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A Descriptive Study of Serial Killers and the Presence of Macdonald Triad Symptoms

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ABSTRACT

The purpose of this study was to determine if there was an increased likelihood of the presence of Macdonald Triad symptoms (animal cruelty, bedwetting, and firesetting) based on different types of abuse (physical, sexual, or psychological) among serial killers. The sample of this study was of 149 serial killers, all of whom met the requirements of being male and having killed 3 or more victims. The results support the three hypotheses that serial killers who have faced physical, sexual, or psychological abuse were more likely to display Macdonald Triad symptoms compared to those who were not abused. In addition, the study determined whether lust serial killers were more likely to display Macdonald Triad symptoms compared to other types of serial killers and found that lust killers had a greater likelihood of displaying both acts of animal cruelty and bedwetting, but not firesetting.

Keywords: Serial killers, Macdonald Triad, physical abuse, sexual abuse, psychological abuse, lust killers

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INTRODUCTION

The phenomenon of serial murder has generated a great deal of interest from the media and citizens alike. It draws the attention of the people that there can be a person among them that has killed multiple victims and has gotten away with it. People begin to ask, "what type of person could do such a thing?" or "how is it possible that they haven't gotten caught?" but what they do not realize is that the whys and hows of serial murder are extremely complex. The actions of a serial killer often may seem random, which is what garners attention, but even though these acts of killing seem random to the average person, serial murderers kill using their own twisted logic, even though it may not seem logical or justifiable to us (Warf & Waddell, 2002). Because of this, the idea that serial killers are insane often arises, but in reality, they typically cannot be classified as legally insane, meaning that they are aware of the consequences of their actions, and appreciate that they are morally wrong, even though they may be unimaginably cruel to the average person (Warf & Waddell, 2002).

Serial murder is more than just killing, it is the product of deranged individuals displaying their psychological defects. The news media gains attention when they discuss cases of serial murder because they know that there is a fascination with death among people, but they rarely discuss the motives of the serial killer, or the events leading up to their reigns of terror (Hodgkinson et al., 2016; 2017).

The purpose of this thesis will be to examine whether or not having been abused makes it more likely that a killer will exhibit Macdonald Triad symptoms. In addition, this project will determine if serial killers who have been sexually abused are more likely to become a specific type of serial killer known as a "lust killer". Prior to doing the empirical analysis, this thesis will provide an overview of serial murder in general, and the more specific art and science of

criminal profiling, which has been widely used in the investigation of, and research about, serial killers.

Definitions and Typologies

Before reviewing the literature, it is important to establish some basic definitional criteria. Holmes and Holmes (2010) define serial murder as "the killing of three or more people over a period of more than 30 days, with a significant cooling-off period between the killings," (p. 5-6). They designed a typology to distinguish different types of serial killers based on their motives and anticipated gains; serial killers will sometimes have ideal victim types whereby they hunt victims based on race, occupation, or even something as simple as their hair color (Holmes & Holmes, 2010).

There are four categories of serial killers in this typology: visionary, mission, power/control, and hedonistic (Holmes & Holmes, 2009). Visionary killers are those who are psychotic and end up killing due to some kind of psychotic break. They usually do not have an ideal victim type and it is common that their reasoning does not make sense, except to them (Miller, 2013). As a result, the victims of visionary killers can be chosen at random (Holmes & Holmes, 2010).

In contrast, mission oriented serial killers do have an ideal victim type, because they feel that it is their job to rid the world of an "unwanted" group of people: their reasoning can be due to personal opinions, and they may choose their victims because of their race or occupation (Miller, 2013). A common group of people that are targets of mission serial killers are prostitutes (Holmes & Holmes, 2010). Similar to mission-oriented killers, power/control killers also have ideal victim types, but they kill to feel powerful and in control of their victims. Usually,

power/control killers target a certain group of people because of the availability of victims, again, prostitutes are frequent targets (Holmes & Holmes, 2010).

Lastly, the hedonistic killer kills for personal pleasure (Holmes & Holmes, 2010). There are three different sub-types of hedonistic killers that have different reasons why the act of killing satisfies them: comfort, thrill, and lust (Holmes & Holmes, 2009). Comfort killers are those who kill for material gain, such as money; an example would be black widows, or women who kill their husbands for the insurance payout or inheritance (Miller, 2013; Fox et al., 2019). Next, the thrill killer gets sexual gratification from the act of torture and prolonging the death of their victim, but once their victim has died, the fantasy has ended for the thrill killer and the body is of no use to them (Holmes & Holmes, 2010). The third type of hedonistic killer is the lust murderer which will be discussed in greater detail in this literature review.

LITERATURE REVIEW

A Focus on the Lust Murderer

Although sexual gratification is often an element of serial murder, it is the greatest factor in lust murder, otherwise known as erotophonophilia. The FBI defines erotophonophilia as "murder that involves more than three victims and in which the offender has a cooling off period between murders, indicating the premeditation of each sexual offense…[in addition to] acting out the deviant behavior by means of brutally and sadistically killing the victim to achieve ultimate sexual satisfaction" (Arrigo & Purcell, 2001, p. 7, p. 10). Sexual attraction is not necessary, but the sexual dynamic of lust murder is the means to degrade and dehumanize the victim while enacting the fantasy of the killer (Vronsky, 2004; Shon & Milovanovic, 2006). Lust murder is also known as sexual homicide; it is defined as murder with sexual gratification as the main goal of the crime (Holmes & Holmes, 2010). As the lust murderer kills more people, the time between the killings tends to decrease, while violence and brutality increase with each kill (Holmes & Holmes, 2010).

The lust murders tend to also be sexually sadistic. According to the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-V*), sexual sadism is defined as a person who experiences "persistent and intense sexual arousal from causing or fantasizing about the physical or mental suffering of another person, with or without their consent," (Sexual Sadism Disorder, 2019) and those who have the greatest satisfaction from their victim's response to pain and torture (Knoll, 2006). Sadism is an important component of lust murder because it involves the degradation and humiliation of the victim, because of this, the lust killer often sexually abuses the body after death (Shon & Milovanovic, 2006; Juni, 2009).

Researchers have set out to expand the material available on sexual serial killers because the current available information is limited. It is estimated that of all the homicides committed in the United States, only 0.2% have some type of sexual element (Kerr et al., 2012; 2013). Because there are multiple definitions of sexual homicide, FBI researchers state that there must be at least one of the following elements for a homicidal act to be labeled as sexual: "the victim is found totally or partially naked, the genitals are exposed, the body is found in a sexually explicit position, an object has been inserted into a body cavity (anus, vagina, or mouth), there is evidence of sexual contact, there is evidence of substitutive sexual activity (e.g., masturbation and ejaculation at the crime scene), or of sadistic sexual fantasies (e.g., genital mutilation)," (Kerr et al., 2012; 2013, p. 2-3).

Law enforcement can usually distinguish if a crime scene displays a sexual component or not from the presence of semen, or by evidence of penetration of the victim (Kerr & Beech, 2016). As stated earlier, the crime scene does not always include a visual sexual element because the torture and killing itself can be substituted for sexual acts (Kerr & Beech, 2016).

Serial sexual homicide is different from regular serial murder. Most definitions of serial murder require that there be a cooling off period of about 30 days between killings, but some lust murderers do not wait to kill and do so before the 30-day period. Holmes and Holmes (2010) consider spree killings to be those where there are three or more murder victims in a timeframe of less than thirty days. Schlesigner et al. (2017) argue that many serial sexual murderers have killed in rapid sequence before becoming – by definition – serial killers. They also determined that when one or more murders took place, the likelihood of there being another murder in a small timeframe increases. For example, Albert DeSalvo, also known as the Boston Strangler,

killed six out of his 13 victims in what would be considered rapid sequence; there was less than a 30-day period between those six murders (Schlesinger et al., 2017; Vronsky, 2004).

Schlesigner et al. (2017) conducted a study on the temporal patterns of serial sexual homicide and found that although the majority of serial sexual murderers were likely to have more than 14 days pass between each killing, a significant number (43.2%) of the offenders in their sample had killed in either rapid sequence, or in rapid clusters. The researchers also determined that those who did kill in rapid sequence were likely to act impulsively, with less planning time, which resulted in some leaving more evidence behind.

Serial sexual murder has become a topic of interest for many researchers, and as a result, some have even distinguished subcategories of lust murderers. Lust killers can be separated into four different categories: power-assertive, power-reassurance, anger-retaliatory, and anger-excitation (Karakasi et al., 2016; 2017). These categories are similar to those of the Holmes and Holmes typology of serial rapists with the exception that in serial rape the victim is not killed (Holmes & Holmes, 2009). The power-assertive lust murder strives to feel power and domination which results in premeditated rape, and because of the increased aggression and force used to overpower their victim, they end up unintentionally killing the person. Next, the power-reassurance sexual serial killer is one who often fantasizes about rape and feels the need to be intimate with another person, even if it means having an unwilling partner. In these cases, the rape is planned, but the killing is not, the death of the victim typically takes place because they do not choose to comply with the perpetrator's orders, causing the offender to panic and kill the victim. This type of sexual offender is likely to engage in necrophiliac acts or mutilation of the dead body. Anger-retaliatory homicide offenders are those with criminal backgrounds: they plan both rape and murder, which often ends in overkill because the perpetrator is displacing

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anger towards a female in their life onto their victim. The last type is the anger-excitation serial killer. This serial murderer plans to act out their sexually sadistic fantasy including the murder of their victim, and does so solely to feel gratification and live their fantasy. However, since the fantasy always ends, they repeat the offense with other victims, creating a never ending cycle (Karakasi et al., 2016; 2017).

Fantasy is a strong element in lust murder because the killer tries to make it a reality. To be able to relive the fantasy, lust murderers tend to keep souvenirs or trophies of their killings; this can be something from the victim's body, such as a lock of hair, or something personal such as their identification card or jewelry (Fox et al., 2019). To ensure that the fantasy is achieved, lust murderers have to go through a ritualistic process in which certain steps have to be taken to have full sexual gratification from the murder. Some of these steps include posing the victim's body in a degrading position or foreign object insertion. An example is filling the victim's mouth with dirt post-mortem (Koeppel et al., 2019).

A common element of the lust killer's fantasy is the element of control; to achieve control, the killer resorts to sexual acts, such as rape (Hickey, 2013). Holmes and Holmes (2009) even describe rape as a crime of power and violence which feeds into the murderous fantasy of the lust killer. Another way the lust murderer asserts their power over the victim is by killing them through strangulation. Although there are other means that lust murderers kill their victims, strangulation is the most common because it allows the killer to be in total control of the victim's life; they choose when their victim dies because they know whether to apply more or less pressure, depending if they want to keep the victim alive longer (Hickey, 2013; Pettigrew, 2019). Once the lust killer has been able to fulfill their fantasy, they feel a sense of empowerment that has developed through fantasy, over many years (Miller, 2013).

The significance of serial sexual homicide is widely underestimated because it is not categorized like other crimes. The Uniform Crime Report (UCR) places cases of sexual homicide under the "unknown motive" category because law enforcement agencies are not always able to distinguish the sexual dynamic involved in the killing (Arrigo & Purcell, 2001). Although in many sexual homicide cases the sexual component is evident in the crime scene, its possible that in some cases the offender experiences sexual gratification based solely on the pain and suffering of their victim, which leaves no obvious physical sign behind (Knoll, 2006).

Demographics of Serial Killers

Serial homicide is not solely committed by men, females also account for serial murderers, but only for about 5-8% of them (Holmes & Holmes, 2010). Moreover, women are almost completely absent in the serial sexual homicide category; therefore, male serial killers will be the sole focus of this study. In addition, because lust killers are a subset of all serial killers, their demographics and childhood experiences will be compared to the general population of all serial killers in the sample.

Aside from males being the majority of serial killers, white males also account for the majority when comparing the races of serial killers; although proportionately speaking, black males are more likely to engage in this behavior. Branson (2012; 2013) notes the racial disparity in serial killers, stating that "one in five known serial killers is black [i.e. 20%]…[while] the percentage of the US population that is African American is approximately 13%" (p. 2). Meanwhile, an empirical study conducted by the FBI's behavior analysis unit found that among their dataset of 92 offenders – collectively 480 serial murder cases – the majority of offenders were white (52.2%); the other races accounted for were Black (38.0%), Hispanic (7.6%), and other (2.2%) (Morton, Tillman, & Gaines, 2014).

In addition to the majority of serial murderers being White, a substantial amount come from lower income families (Stone, 2001). One study found that in a sample of 145 serial killers, 20.7% were of lower middle class, 62% were of working class, and 5.5% were of lower class. The other 11.8% were of upper or upper middle class (Stone, 2007). These statistics play a significant role in understanding the childhood development of serial murderers because researchers have noted that lower middle-class men tend to be more abusive towards others, or physical in displaying their feelings, especially rage (Stone, 2001). This is important to understand because it leads to the realization that a parent's lack of education or ability to provide financial stability for their family can lead to acts of physical or psychological abuse towards their spouses or children, thus increasing the probability of said children becoming violent later in life due to their negative experiences in their upbringing.

The age at which serial killers commit their first murder will also be taken into account because researchers have found that serial killers tend to be psychopathic in nature. As a result of psychopathy, serial killers are often aware of their disorder (Vronsky, 2004). It has been found that psychopaths find ways to treat, or deal with their disorder; and as they get older, they begin to adjust to their environments and to society. In other words, psychopaths are more likely to commit crimes at an earlier age as opposed to later in life (Vronsky, 2004).

From Victims of Abuse to Lust Killers

As unimaginable it is having one human taking the lives of multiple victims is, it is difficult for the average person to understand how this type of crime can have an additional sexual component. Juni (2009) found that sadism can stem from traumatic events that have taken place during childhood. Kerr et al. (2012; 2013) state "fantasy is thought to act as a safe, private, and very powerful reality for the would-be sexual murderer. It may act as a coping strategy to

guard against unbearable trauma in early life and difficulty in social and sexual relationships later on," (p. 5). In studies regarding sexual homicide, researchers have found that physical and psychological abuse had been reported when studying the developmental factors of the subjects (Beauregard & DeLisi, 2018).

Other researchers determined that children who have been physically or sexually abused are more likely to engage in violence as adults compared to children who have not been physically or sexually abused (Allely et al., 2014). In addition, children who have been sexually abused have an increased risk of committing crimes when they are older, including engaging in sexual crimes and being sexually aggressive towards others (Papalia et al., 2018; King et al., 2019). Sexual aggression is the intent or act of coercion, threat, or physically forcing sexual contact on a non-consenting individual (King et al., 2019).

It has been found that children who suffer psychological trauma at a young age have disruption in their personal development, and as a result, find solace in fantasy worlds where they are in control. This can be viewed as a coping mechanism following their abuse (Kerr & Beech, 2016). Children who have been sexually abused have difficulty verbally expressing what happened to them, or how they feel, so they resort to physical actions including sexually aggressive behavior, which can last into adulthood (Rowan, 2006).

Beauregard and DeLisi (2018) determined that children who have suffered from abuse or neglect often develop antisocial tendencies, which lead to social isolation due to feeling a loss of control of their lives. In this social isolation is where the fantasy world begins to develop (Beauregard & DeLisi, 2018). The fantasy becomes a safe space for children who have been abused or neglected and they begin to isolate themselves from the world, which can lead them to become emotionally and socially self-reliant (Reid et al., 2019). Knoll (2006) found that lust

killers who were sexually abused as children were more likely to begin fantasizing about aggressive sexual acts, such as rape, at early ages.

Fox et al. (2019) describe the way the fantasy world becomes violent to where the offender feels the need to act out: "…an abused child escapes from cruel parental treatment by developing a fantasy world of pleasure and kindness. At the same time, the angry and hateful feelings toward the abusive parent are stored in a reservoir that the child suppresses. In later life, the two perspectives – the loving and the hateful – split into their own personalities that compete for control. The angry person takes turns with various alter egos for dominance over the same body," (p. 117).

In a study of 61 men who have been diagnosed with sexual sadism, the researchers found that 82% suffered from physical abuse, 83.6% reported emotional abuse/neglect, and 24.6% had suffered from sexual abuse (Hill et al., 2006). In another study of 85 serial sexual homicide offenders (SHOs), the researchers found that 56.5% were victims of psychological violence, 67.1% were victims of physical violence, 17.6% were victims of incest, and 42.4% were victims of unwanted sexual contacts (Beauregard & DeLisi, 2018). Men who have reported being victims of both sexual and physical abuse as children were found to be 4.5 times more likely to engage in sexual violence compared to men who did not suffer from child abuse (King et al., 2019).

Because of traumas and abuse suffered in their childhoods, there are different triggers that begin the process of killing in sexual homicide offenders. In those who were sexually abused as children, their trigger can be as simple as remembering the incident, then wanting to avenge the sexual abuse on someone else. Others can be triggered into killing on impulse because they

see something or someone that reminds them of their sexual abuse. As a result, sexual murderers are likely to kill more than once (Kerr and Beech, 2016).

Other researchers have found that abused children often imitate what they see at home, a notion called "trickle down predation". These children begin to replicate what happened to them at home, which can also lead to violence when they become adults (Stein, 2009). This can also be the result of the stunted development of the child's brain because children who suffer and see abuse in their homes often suffer from disrupted development which can have negative repercussions in the future (Reid et al., 2019).

Due to the abuse suffered at the hands of their parents, serial killers tend to displace their aggression on other people who then become their victims; typically, the victims resemble the offending parent in some way, such as hair color (Fox et al., 2019).

The Macdonald Triad

The Macdonald Triad was developed in 1961 by John Macdonald. The Triad is made up of three elements: enuresis (bedwetting), fire setting, and animal cruelty. The idea is that if a person, typically a juvenile, displays these three elements, the likelihood of them engaging in violent behavior as an adult increases (Wright & Hensley, 2003). Victims of child abuse have been found to display these three elements as a response to their abuse which suggests that child abuse leads to violence in adults (Miller, 2013). Researchers have found that most serial killers tend to exhibit these behaviors and that the majority have experienced some type of physical or sexual abuse during their childhood or adolescence (Warf & Waddell, 2002).

Bedwetting in a child who is of an age capable of bladder control is often an effect of sexual abuse, and can also be a predictor of behavioral problems, although it is not always reported (Anderson et al., 2014). Firesetting is also an indicator of child abuse because it

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correlates with great anger, and also displays a higher frequency of maltreatment, which can also lead to engaging in violence in adulthood (Baglivio et al., 2017). Firesetting is defined as "the intentional destruction of property – via fire – for unlawful purposes," (Gannon & Pina, 2010, p. 225) and studies have shown that children and adolescents who engage in firesetting tend to come from families that were struggling financially, and where parents neglected and/or abused their children whether it be physically, sexually, or both (Gannon & Pina, 2010). Animal cruelty is a broader element of the Macdonald Triad: "Cruelty to animals includes intentional and unintentional acts of abuse, neglect, torture, and abandonment of animals such as orchestrated fighting, burns, blunt force trauma, sharp force injuries, gun and projectile injuries, asphyxia and drowning, sexual abuse, and poisoning" (Bright et al., 2018, p. 287).

Although there are many responses to child abuse, enuresis, fire setting, and animal cruelty can serve as better predictors of adult interpersonal violence; it is believed that animal cruelty is associated with child abuse in families (Henderson et al., 2011; Louise Petersen & Farrington, 2007). Many studies have been conducted to test the validity of the Macdonald Triad. A study conducted by the FBI in 1988 found that animal cruelty was the strongest predictor for serial murder. The study also found that animal cruelty is reported more often among boys than girls (Wright & Hensley, 2003; Bright et al., 2018). In one study, the researchers found that in 88% of the families sampled that displayed child abuse, animal cruelty was also reported (Louise Petersen & Farrington, 2007). Other researchers have determined that there is a significant link between childhood animal cruelty and committing physical violence in adulthood. It is assumed that those who perform cruel and sadistic acts on animals early in life become desensitized to violence committed later in life (Knoll, 2006).

Animal cruelty has also been linked to severe sexual abuse in children, and the parents of

children who were both physically and sexually abused were more likely to report the child

committing cruel acts towards animals (Boat et al., 2011). Research has indicated that in 89% of

homes when children are being physically abused, they also report incidents of animal cruelty

whereas 34% of homes with child sexual abuse or neglect also report animal cruelty (Bright et

al., 2018). Stone (2001) found that the most common victims of animal cruelty were cats, as they

are easier to catch as compared to rabbits or squirrels, and less dangerous to the abuser than

dogs.

In Hill et al.'s study (2006), mentioned earlier, 41% of subjects suffered from enuresis,

4.9% engaged in animal cruelty, and 9.8% engaged in fire setting. Again, comparing this study

with Beauregard and DeLisi's (2018) study, 31.8% suffered from enuresis and 16.5% reported

engaging in animal cruelty; they did not include a measure for fire setting.

In another study that assessed the validity of the Macdonald Triad, researchers found that

sexually abused children were four times as likely to exhibit Triad symptoms than children who

had not been sexually abused, physically abused children were more than twice as likely to

exhibit triad symptoms than non-physically abused children, and neglected children were

significantly more likely to exhibit triad symptoms than non-neglected children (Prentky &

Carter, 1984). Hickey (2013) suggests that children are more susceptible to develop

inappropriate behaviors because they do not have the coping skills to deal with traumatic events.

Knoll (2006) created a list of signs that indicate the risk of an individual becoming a

potential sexual killer that when seen in combination, the likelihood increases. The researcher

listed ten signs which happened to include "childhood abuse…pathological lying and

manipulation, sadistic fantasy with a compulsion to act, animal cruelty…need to control and

dominate others, repetitive firesetting…[and] evidence of ritualistic (signature) behavior,"
(Knoll, 2006, p. 68).

The notion of the fantasy is a recurring element that is involved in sexual homicide. As mentioned before, due to the abuse suffered at a young age, sexual homicide offenders develop a fantasy world where they are in control; when the idea of the fantasy is not enough to satisfy them, they begin to engage in deviant behavior, which results in criminal acts such fire setting and animal cruelty (Beauregard & DeLisi, 2018). Studies have also concluded that serial killers graduate to killing humans when the animals are not enough to satisfy their fantasies (Wright & Hensley, 2003).

Criminal Profiling

It is important to understand the significance of criminal profiling because it can be useful in identifying what type of person can commit a gruesome crime such as lust murder. The crime scene often reflects the personality and behavior of the offender, so it is important to understand how profiling is used (White et al., 2011).

Criminal profilers look for the MO, or modus operandi, and the signature left by the killer; although a signature is not always available (Holmes & Holmes, 2009). These two things often reflect the behavior of the offender and can give the profiler an idea of their emotional state at the time of the crime (Skrapec, 2001). In some instances, the offender will alter their MO to better avoid detection and delay their apprehension (Beauregard & Martineau, 2016). On the other hand, the signature is the psychological footprint of the offender; this often shows the emotional distress suffered by the person (Campbell & DeNevi, 2004; Pettigrew, 2019).

In addition to the MO and signature, profilers also determine if a crime scene is organized or disorganized. Similar to the MO, the crime scene being organized or disorganized reflects the

personality of the offender (Sewall et al., 2013). A crime scene classified as organized shows

signs of planning, missing evidence, no weapon left behind, and in many instances, there are

signs that the body of the victim has been moved from the original location of the murder

(Sewall et al., 2013; Vronsky, 2004). The organized offender is generally an organized person,

meaning they have a clean home, clean car, and dress well (Holmes & Holmes, 2009). They also

tend to be narcissistic and nonsocial because they feel that others are not worthy of their

companionship; Ted Bundy is an example of the organized offender (Hickey, 2013). This type of

offender also prepares to kill by carrying around items that they can use to overpower their

potential victims (Hickey, 2013).

The organized offender can also have feelings of rejection, and as a result they develop a

growing hatred for the world around them. In turn, they become enveloped in a fantasy world

which they try to make a superior reality by acting out their dark desires. Because they act out

their fantasies, the organized offender typically has an ideal victim type (Beauregard &

Martineau, 2016).

Organized offenders also tend to choose victims that are of the same race or ethnicity, but

it is not because of their ideal victim type; instead, they choose victims within their race because

it draws less attention to them (Warf & Waddell, 2002). This adds to the notion of the planning

that organized killers do before looking for their victims. A significant case where this was seen

was in the Atlanta child murders in the late 1970s and early 1980s. Criminal profiler John

Douglas worked on the case and suggested that the person responsible for the killings of black

children would probably be a black male. The citizens of Atlanta were hesitant to believe that a

black man would be killing these children and were fixated on the idea that a white man or a

member of the Ku Klux Klan would prove to be the person responsible for the murders (Douglas

& Olshaker, 1995). Douglas (1995) argued that a white man would not have been able to walk into a predominately black neighborhood without drawing attention to himself. Eventually the perpetrator was caught, and as Douglas had predicted, proved to be a black man (Wayne B. Williams). This demonstrates how the organized offender plans their movement to get their victim and delay detection.

In contrast to the organized crime scene, the disorganized crime scene tends to be chaotic, shows signs of explosive violence, and typically where the body of the victim is found, is also the location where they died; the murder weapon (if any) is also frequently found at the crime scene (Sewall et al., 2013; Miller, 2013). The disorganized offender is impulsive, attacks based on opportunity, and is asocial, meaning people perceive them as weird or different, so much so that they tend to avoid this type of person (Hickey, 2013; Holmes & Holmes, 2009). Disorganized lust killers are often those who insert foreign objects into the victim (Koeppel et al., 2019).

Theories

Some researchers have theorized about what makes lust murderers act out their fantasies and it can be a variety of factors. Sociological and psychological theories are best used to understand sexual homicidal behavior because they provide the best insight into the actions committed by these unique offenders. Biological theories are not as useful because although they can be applied in certain cases, they do not always provide informative results (Warf & Waddell, 2002).

Arrigo and Purcell (2001) used Hickey's Trauma-Control Model to examine the events of serial killers during their childhoods and how trauma shaped them into the adults they turned into. The Hickey's model "demonstrates how psychological and/or traumatic events occurring in

the formative years of a person's life can function as trigger mechanisms in which increasingly

violent fantasies, fueled by facilitators…produce homicidal behavior," (Arrigo & Purcell, 2001,

p. 8). This is not necessarily a complete theory; however, it can be used to help understand why

certain people become serial killers. Similar to the Macdonald Triad, this model demonstrates

that certain events in a child's life can have serious consequences later in adulthood: similar to a

chain reaction in which a child suffers abuse, so they abuse animals, then graduate to abusing

and eventually killing, human beings, as shown in Figure 1. Although traumatic experiences

alone are not enough to change the direction of a child's life to become a killer in the future,

Hickey's model also emphasizes that both social and environmental issues can add to the

experience in both negative and positive ways (Arrigo & Purcell, 2001). Similarly, FBI profiler

John Douglas alludes to this notion in his book *The Killer Across the Table* when discussing the

dynamic of serial killers: "They are all predators, and all grew up without forming trusting bonds

with other human beings during their formative years," (Douglas & Olshaker, 2019). The ending

of the quote is most important, because it suggests that the formative years, as in Hickey's

Trauma-Control Model, are the origin of the criminal careers of future offenders.
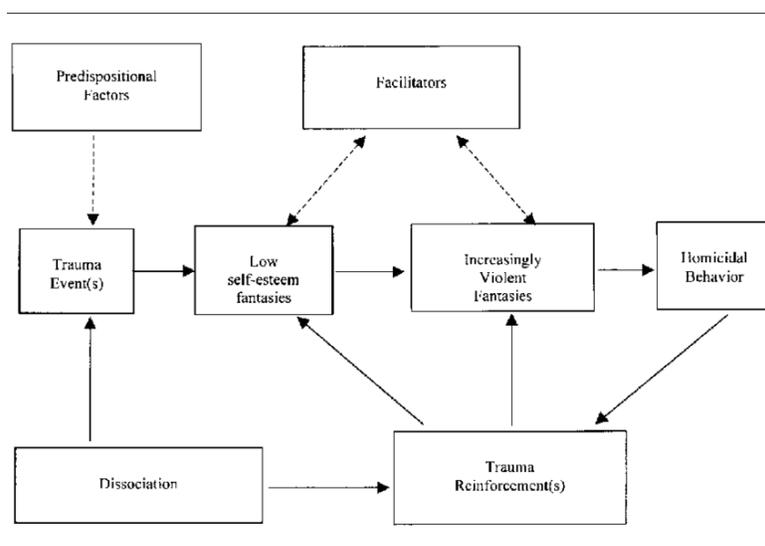

Figure 1: Hickey's Trauma-Control Model
SOURCE: Arrigo, B. A., & Purcell, C. E. (2001).

Aside from Hickey's Trauma-Control Model, routine activities theory can also explain the behavior of serial killers. Routine activities theory suggests that crime, including serial murder, takes place when there is a motivated offender, a suitable target, and lack of capable guardianship (Beauregard & Martineau, 2015). This theory applies well to serial killers because when there is a lack of capable guardianship is when they tend to attack, whether they are organized or disorganized, the real difference is how much planning is done before hand. Beauregard and Martineau (2015; 2016) argue that offenders weigh the risks and benefits of choosing certain victims over others to ensure that they have greater gain; this is especially true of organized offenders. Unfortunately, certain lifestyles put people in a suitable environment for sexual serial killers to find their victims. An example would be sex workers, such as prostitutes. Prostitutes can be considered easy, suitable targets because they are willing to go to secluded areas with their customers. This also creates a lack of capable guardianship, which enables the crime to happen. As a result of their work, prostitutes are also less likely to be reported missing, and their nomadic lifestyle makes crimes involving these victims harder for investigators to solve (Beauregard & Martineau, 2016).

Similar to Hickey's Trauma-Control Model, Healy and Beauregard (2015) discussed the Motivational Model that was developed by the FBI. According to this model, sexual murderers come from an environment where they do not have strong bonds with their caregivers, whether they be parents or some other people in authority. The model consists of five factors that interact with one another that contribute to the formation of a sexual murderer: "an ineffective social environment, child and adolescent formative events, patterned responses to these events, resultant actions towards others, and the killer's reaction to his killings" (Healy & Beauregard, 2015, p. 1226). As a result of the lack of emotional bond with a caregiver, the neglected child

falls into social isolation, where the fantasy world begins to become an escape for the child. Because of the inability to form positive social bonds, these children become more and more dependent on their fantasies, which eventually turn violent and sexual to fulfill their social and emotional needs. Eventually, the fantasy is not enough to fulfill the neglected child's needs and they resort to committing violent acts, such as arson and animal cruelty (an element of the Macdonald Triad) (Healy & Beauregard, 2015).

Summary of the Literature

The significance of this study is to examine how the childhood experiences faced by serial killers have played a role in turning them into the criminals whom they eventually become. Since not all serial murderers have the same motive in killing people, Holmes and Holmes (2010) have separated them into four different categories, with the hedonistic lust murder being the focus of this study. Profiling has been widely used by law enforcement officials who investigate the crimes of serial killers, and enables them to distinguish the types of people who commit such acts by looking at the crime scenes, which can tell an investigator a lot about the person responsible, and their motives (Holmes & Holmes, 2009).

Researchers have determined that many lust murderers were found to exhibit at least one of the three Macdonald Triad symptoms – bedwetting, firesetting, and animal cruelty – with animal cruelty being the most significant factor in predicting violence (Wright & Hensley, 2003). Because of abuse or neglect, juveniles fall into social isolation, and as a result, they envelop themselves in a fantasy world where they are in control, which leads them to fantasize about violence towards others (Beauregard & DeLisi, 2018). Eventually, the fantasy is not enough for the person, at which point they begin to act out their fantasies, which in turn leads to murder. However, when the live fantasy ends, the perpetrator feels the need to relive it, and therefore

repeats their actions: which means, that sexual violence, or murder, become serial in nature (Karakasi et al., 2016; 2017).

Researchers have used theories and models to explain and even predict the actions of serial killers but no one theory has proven to be 100% effective. The ones presented in this literature review represent significant progress, but unfortunately, they cannot be applied to every case and leave certain key questions unanswered. This leads the present researcher to test the hypotheses of this study: serial killers who have been sexually abused as children are more likely to display Macdonald Triad Symptoms than other serial killers who were not sexually abused, serial killers who have been non-sexually or physically abused as children are more likely to display Macdonald Triad symptoms than non-abused serial killers, and serial killers who have been sexually abused as children are more likely to be lust killers than any other type of serial murderer.

Hickey's Trauma-Control Model supports the idea that the experiences and events in a person's early years shape the type of person they become later in life, and depending on whether they have positive or negative experiences, it forms their persona as an adult (Arrigo & Purcell, 2001). In addition, routine activities theory is also presented as an explanation of why certain people become victims of serial murderers, and why these offenders choose to attack at certain moments in time (Beauregard & Martineau, 2015). The last theory presented was the FBI's Motivational Model, which is similar to Hickey's Trauma-Control model, as they both emphasize the significance of experiences during childhood shaping the adult later in life. The key difference being that the Motivational Model looks at five factors that play different roles in the development of the violent offender (Healy & Beauregard, 2015).

METHODS

The present study represents a secondary analysis of an existing data set. The key variables to be measured will be taken from an existing database, input into SPSS, and subjected to statistical analysis in order to test the hypotheses presented below.

Data and Sample

The data to be used for this study is secondary data from Radford University. Dr. Mike Aamodt is a professor in the department of psychology at Radford University and his students created the database of Serial Killer Timelines from 2004 to 2012 (Radford University Students). The database consists of information on 202 serial killers; however, only 149 were used in this sample: those who are male and had three or more homicide victims.

The data on these serial killers consists of timelines of certain events that occurred during their lifetimes, including: information on their childhoods, relationships and work histories, in addition to information on whether or not they were sexually, physically, or psychologically abused, and if they had displayed Macdonald Triad symptoms (Wright & Hensley, 2003). The documents also include data on when they would kill, including their behavior during these crimes. This will permit the classification of each killer according to the Holmes and Holmes typology of serial killers (2010).

Measures

A variety of variables will be utilized in this study, however, the primary variable of interest will be the category of serial killer based on the Holmes and Holmes typology (2010) measured at the nominal level comparing all six of the categories: visionary, missionary, power/control, lust, comfort, and thrill.

Next, a variable will be coded that represents the different Macdonald Triad categories: animal cruelty, firesetting, and bedwetting (Wright & Hensley, 2003). Three dichotomous (yes or no) abuse variables will also be coded: sexual, psychological, and physical abuse.

The definitions of abuse in this study are as follows: "Sexual abuse is defined as any sexual activity, practice or instruction which either meets the criminal definition or is unhealthy for a child considering his/her age and level of development…psychological abuse refers to any acts such as intentional humiliation, causing emotional conflict, or any act that could be psychologically damaging to a child…physical abuse is defined as causing or allowing any nonaccidental physical injury," (Mitchell & Aamodt, 2005, p. 41).

Finally, this study will consider race, socioeconomic status and age at first kill as demographic measures that may be associated with serial murder. Socioeconomic status will be measured as a dichotomous variable based on whether or not the offender had experienced financial hardship during their childhood or adolescence, and race will be measured as one variable with five nominal categories: White, Black, Latino, Asian, or Native American. Age at first kill is operationalized as a continuous variable measured in years.

Table 1: Variables of Study

Variables	Data
Physical, sexual, or psychological abuse	Any type of abuse experienced by a serial murderer.
Macdonald Triad	The presence of bedwetting, firesetting, or animal cruelty.
Holmes & Holmes Typology	The category of serial murderer the offender falls under based on the motive or reasoning behind their homicidal acts.
Age at first homicide	The age at which they killed their first victim; can be intentional or accidental.
Race	Race of the offender
Socioeconomic status	Level of poverty or wealth of the offender; history of poverty

Hypotheses

This study will test five hypotheses:

1. Serial killers who have been sexually abused are more likely to display Macdonald Triad symptoms than other serial killers who were not sexually abused.

2. Serial killers who have been physically (not sexually) abused are more likely to display Macdonald Triad symptoms than non-abused serial killers.

3. Serial killers who have been psychologically abused are more likely to display Macdonald Triad symptoms than other serial killers who were not psychologically abused.

4. Serial killers who have been sexually abused are more likely to be lust killers than another type of serial murderer.

5. Lust killers are more likely to display Macdonald triad symptoms than non-lust serial killers.

RESULTS

Univariate Descriptive Statistics

The descriptive demographic variables considered in this study were age at first homicide, race, and socioeconomic status. Although the original researchers specifically looked at the age at the beginning of the series killings, they also included information about whether or not that subject had killed before. Out of the 149 serial killers, there were data available about 147 of them; the two with missing data are not included in this analysis. The average age at which these serial killers committed their first homicides was 29.3 years old. In addition, the standard deviation of age was 9.2 years.

The highest proportion of serial killers in this study were White (84.6%), followed by Black (10.7%), Hispanic (4.0%) and Asian (0.7%). Native American serial killers were not present in this sample (see Figure 2).

Races of Serial Killers ($n = 149$)

White: 126
Black: 16
Hispanic: 6
Asian: 1
Native American: 0
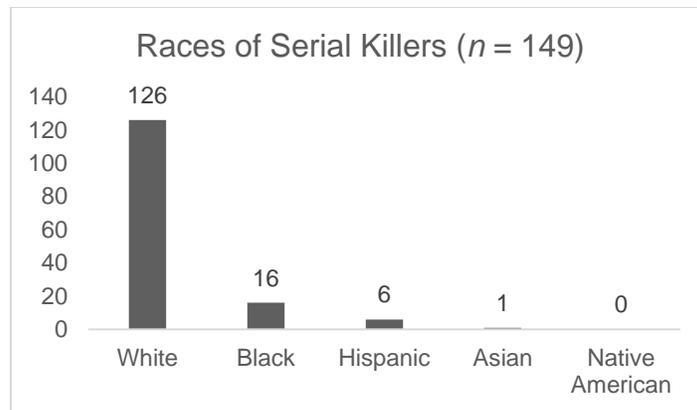
Figure 2: Races of serial killers in this sample

The last demographic variable taken into consideration was socioeconomic status. Of the 149 serial killers included in this sample, only 7 (4.7%) were classified having a history of poverty. This variable was not created by the original researchers who compiled the database: instead, it was calculated by this researcher based on information about each subjects' history of economic issues (where that was present in the timelines).

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The next variable measured in this study was the presence of the three Macdonald Triad elements: animal cruelty, firesetting, and bedwetting. Animal cruelty was present in 33.6% ($n =$ 50) of cases, followed by firesetting with 18.1% ($n = 27$), and bedwetting with 12.8% ($n = 19$) (see figure 3).

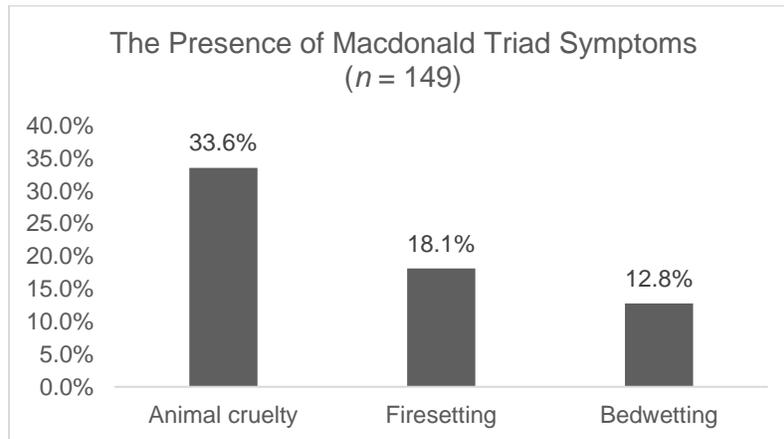**Figure 3: The presence of Macdonald Triad symptoms in this sample**

Bivariate Statistical Analyses: Hypothesis Tests

H_1: Serial killers who have been sexually abused are more likely to display Macdonald Triad symptoms than other serial killers who were not sexually abused.

The data analysis of this study found that 21.5% ($n = 32$) of the sample reported being sexually abused at some time in their life compared to 78.5% ($n = 117$) not reporting sexual abuse. Compared to non-sexually abused serial killers, sexually abused serial killers had higher percentages displaying each of the three Macdonald Triad symptoms (see Figure 4). 43.8% ($n =$ 14) of sexually abused serial killers exhibited acts of animal cruelty whereas 30.8% ($n = 36$) of serial killers who were not sexually abused showed that same symptom.

In addition, sexually abused serial killers were also more likely to commit acts of arson, also known as firesetting. Of the sexually abused group, 25.0% ($n = 8$) displayed acts of

firesetting compared to the non-sexually abused group that had only 16.2% ($n = 19$) of the correspondents setting fires.

Lastly, 21.9% ($n = 7$) of sexually abused serial killers reported bedwetting taking place compared to 10.3% ($n = 12$) of non-sexually abused serial killers. Although the number of sexually abused serial killers is substantially smaller than their non-sexually abused counterparts, sexually abused serial killers were more likely to display Macdonald Triad symptoms thus supporting H_1.

Figure 4: The presence of Macdonald Triad symptoms in sexually abused serial killers compared to non-sexually abused serial killers

H_2: Serial killers who have been physically (not sexually) abused are more likely to display Macdonald Triad symptoms than non-abused serial killers.

This hypothesis focuses on the physical abuse aspect that does not include sexual abuse; H_2 states that physically abused serial killers are more likely to display Macdonald Triad symptoms than non-physically abused serial killers. Physically abused serial killers were found to display the Triad symptoms more often as compared to their non-abused counterparts. Of all the serial killers in this sample, 40.3% ($n = 60$) reported being victims of physical abuse.

46.7% ($n = 28$) of physically abused serial killers engaged in acts of animal cruelty; in contrast, 24.7% ($n = 22$) of non-physically abused serial killers engaged in these acts. Second,

28.3% ($n = 17$) of physically abused serial killers took part in firesetting compared to 11.2% ($n = 10$) of their counterparts. More dramatically, 28.3% ($n = 17$) of physically abused serial killers reported bedwetting while only 2.2% ($n = 2$) of non-physically abused serial killers reported the same. This data further supports H$_2$ suggesting that physically abused serial killers are more likely to display Macdonald Triad symptoms (see Figure 5).
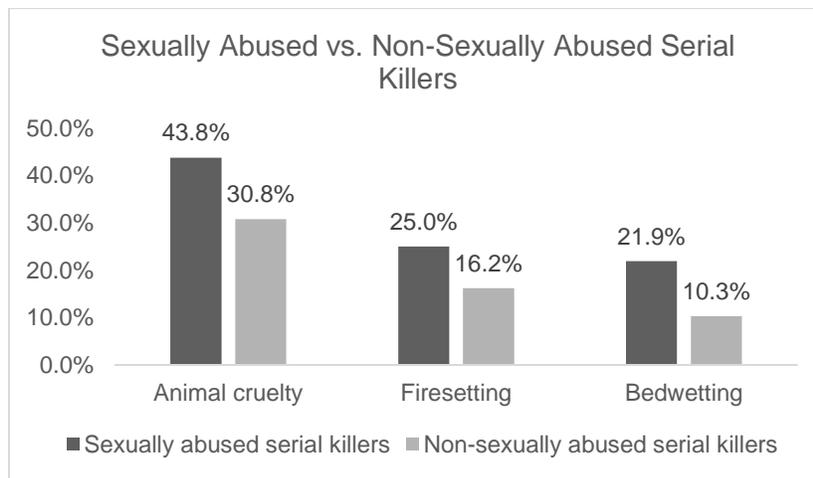

Figure 5: The presence of Macdonald Triad symptoms in physically abused serial killers compared to non-physically abused serial killers

H$_3$: Serial killers who have been psychologically abused are more likely to display Macdonald Triad symptoms than non-abused serial killers.

In addition to sexual and physical abuse, psychological abuse has been found to be present in serial killers. 50.3% ($n = 75$) of serial killers in this sample have been abused psychologically, more than both sexual and physical abuse. Of those, 41.3% ($n = 31$) have reported carrying out acts of animal cruelty whereas only 25.7% ($n = 19$) of non-psychologically abused serial killers have engaged in those acts.

Moreover, 29.3% ($n = 22$) of psychologically abused serial killers committed acts of firesetting compared to 6.8% ($n = 5$) of their counterparts. Furthermore, 20.0% ($n = 15$) of psychologically abused serial killers faced issues with bedwetting whereas only 5.4% ($n = 4$) of

non-psychologically abused serial killers reported the same. Similar to H_1 and H_2, the data supports the hypothesis that psychologically abused serial killers are more likely to display Macdonald Triad symptoms than non-psychologically abused serial killers (see Figure 6).
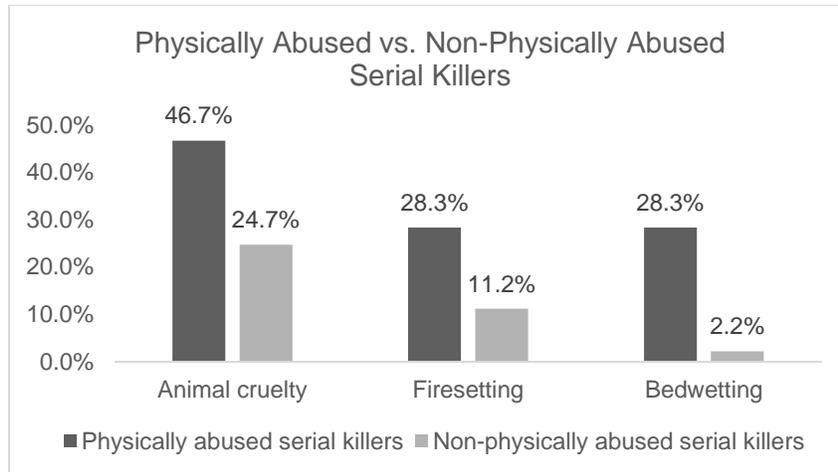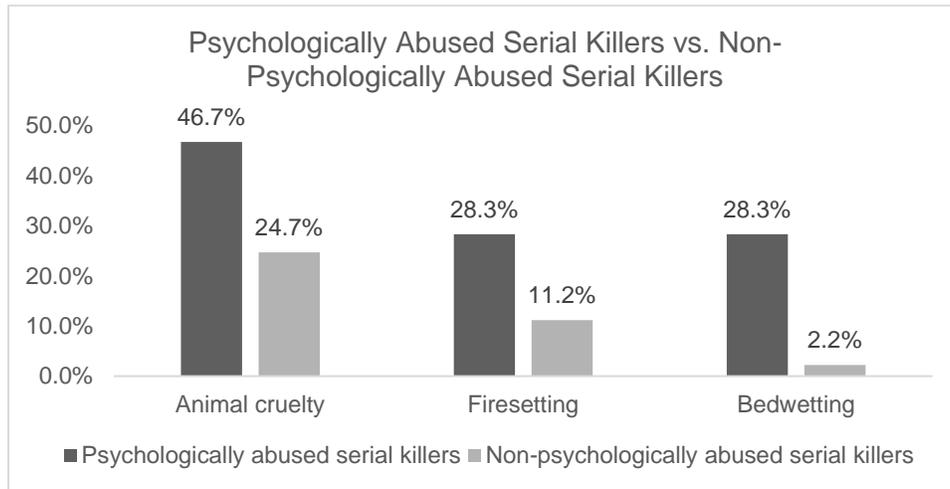

Figure 6: The presence of Macdonald Triad symptoms in psychologically abused serial killers compared to non-psychologically abused serial killers

H_4: Serial killers who have been sexually abused are more likely to be lust killers than another type of serial murderer.

H_4 looks to determine whether there is a likelihood that a sexual abuse can lead to serial killers falling to the Holmes and Holmes serial killer typology of a lust killer (Holmes & Holmes, 2010). Out of the 149 serial killers in this sample, 52.3% ($n = 78$) were coded as lust killers. It was determined that 23.1% ($n = 18$) of the lust killers in this sample were reported to have been sexually abused, but of the 32 serial killers who were sexually abused, 56.3% ($n = 18$) were lust killers. The other typologies with the presence of sexual abuse are as follows: visionary (3.1%, $n = 1$), missionary (6.3%, $n = 2$), power/control (6.3%, $n = 2$), thrill (34.4%, $n = 11$), and comfort being the only one that had no reports of sexual abuse ($n = 0$) (see Figure 7). Of the 117 non-sexually abused serial killers, 52.1% of them ($n = 61$) fell into the lust category.

Due to the changing of MO, serial killers can be classified as more than one typology; the typologies that were most linked to sexual abuse were lust and thrill. The data supports H_4 in which sexually abused serial killers are more likely to be lust killers than another type of serial murderer.

Presence of Sexual Abuse in the Holmes & Holmes Typology
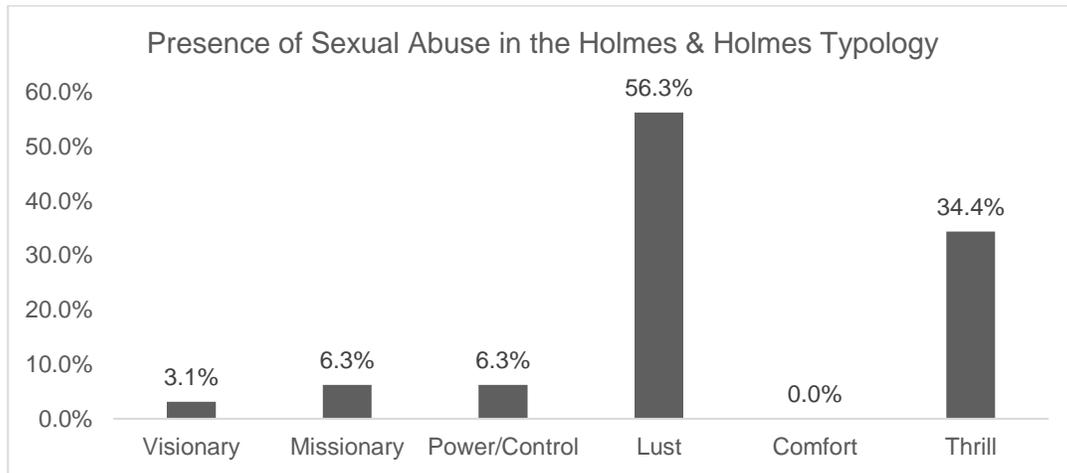
Figure 7: The presence of sexual abuse within the Holmes & Holmes typology of serial killers

H_5: Lust killers are more likely to display Macdonald Triad symptoms than non-lust serial killers.

The last hypothesis to be tested looked at the presence of Macdonald Triad symptoms among lust and non-lust serial killers. Lust serial killers accounted for 52.3% ($n = 78$) of the sample. The Macdonald Triad symptoms were all present: animal cruelty (34.6%, $n = 27$), firesetting (16.7%, $n = 13$), and bedwetting (16.7%, $n = 13$).

Those who were not classified as lust killers (47.7%, $n = 71$) had less people displaying the Macdonald Triad symptoms with the exception of firesetting: 19.7% ($n = 14$) of the non-lust serial killers engaged in acts of firesetting, slightly higher than their lust counterpart. On the other hand, animal cruelty was present for 32.4% ($n = 23$) in the non-lust population and bedwetting was present for only 8.5% ($n = 6$). This data support the hypothesis because two out

of the three Macdonald Triad symptoms were present more often within the group of lust killers

than non-lust killers (see Figure 8).

Figure 8: The presence of Macdonald Triad symptoms in lust killers compared to non-lust killers.

DISCUSSION

Scholarly researchers have determined that abuse in childhood and even as adults can play a significant role in the development of the human psyche (King et al., 2019) and this study aimed to answer multiple questions:
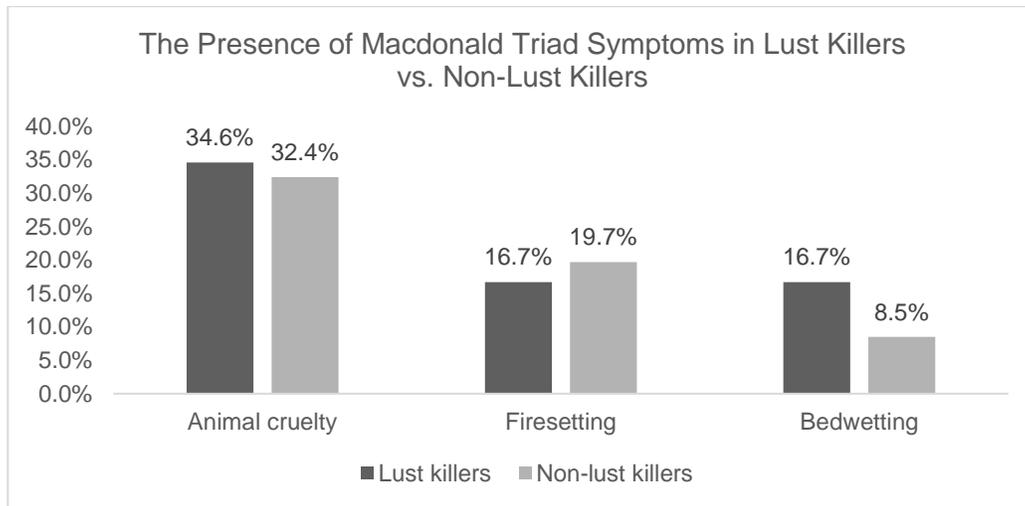
1. Do different types of abuse lead to a higher prevalence of Macdonald Triad symptoms in a sample of serial killers?

2. What is the likelihood that a specific type to abuse can lead to the increase in chances of a person exhibiting Macdonald Triad symptoms?

3. Does sexual abuse have a greater probability to contributing to the formation of lust killer behavior as compared to other Holmes and Holmes (2010) typology behaviors?

To summarize, the Macdonald Triad is a set of three elements that can be used to predict the likelihood of an individual becoming violent later in life (Wright & Hensley, 2003). The three elements are animal cruelty, firesetting, and bedwetting: which were all present in this study.

H_1, H_2, and H_3 were supported by the evidence: this suggests that abused serial killers are more likely to display Macdonald Triad symptoms compared to serial killers who were not abused. Of the three types of abuse included in this study – sexual, physical, and psychological – each had a greater presence of Macdonald Triad symptoms compared to the non-abused group.

When measuring the presence of the Macdonald Triad, animal cruelty was the most frequently reported element of the three and was associated with three kinds of abuse in nearly half of the cases: sexual abuse (43.8%, $n = 14$), physical abuse (46.7%, $n = 28$), and psychological abuse (41.3%, $n = 31$). Animal cruelty can be considered the most important element of the Macdonald Triad because a study conducted by the FBI concluded that animal

cruelty is the strongest predictor for the formation of a future serial murder (Wright & Hensley, 2003). In addition, some researchers have found that practicing animal cruelty has been linked to engaging in physical violence toward humans in the future; with some scholars believing that this is because those who commit cruel and violent acts towards animals become desensitized to violence (Louise Petersen & Farrington, 2007; Knoll, 2006). Correspondingly, as a lust killer's victim count increases, so does the violence and brutality in the killings; which can correlate to the desensitization toward violence within the killer's psyche (Holmes & Holmes, 2010). This further supports the evidence that the practice of animal cruelty increases the likelihood of a person becoming violent toward humans later in life.

Firesetting was slightly more prevalent in the group of psychologically abused serial killers with 29.3% ($n = 22$) compared to those who were sexually (25.0%, $n = 8$) and physically abused (28.3%, $n = 17$). This supports Gannon & Pina's (2010) finding that those who engage in firesetting tend to come from families that neglect their children. In addition, the researchers determined that firesetters commit these acts as a way of expressing their emotions. Such individuals may choose this form of expression because they have poor communication skills as a result of the parental neglect they have suffered (Gannon & Pina, 2010). Furthermore, Gannon & Pina (2010) found that firesetters are more likely to come from a financially unstable home: where the child may have a hard time forming bonds with their caregiver(s) compared to non-firesetters. This alludes to the notion that psychological factors have an impact on the Macdonald Triad element of firesetting.

Lastly, bedwetting was most commonly observed within the group of physically abused serial killers with 28.3% ($n = 17$) reporting the presence of this Macdonald Triad element. Within the group of sexually abused serial killers, 21.9% ($n = 7$) reported bedwetting whereas

20.0% of psychologically abused serial killers reported the same. Some researchers have found

bedwetting to correlate more with sexual abuse rather than with physical abuse (Anderson et al.,

2014). While bedwetting is common in younger children, the researchers have concluded that the

commencement of bedwetting is a common sign of sexual abuse and that bedwetting was more

common in the population of sexually abused children compared to those who were not victims

of sexual abuse (Anderson et al., 2014).

This study also supported H_4 suggesting that sexually abused serial killers are more likely

to be lust killers than another type of serial killer based on the Holmes and Holmes (2010)

typology. Of the 149 serial killers in this study, 32 (21.5%) reported sexual abuse and of those

32, 56.3% ($n = 18$) fell into the lust killer category, supporting this hypothesis. This can be

explained by Kerr & Beech (2016) who determined that those who were victims of sexual abuse

can be triggered into remembering, or reliving, their abuse. This can contribute to the desire to

avenge that abuse by inflicting what happened to the victim onto other individuals. Multiple

studies have found that sexual homicide offenders are often victims of sexual abuse and the

increase in prevalence of the abuse led to an increase in likelihood that sexual homicide

offenders, or lust killers, were to have been sexually abused at some time in their lives

(Beauregard & DeLisi, 2018). Other researchers have determined that the behaviors of offenders

often reveal the underlying factors of their actions which can stem from psychological, physical,

or even sexual trauma (Purcell & Arrigo, 2006). This can be represented in the crime scenes left

by lust killers (Kerr & Beech, 2016). The problem for law enforcement, and other researchers is

that the crime scene doesn't always present itself as the location of a sexual homicide because

they are unaware of the psychological meaning behind certain actions of a lust killer. The reason

why they do things in a certain manner, or by how they leave their victim in the event that they

are left posed, often has to do with the psychological component of the killing (Knoll, 2006). As stated earlier, the UCR does not always count lust crimes as sexual in nature because the link between sexual gratification and violence is not always evident to other individuals (Arrigo & Purcell, 2001). The fantasy is often what makes a lust killing sexual in nature, and not by what's left behind at the scene of the crime.

Lust killers have often been found to be victims of sexual abuse because they typically murder their victims in the hope of making their sadistic fantasies into a reality. The formation of these fantasies tends to be a response to abuse, specifically sexual abuse, where the victims isolate themselves, and as a coping mechanism, they begin to fantasize of a world where they are in charge, and can inflict the pain that they suffered onto others (Fox et al., 2019; Hickey, 2013). The fantasy world serves as a link between sexual abuse and lust killings because the act of killing a person, and the methods used, are for the sexual gratification of the offender (Koeppel et al., 2019).

Lastly, the data supported H_5 that lust killers are slightly more likely to display Macdonald Triad symptoms than non-lust serial killers: 71 out of the 149 serial killers in this sample were categorized as a lust killer and lust killers were more likely to show elements of the Macdonald Triad (apart from firesetting). Lust killers displayed animal cruelty 34.6% and bedwetting 16.7% of the time. Non-lust killers displayed animal cruelty and bedwetting 32.4% and 8.5% of the time, respectively. Firesetting was the only element of the Macdonald Triad that did not support the hypothesis; firesetting was present in 16.7% of lust killers compared to a slightly higher 19.7% of non-lust killers. It is possible that with a larger sample, this hypothesis could be fully supported by all three elements; but in this study, only two out of the three triad symptoms are elevated in the lust murder typology category. Generally, the association between

Macdonald Triad symptoms and the phenomenon of lust murder does not appear to be especially strong.

As previously stated, lust killers murder their victims out of the hope of making their fantasy a reality as a way to cope with abuse and the Macdonald Triad presents its elements as responses to different types of sexual, physical, or psychological abuse (Koeppel et al., 2019). It was assumed that due to the result of being victims of abuse, lust killers in general would be more likely to display the three Triad symptoms to explain the reasoning behind their homicidal tendencies, but H_5 was not fully supported by the data analyzed.

Conclusion

With the commencement of research about serial murder started by the Behavioral Sciences Unit of the FBI, researchers have gained a large amount of data regarding the underlying motives of serial killers (Morton, Tillman, & Gaines, 2014). Contributing to the motives of serial killers are the presence of three elements (animal cruelty, firesetting, and bedwetting) that can serve as predictors for an individual who may commit violent acts in the future (Purcell & Arrigo, 2006). Specifically, animal cruelty has been found to desensitize individuals to violence and may correspond to killers increasing in brutality towards their victims as a result of becoming numb to violence (Louise Petersen & Farrington, 2007; Holmes & Holmes, 2010).

This present study determined that physical, psychological, and sexual abuse leads to a higher prevalence of Macdonald Triad symptoms among serial killers and the likelihood that a specific type of abuse can lead to the increase in chances of a person exhibiting the three symptoms. In addition, this study also concluded that sexual abuse has a greater chance of contributing to the formation of lust killer behavior. Although the presence of firesetting was

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greater among non-lust serial killers, further research would be necessary to determine if this generalization can be applied to a larger sample of serial killers, and can lead to a better understanding of the casual mechanisms underlying these relationships.

Illustrative Examples

In analyzing the quantitative data, and presenting numbers pertaining to serial killers, it is easy to lose focus about what this information truly represents: that is, the sheer brutality and depravity of the acts in question, as well as the critical importance of developing a thorough understanding of why serial murder happens, and how this phenomenon develops. Consequently, at this point in this thesis, the present researcher has chosen to provide a series of case studies to illustrate the relationships discussed above. The cases are not statistically representative of all serial murder cases; but they should help the reader appreciate what the percentages, proportions and other statistical information, revealed in this study actually mean.

One of the subjects from the sample that illustrates the hypotheses is Henry Lee Lucas: a man who had a very difficult upbringing that can be argued led to his homicidal habits later in life. Lucas is known as one of the most prolific serial killers in the United States suspected of being responsible for the killings of hundreds of women across the country (Newton, 2006; Kenner & Oldham, 2019). There are many accounts to how many victims Lucas had, some authors have estimated over 600! However, the actual number is unknown because DNA evidence suggests that Lucas may have lied about murdering many victims (something that is not unusual among serial killers) (Gajanan, 2019). In Kenner and Oldham's (2019) limited series *The Confession Killer*, it was stated that Lucas is believed to be responsible for about 150 murders.

Lucas was born into an unstable family dynamic: they lived in poverty, and he was physically, psychologically, and arguably, sexually abused (Vronsky, 2004; Gajanan, 2019). It can be argued that Lucas used different coping mechanisms as a way to deal with the abuse including engaging in deviant acts and animal cruelty. Lucas himself directly stated that he would resort to delinquent behavior as a means to escape the abuse and that growing up he did anything to stay away from his home (Reid et al. 2019).

In his book, Serial Killers: The Method and Madness of Monsters, Vronsky (2004) states "Lucas's childhood history can serve as a manual on how to incubate a serial killer. It includes virtually every factor reported by different serial killers in one single life," (p. 276). This statement supports the nature versus nurture argument in which an individual does not become a serial killer because of who they are at birth, but rather how they were raised, and whom they were taught to be. In addition, this provides some context to the events leading up to Lucas's first homicidal act against his mother. Because of his experiences and abuse, Lucas began to associate blood and violence with sex, which can be seen in his killings later in life (Vronsky, 2004).

As a teenager, he engaged in firesetting and sexual acts with animals, both dead and alive and, was in and out of jail for different crimes. Not long after, he ended up killing his mother when he was in his early twenties, for which he served time in prison (Radford University Students; Vronsky, 2004). Following his release, he attempted to kidnap a female teen and would end up being sent back to prison. It wouldn't be long after his second release that he would graduate to murder; Vronsky (2004) found that Lucas even begged authorities not to release him from prison because he knew he had the urge to kill (Henry Lee Lucas, Biography).

Its unknown exactly when Lucas began killing again following his release but it ended in 1983 when he was caught following the disappearance of his 15-year-old girlfriend and the death

of a woman he was living with (Newton, 2006; Kenner & Oldham, 2019). In 1983, 82-year-old Kate Rich was missing and her relative alerted authorities that she believed Lucas, who was living with her at the time, was responsible for her disappearance. About a month after authorities began working on the Rich case, they were made aware of another disappearance of a teenage girl: Becky Powell, Lucas's girlfriend (Kenner & Oldham, 2019). Since Lucas was linked to both women, he was law enforcement's best suspect. It would not be long after authorities caught up to Lucas that he would confess to murdering both women: first he killed Becky, then he killed Kate after she found out about Becky's death. From this instance, Lucas would begin to tell authorities about the rest of the murders tied to him (Kenner & Oldham, 2019).

In 1976, Lucas met fellow serial killer Ottis Toole while when working in a soup kitchen and they began an amorous relationship and became partners in crime (Newton, 2006). Their homicidal spree lasted about six and a half years and they did not have an ideal victim type; together they murdered a wide variety of people (Newton, 2006; Vronsky, 2004) Although they were together for so long, not all of their murders were committed as a team (Newton, 2006). Lucas, along with Toole, is known as a nomadic serial killer because of his transient lifestyle. This benefited Lucas in the fact that it would be harder to connect murders to him because it would make it harder for multiple police jurisdictions to distinguish a pattern among the crimes (Newton, 2006). Aside from the many different locations of the murders, there was not one specific way that Lucas killed his victims; methods of killing ranged from being shot, stabbed, or suffocated to being beaten to death (Vronsky, 2004).

Aside from using different methods to kill his victims, it was also reported that Lucas would sexually assault or rape some of his victims (Vronsky, 2004). The original researchers of

the Radford dataset categorized Lucas as a lust and thrill killer; it was reported that he would

engage in acts of necrophilia with some of his victim's corpses (Radford University Students). In

other instances, the bodies would be mutilated but the purpose has not been clearly stated; it

could have been to prevent the location and identification of his victims or for his own

enjoyment (Oliver, 2020).

Although Brian James Dugan did not have nearly as many victims as Henry Lee Lucas,

his case also supports the five hypotheses: that is, he is classified as a lust killer, suffered from

sexual, physical, and psychological abuse, and displayed all three of the Macdonald Triad

symptoms (Radford University Students). It has been confirmed that Dugan had three murder

victims, but it is suspected that his victim count is actually five (Radford University Students);

his murders took place from 1983 to 1985 (Gutowski, 2007). Following his capture, the FBI

interviewed his siblings and his mother in regard to his upbringing. His siblings and mother gave

conflicting accounts; but based on what they had to say, it seems likely that their parents played

an important role in the person that Dugan turned into (Gutowski, 2007).

Dugan's father was known to be violent towards his children, and was an alcoholic, but

he died when Dugan was in his twenties (Radford University Students). Moreover, his mother

was described as punishing her kids more than one would seem necessary. When Dugan and his

brother were caught playing with matches, their mother had one of them hold a lit match until

they would burn their fingers. Dugan and his brother would eventually begin committing acts of

arson: beginning with burning down their garage (Gutowski, 2007). Aside from arson, Dugan

also engaged in acts of animal cruelty: at the age of 13, he poured gasoline on a cat then set it on

fire. In addition to the two Macdonald Triad symptoms, Dugan often wet his bed, and as a

punishment, his mother would make him sleep in the soiled sheets, which can be considered

psychological abuse. Although he was not sexually abused in his home, it was suspected that Dugan was sexually abused as a teen when he was sent to a youth home (Gutowski, 2007).

Dugan was classified as a lust killer because his MO involved the rape of his victims before killing them; and although he did not kill all of his victims, those who did survive were also victims of rape (Gutowski, 2007). Although he did not start killing until 1983, his last known homicide took place in 1985. Dugan did not have an ideal victim type but attacked when the opportunity arose (Gutowski, 2007). His first victim, 10-year-old Jeanine Nicarico was kidnapped from her home, raped, then stabbed in 1983; three men were charged with the crime until years later that Dugan would confess to the murder while his plea deal was being negotiated for the other two murders (Rolando Cruz; Gutowski, 2007). A little over a year later, Dugan spotted a woman at a stoplight and followed her, running her off the road. Afterwards he raped then drowned her. The next year, after helping a woman start her car, he overpowered her and ended up raping her but survived her attack. A few weeks later he attempted to abduct another woman, but she was able to get away; the following day he found another victim whom he raped then returned her home (Gutowski, 2007).

Dugan's last victim would be a 7-year-old by the name of Melissa Ackerman (Gutowski, 2007). It would take authorities about two weeks before finding her lifeless body in a ditch; she had been raped and drowned in the creek where her body was found. Dugan had attempted to kidnap both Ackerman and her friend, but her friend was able to escape (Rozek, 2009). He was eventually caught after his vehicle was recognized by a police officer from a nearby town following Ackerman's death. Dugan confessed to the killings in exchange for his life because the death penalty was being sought by prosecutors (Gutowski, 2007).

Limitations

When using secondary data, there will be limitations to any study. A specific challenge faced with conducting this study is that some potentially important confounding variables could not be taken into consideration, such as socioeconomic status. This researcher attempted to measure socioeconomic status based on information contained in the timelines of each subject included in the sample, but many of the subjects did not have a sufficiently detailed timeline of their lives, so socioeconomic status could not be determined for these cases, or taken into consideration for the entire sample.

Similarly, the categories of abuse were interpreted differently by the researchers. In some instances, the researchers considered having strict parents, or facing corporal punishment, as forms of abuse, but it can be open to interpretation whether these are actually forms of abuse. At a minimum, it would have been useful to measure the degree of abuse each subject experienced, as opposed to a simply dichotomous measure ("yes/no"). Unfortunately, the researchers who coded the original data did not go into great detail regarding the histories of many of the serial killers, which left a lot of missing information that could have been useful for the present study.

In addition, the researchers who put together the data did not follow the same format. This means that there was frequently missing information, or the information was based on their subjective interpretation of the variables, or categories. For example, for some of the serial killers of this database, when determining what typology category they fell into, the researchers answered with the following: serial, organized, disorganized, rape, revenge, etc. In other words, they did not follow a specific typology in categorizing the offenders. Although the Holmes and Holmes (2010) typology was used in this study to separate serial killers, the original researchers did not stick to any one dominant typology. This would have led to incongruent measurement of

the key outcome variable, so the present researcher had to recode some of the cases to the closest

Holmes and Holmes category possible based on the information in the timelines provided. When

this was not possible, cases were removed from the sample.

As a result of the missing data, imprecision of the original researchers, and the overall

modest number of cases, as well as the fact that this sample was not assembled using probability

techniques, it was determined that inferential statistical tests, such as a logistic regression

analysis, could not be used to make accurate generalizations to the population of serial killers as

a whole[1].

Policy Implications

Although homicide as a whole cannot be prevented, there can be measures taken to

prevent these violent outbursts in certain individuals. As stated earlier, when the three elements

of the Macdonald Triad are present in an individual, the likelihood of them becoming violent

later in life increases (Wright & Hensley, 2003). If, for example, a child or a teenager is being

abused and does not have an outlet or means to communicate their experiences to others, they

begin to isolate themselves which leads to the creation of the fantasy world as a coping

mechanism of their trauma (Beauregard & DeLisi, 2018). By preventing the isolation of these

individuals, theoretically, it could prevent future homicidal acts from taking place.

Researchers have found that isolation and loneliness can have negative cognitive effects

on the human psyche because it prevents the individual to be able to respond to the feedback of

others (Martens & Palermo, 2005). This results in the individual to become unable to "develop

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[1] It should be noted that the researcher did run several exploratory multivariate logistic regression models on the available data to investigate questions such as "Might the Macdonald Triad symptoms serve as intervening variables between abuse and Holmes and Holmes typology category?" and "Do the relationships revealed hold controlling for race and age at first kill?" The results of the multivariate analyses were not helpful; and did not provide any additional information or insight beyond the bivariate analyses presented in the previous chapter. Consequently, they are not included in this thesis.

emotionally, socially, and morally in a normal and healthy way." (Martens & Palermo, 2005, pp. 304). To keep this from happening, schools should provide students with the means to communicate with a trusting adult in the event that they do not have anyone else to talk to.

Studies conducted on counselors in a school setting have found that when a student visits a counselor regularly, they begin to form an emotional bond which can offset the loneliness that they might be feeling at home if they begin to isolate themselves ("Protecting Child Welfare and Preventing Abuse," n.d.). In addition, by providing students with someone to talk to, counselors or social workers would be able to intervene and stop the abuse faced by the student at home ("Protecting Child Welfare and Preventing Abuse," n.d.).

Suggestions for Future Research

To make this study more applicable to the general population of serial killers, future researchers should either use secondary data that has clear, concise information so that there is a smaller margin of error, or perhaps assemble and code their own databases. For those who choose to use this database from Radford University, it is suggested that they use outside information for the areas that are not adequately measured, and that one consistent typology be used for classifying serial killers. The use of 'organized' and 'disorganized' could be kept in the categorization, but it should be supplemented with a serial killer typology such as Holmes and Holmes (2010), to make it possible to be more accurate when testing hypotheses. Furthermore, there have been more serial killers caught since the data has been gathered; and thus, updating the database with these cases might possibly shed further light on the hypotheses tested in this thesis.

However, for future researchers who choose to compile their own data, they should provide definitions and requirements for the variables they will be coding. For example, for the

code of physical abuse, the researchers should define what they look at to consider something as physical abuse such as harsh or corporal punishment. In addition, the descriptions of the variables should include what they will not be considering to be a "yes" for the presence of that variable. The presence of psychological abuse was considered for the present study, but for future researchers looking at that same variable, they should consider the option of only including those who meet a more specific criteria. Psychological abuse from parents or family members instead of psychological abuse as a whole could have an effect on the victim's outcome based on who their abuser is. Overall, future researchers should make it easy for the reader to understand what exactly they will be looking at within their variables instead of a generalization to prevent the need of removing cases as was done in this study. In short, future research in this area would benefit from improved validity in the measurement of key concepts.

Aside from the subject of the use of certain databases, it would be beneficial to look at a different theoretical model in understanding the events leading up to serial murder. Robert Agnew created general strain theory in the late twentieth century that explains the relationship between the loss of positive incentives in one's possessions or relationships and/or the presence of a negative entity which is considered to be a stressor (Williams & McShane, 2018). This theory could be tested with the research subject presented in this thesis as abuse is a stressor that could be measured with this theory. Strain theory argues that the greater the stressor, the greater the likelihood of offending increases similar to the notion of the presence of the Macdonald Triad (Williams & McShane, 2018; Wright & Hensley, 2003).

Personal Reflection

The most important thing this researcher learned from writing this thesis is that the presence of abuse can be manifested in multiple ways. The presence of the Macdonald Triad

specifically, and it seems plausible that when there is more than one of the three elements present, the likelihood of a person becoming violent in the future increases, which could eventually lead to homicide (Wright & Hensley, 2003). In addition, this researcher found it eye-opening to learn that the UCR does not always categorize sexual homicide as such because it is not always evident that there is a sexual element present (Arrigo & Purcell, 2001). Having a criminal profiler present when examining a crime scene of a known offender could bring more information to law enforcement officials in regards to proving a different point of view; as opposed to using profilers only when the offender is unknown (White et al., 2011).

APPENDIX

Spreadsheet of Coded Data of Serial Killers

Data Results (*n* =149)

Categories			Non-		Race			
Physically abused	60	40.3%	59.7%		White	126	84.6%	
Psychologically abused	75	50.3%	49.7%		Black	16	10.7%	
Sexually abused	32	21.5%	78.5%		Hispanic	6	4.0%	
Animal cruelty	50	33.6%	66.4%		Asian	1	0.7%	
Firesetting	27	18.1%	81.9%		Native American	0	0.00%	
Bedwetting	19	12.8%	87.2%		**Avg. age first kill**	**29.3**		
Categorized as 'Lust'	**78**	**52.3%**	***n***		**Not Categorized as 'Lust'**	**71**	**47.7%**	***n***
Physically abused	34	43.6%	22.8%		Physically abused	26	36.6%	17.4%
Psychologically abused	44	56.4%	29.5%		Psychologically abused	31	43.7%	20.8%
Sexually abused	18	23.1%	12.1%		Sexually abused	14	19.7%	9.4%
Animal cruelty	27	34.6%	18.1%		Animal cruelty	23	32.4%	15.4%
Firesetting	13	16.7%	8.7%		Firesetting	14	19.7%	9.4%
Bedwetting	13	16.7%	8.7%		Bedwetting	6	8.5%	4.0%
Race (Lust)					**Race (Non-Lust)**			
White	64	82.1%	43.0%		White	62	87.3%	41.6%
Black	9	11.5%	6.0%		Black	7	9.9%	4.7%
Hispanic	4	5.1%	2.7%		Hispanic	2	2.8%	1.3%
Asian	1	1.3%	0.7%		Asian	0	0.0%	0.0%
Sexually Abused	**32**	**21.5%**	***n***		**Non-Sexually Abused**	**117**	**78.5%**	***n***
Animal cruelty	14	43.8%	9.4%		Animal cruelty	36	30.8%	24.2%
Firesetting	8	25.0%	5.4%		Firesetting	19	16.2%	12.8%
Bedwetting	7	21.9%	4.7%		Bedwetting	12	10.3%	8.1%
Physically Abused	**60**	**40.3%**	***n***		**Non-Phys. Abused**	**89**	**59.7%**	***n***
Animal cruelty	28	46.7%	18.8%		Animal cruelty	22	24.7%	14.8%
Firesetting	17	28.3%	11.4%		Firesetting	10	11.2%	6.7%
Bedwetting	17	28.3%	11.4%		Bedwetting	2	2.2%	1.3%
Psychologically Abused	**75**	**50.3%**	***n***		**Non-Psych. Abused**	**74**	**49.7%**	***n***
Animal cruelty	31	41.3%	20.8%		Animal cruelty	19	25.7%	12.8%
Firesetting	22	29.3%	14.8%		Firesetting	5	6.8%	3.4%
Bedwetting	15	20.0%	10.1%		Bedwetting	4	5.4%	2.7%
Holmes & Holmes Typology	**149**	***n***			**Sex. Abuse & HH Type**	**32**	**21.5%**	***n***
Visionary	3	2.0%			Visionary	1	3.1%	0.7%
Missionary	8	5.4%			Missionary	2	6.3%	1.3%
Power/Control	9	6.0%			Power/Control	2	6.3%	1.3%
Lust	78	52.3%			Lust	18	56.3%	12.1%
Comfort	5	3.4%			Comfort	0	0.0%	0.0%
Thrill	29	19.5%			Thrill	11	34.4%	7.4%

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