, but also in other professional fields, such as psychology, criminology, social work, law, medicine, and public health. Infanticide and the people involved in it, meaning the victim, the offender, and the family; should also be analyzed from different points of view, in order to determine the best prevention policies.

### **Limitations**

As a result of this study it was demonstrated not only how the main characteristics of infanticide have been changing from 1999 to 2013, but also that more studies about



this crime are necessary. In the United States accurate data concerning neonaticide and infanticide is not available. It is important to determine why infanticide is not entirely reported, where the weakest links in this chain of information are, how people around a victim of infanticide –family, doctors, police- could positively influence or be part of the investigation of this type of crime and what they can do in order to prevent it.

According to some authors the lack of accurate and complete data is due to the inaccuracy of coroners and medical examiner's when determining the causes and manner of death in cases related to children (HHS, 1995; Friedman & Resnick, 2007; Schwartz & Isser, 2007). Moreover, in many cases there is no body to perform the autopsy; and not all of the probable neonaticide and infanticide cases are reported to the police. This leads to an important lack of information in official reports, such as the UCR. Because of that it is also important to confirm that medical examiners and coroners, as established, are performing autopsies in all of the children death cases, and compare their findings with police reports.

It is also necessary to establish a better registration system linking police departments, hospital and clinics, and medical examiner's offices. Neonaticide and infanticide should be considered as a problem of public health, so more policies for prevention could be established and implemented throughout the country. Unfortunately, greater access to financial resources is required to accomplish a project of this nature. In the United States it is highly unlikely that a project such of this will be initiated soon, especially considering a specific law concerning infanticide and neonaticide has not been

created or even addressed. It is unlikely that the severity will be addressed until the policy makers are willing to recognize importance of dealing with infanticide and neonaticide.

Discrepancy between results of this study and other studies' results regarding the most common offender in cases of infanticide could be due to the UCR data considered for this study did not specify the relationship between the victim and the offender for all the infanticide cases registered. This lack of information affects not only the results of this study but also those found by Smith and Cooper (2013), since they clarify that many homicide cases in the UCR report do not have information on the offender characteristics. According to them, this might be due to the lack of the information from its origin (law enforcement agencies) or because the information was not properly reported. Since it is not possible to differentiate infanticide UCR data from neonaticide data the results are combined.

Some researchers state that motivations to commit neonaticide, infanticide and filicide are different from each other (Friedman et al., 2005; Krischer et al., 2007), thus they must be studied and analyzed separately in order to understand motives for each type. It would be necessary for more studies to search and analyze data of those reasons and motivations which lead parents, and other people, to commit neonaticide and infanticide. Data for these studies would have to be collected from differing data resources, thus results would be more accurate. This would require an in depth search of the healthcare system, as well as data from different Police departments.

When trying to determine the weapon more commonly used to commit infanticide and neonaticide, it was not possible to differentiate results of the weapon used in cases of

neonaticide and infanticide separately. This was due to the UCR report which does not specify the age of the victim under 1 year of age. Thus, results of weapon used to commit neonaticide and infanticide are combined.

## **Chapter VI**

### **Conclusions**

Infanticide is defined as the killing of a child under 1 year of age. The term includes neonaticide, which is the killing of a baby until 24 hours of life. Infanticide, and hence neonaticide, has been practiced by many countries and cultures all around the world since thousands years ago. In the United States not much is known concerning the history of infanticide. However, it is known that infanticide was a common practice among many Native American tribes. In colonial America infanticide was commonly practiced in poor families. Female babies were the most common victims, since field work was exclusively performed by men. Women could not help with field work when they grew up and they become an economic burden for their families.

Many authors agree infanticide is still an underreported crime. Therefore, real numbers of infanticide are not accurately known. The United States has never had a specific legal regulation for infanticide crimes. Thus, this type of crime could be labeled as another type of homicide, such as manslaughter or murder, or even as a misdemeanor crime.

The analysis of the main characteristics of infanticide reported in the United States from 1999 to 2013 demonstrated that there is no significant difference when considering sex of victims of infanticide and the relationship of the victim and the offender in infanticide cases. Furthermore, there is no significant difference in infanticide cases by year, from 1999 through 2013. This means that the total number of infanticide

cases, the most common sex of the victim, and offenders who committed infanticide were similar in all years of that period of time.

However, there is a significant difference on cases of infanticide committed from 1999 to 2013 regarding the victim's race and the weapon used to commit the crime. This significance shows that differences of each variable's characteristics varied remarkably from one year to another in that period of time. Results also demonstrated that changes in the total number of murders per year affect infanticide total cases likewise.

There were more cases of infanticide in 2003 and 2008. The lowest number of cases of the period considered for this study occurred in 2012. Results show that infanticide cases have been decreasing from 2011. However, there is a constant and slight variation. Cases of infanticide constitute less than 2% of the total number of murders per year, but underreporting is a problem that must be taken into account. Thus, infanticide could constitute a higher percentage than 2% if it would be entirely and truly reported.

Regarding the sex of the victim in infanticide cases, male are more commonly victims of infanticide than female. However, the difference of numbers of both sexes is not remarkable. There were more cases of infanticide with white victims. The variation is important, since the number of white victims exceeds considerably numbers of black and other race victims.

From 1999 through 2013, infants were more commonly killed by a known person who was not part of their family but known by them (friend, acquaintance or neighbor). However, UCR report does not specify the relationship between victim and offender for all the infanticide cases referred. With regard to the most common weapon used to

commit infanticide (including neonaticide) the offenders used a personal weapon (this means hands, feet, fists, knees) to kill the victims. Some of the offenders could usually use blunt objects or asphyxiate their victims. Poison, explosion, and fire were very rarely used to commit infanticide.

Although, the number of infanticide and neonaticide cases is important (even considering that they are not entirely reported) the United States has not included a differentiation between these two crimes and other types of homicide. In depth studies about stress factors, motivations and causes of infanticide and neonaticide are required, as well as studies to clarify the reasons for the predominance of certain victims' characteristics, such as race. Knowing stress factors and motivations for neonaticide and infanticide would explain why someone becomes an infant killer, what leads him/her to commit neonaticide or infanticide and how he/she chooses the weapon to commit infanticide. Thus, pre-existing prevention policies would be enhanced and new more efficient prevention policies would be created.

Understanding infanticide as the great public health and social problem that it is might lead society to pay more attention to those potential victims and offenders of future infanticide cases. It is also important to perform a joint work among different types of professionals, especially those linked to the murder cases' investigation. In that way, medical examiners, police departments, law enforcement, forensic scientists from diverse forensic areas and personnel from the judicial system might cooperate for a common good. The common good is to speak openly about infanticide and to promote more

research on the topic. In order to achieve this common goal, sharing data and disclosing information about cases of dead children is vital.

Finally, results of this analysis of the main characteristics of infanticide cases in the United States might be useful as a basis for comparison with data from other countries. Thus, we could see if differences between data from the United States and other countries are remarkable or not. A medium or long term objective is performing a comparison between cases of infanticide in Bolivia and cases of infanticide in the United States considered for this study.

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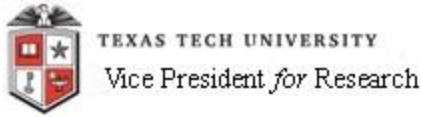
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## Appendix

### Institutional Review Board (IRB) approval form



October 16, 2015

Dr. Robert Paine  
Soc Anthropology & Social Work  
Mail Stop: 1012

Regarding: 505463 Analysis of the Main Characteristics of Infanticide in the United States from 1999 to 2013

Dr. Robert Paine:

The Texas Tech University Protection of Human Subjects Committee approved your claim for an exemption for the protocol referenced above on October 14, 2015.

Exempt research is not subject to continuing review. However, any modifications that (a) change the research in a substantial way, (b) might change the basis for exemption, or (c) might introduce any additional risk to subjects must be reported to the Human Research Protection Program (HRPP) before they are implemented.

To report such changes, you must send a new claim for exemption or a proposal for expedited or full board review to the HRPP. Extension of exempt status for exempt protocols that have not changed is automatic.

The HRPP staff will send annual reminders that ask you to update the status of your research protocol. Once you have completed your research, you must inform the HRPP office by responding to the annual reminder so that the protocol file can be closed.

Sincerely,

A handwritten signature in black ink, reading "Kelly C. Cukrowicz". The signature is written in a cursive style with a large, stylized initial "K".

Kelly C. Cukrowicz, Ph.D.  
Chair, Institutional Review Board for the  
Protection of Human Subjects  
Associate Professor, Dept. of Psychological Sciences

Box 41075 | Lubbock, Texas 79409-1075 | T 806.742.3905 | F 806.742.3947 | [www.vpr.ttu.edu](http://www.vpr.ttu.edu)