

Running Head: BEHAVIORAL & MOTIVATIONAL CHARACTERISTICS

UNIVERSITY OF CENTRAL OKLAHOMA
Edmond, Oklahoma
Jackson College of Graduate Studies

Behavioral & Motivational Characteristics of Female Firesetters in Oklahoma

A THESIS

SUBMITTED TO THE GRADUATE FACULTY

In partial fulfillment of the requirements

For the degree of

MASTER OF SCIENCE IN FORENSIC SCIENCE

Taylor B. Green

University of Central Oklahoma

2018

Behavioral & Motivational Characteristics of Female Firesetters in Oklahoma


By: Taylor B. Green

A THESIS

APPROVED FOR THE W. ROGER WEBB FORENSIC SCIENCE INSTITUTE

November 2018

By  _____
Dr. John P. Mabry Committee Chair

By  _____
Dr. Wayne D. Lord Committee Member

By  _____
Dr. Mark R. McCoy Committee Member

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Acknowledgments

I would like to thank my graduate advisor, Dr. John Mabry as well as the members of my thesis committee Dr. Mark McCoy and Dr. Wayne Lord. Thank you all for your time and insightful commentary and editing that allowed this research to progress and improve in its quality.

Also, I want to thank Ms. Caitlin Porterfield for constantly helping throughout this paper. Thank you for never complaining when asked for help and thank you for reviewing my literature on top of everyone else's that you agreed to look over.

In addition, I would like to thank Robert Doke, Oklahoma State Fire Marshal, for allowing me to use the State Fire Marshal's office as needed to gather case files for my data collection. I could not have completed this research without your assistance and your time.

Additionally, I am grateful to Tulsa ATF Special Agent CES/CFI, Ashley Stephens for taking the time to provide me with nationwide female arsonist results to help complete my research study.

I would like to extend my appreciation to Mrs. Joan Brenneman for her time, assistance, and support throughout my research. I am very thankful for the help with the statistical portion of my thesis.

To my parents, I would like to express my deepest appreciation for all that you have done to make sure that I can go to school, play sports, have everything I ever needed, and support me through it all. Thank you for pushing me to be the best that I can be and I hope to make you proud. Thank you for being my two biggest fans.

Abstract

The purpose of this research is to focus on and identify the behavioral and motivational characteristics of female firesetters of all ages in the state of Oklahoma. The current theory is that female arsonists are motivated most often by revenge. This research seeks and attempts to define the current underlying motivations of female arsonists in Oklahoma and refute or support the contemporary revenge theory. This study is determined to discover the primary motive of female firesetters in Oklahoma. It is hypothesized that revenge is the primary motive of female firesetters in Oklahoma to the same extent as other female firesetters throughout the United States. The previous studies do not address female firesetters behavior in terms of the motives of importance to arson investigations. This study will focus on the motives of this subset of offenders which may prove valuable to investigators in the state of Oklahoma and throughout the region. Throughout the study, the motives are defined, the arson charges in Oklahoma are defined, and case examples are provided. The six motives tested were: vandalism, excitement, revenge, profit, crime concealment, and mental disorder. In this research, thirty-three (33) solved female arson cases from the state of Oklahoma were analyzed. The sample represents all the known arsons committed by females in Oklahoma during the 5 year time period from 2012-2017. Those cases were analyzed using a coding form to compare and contrast for statistical analysis. There were three tests used within the study: One Sample Proportion Test, Effect Size Test, and Fisher's Exact Test. Due to the small sample size, each test gave insufficient results. However, those tests did not support nor refute the hypothesis which left the results to remain neutral. With a larger sample size, the results would be more sufficient. Overall, revenge was the most consistent motive associated with female firesetters in Oklahoma during the time period for this study.

Behavioral & Motivational Characteristics of Female Firesetters in Oklahoma

Introduction

Female-perpetrated arson is a topic that has received relatively little attention in research. In this study, research regarding the characteristics and behaviors of male and female arsonists is reviewed and discussed. Previous research and studies involving female arsonists suggests the need for a study that compares female firesetters to appropriate female arson control groups as a means of identifying motives. This would allow for a theory to be developed on why females commit arson crimes and what common characteristics they exhibit.

Oftentimes, arson is overlooked as a heinous crime, yet arson often results in death or is used to cover up murders. Arson can be used to cover up the true nature of crimes or to destroy any type of evidence that may have been left behind. The main question behind these crimes is “why?” What motivates people to commit the crime of arson? Women aren’t usually seen as the suspects in violent crimes. With every arson case, there is a different story and a different motive, each of which makes perfect sense to the offender,

Problem Statement

Arson crimes are deliberate and often overlooked as insignificant. However, it is one of the most costly and destructive criminal behaviors. According to the statistics provided by the National Fire Protection Association, in 2015 there were 1,345,000 fires reported in the United States. Of those, it is estimated that nearly 20,000 were deliberately set. Fires in the United States resulted in 3,280 civilian deaths along with 15,700 civilian injuries. In 2015, there was nearly \$14.3 billion in property damage resulting from arson crimes.

According to Richard Campbell, of National Fire Protection Association’s “Intentional Fires”, each year between 2010 and 2014, an estimated 261,330 intentionally set fires were

reported to fire departments in the United States. The fires included 196,480 outside or unclassified fires, 49,690 structure fires, and 13,160 vehicle fires. Losses resulting from these fires included:

- 440 civilian deaths
- 1,310 civilian injuries
- \$1 billion in direct property damage 75% of intentional fires occurred outside.

Although 19% of intentional fires involved structures, these fires accounted for 87% of civilian deaths, 84% of civilian injuries, and 86% of direct property damage resulting from intentional fires. 6% of intentional fires involved vehicles. These fires accounted for 12% of the direct property damage.

More specifically, out of the total number of fires in the United States, 501,500 of those were structural fires that caused the death of 2,685 civilians and 13,000 civilian injuries. The structural fires resulted in nearly \$10.3 billion in damage of property. Also, out of the total, 204,500 of those were vehicle fires that caused 500 civilian deaths and caused injuries to 1,875 civilians. The vehicle fires resulted in almost \$1.8 billion in property damage. Other types of fires and outside fires totaled out to be 639,500 that caused 95 deaths of civilians and 825 injuries to civilians. These types of fires estimated around \$252 million in property damage.

For the 2015 statistics in the United States, it was calculated that a fire department responded to a fire nearly every 23 seconds. With these statistics, it would be significant to understand why, in the case of intentionally set fires, people feel the need to cause such destructive damage and to examine their personal motives. More specifically, it would be significant to examine the personal motives behind female firesetters to develop more research

and data for this unique subset of firesetters.

Key Terms

The following terms have been identified and defined for the purpose of this study:

Arson: the illegal burning of a building or other property that is done “maliciously, intentionally, or recklessly” (Arson, n.d; National Fire, n.d).

Firesetter: a person who starts a fire, usually deliberately and maliciously (Glossary of Wildland Fire Terminology, n.d)

Motive: something (such as a need or desire) that causes a person to act. Motive. (n.d.). Retrieved August 22, 2018, from <https://www.merriam-webster.com/dictionary/motive>

Prior Stressor: a prior physical, psychological, or social force that puts real or perceived demands on the body, emotions, mind, or spirit of an individual. (What is stressor? definition and meaning. (n.d.). Retrieved from <http://www.businessdictionary.com/definition/stressor.html>)

Trigger: an event or series of events which place an offender in an emotional law or state of mind prompting them to resort to a criminal act.

Serial Arson: an offense committed by firesetters who set three or more fires with a significant cooling off period between the fires. A crime of violence, often taking lives in addition to significant property damage.

Motive Classifications

Arsonists demonstrate behavior that is incredibly costly and destructive. Setting fires intentionally is costly and can cause serious injuries, or even result in death. According to Robert

Disbrow Jr. in his article “Arson Investigation - The Six Motives for Firesetting,” there are six motive classifications that are associated with fire-setters (2010, December 13):

1. Vandalism
2. Excitement
 - a. Thrill Seeker
 - b. Recognition Seeker (Identity Publicized)
 - c. Attention Seeker (Identity Unknown)
 - d. Sexual Perversion
3. Revenge
4. Crime concealment
5. Profit
6. Extremism

Defining the Motives

Vandalism, as associated with arson, is the “mischievous or malicious act of firesetting that causes damage to property” (Disbrow Jr., 2010). Fires that are set with vandalism as the primary motive usually target abandoned or vacant buildings, vehicles, brush, or educational facilities. Oftentimes, these fires are set to cover up a previous crime such as burglary or they may even be a result of peer pressure as individuals are simply trying to “fit in” or “be cool”. Vandalism fires are generally started by younger people that are juvenile offenders.

According to studies of the FBI, 7% of arson fires are motivated by vandalism. Some characteristics of vandalism motivated fires may include:

- younger subject(s); may act in groups

- typical target is an educational facility
- usually lives within 1 mile of the target
- subject usually lives at home with parents
- fires are usually set after the school day is over
- fires usually set on weekdays

“Excitement is the type of fire that is set by the thrill-seeking arsonist for excitement, recognition, and attention. There are some rare occasions that the fire is set for sexual gratification” (Disbrow Jr., 2010). A fire motivated by excitement can range from brush fires to occupied structures. The person that sets these fires will typically set them in a location that they are familiar with and they may even remain close to the scene.

According to studies of the FBI, 31% of fires are caused by the motive of excitement.

Some characteristics of fires motivated by excitement may include:

- this arsonist craves attention; acts alone
- will set fires and watch from a guarded distance, or
- if at the scene, will attempt to blend in with bystanders
- targets include dumpsters, vegetation, construction sites and residential areas
- often has a prior arrest record

As a keepsake, an arsonist motivated by excitement will often take pictures or videos of the fire in order to relive the crime and re-experience the thrill. At these types of fires, it is important that the investigator or crime scene photographer take pictures of the spectators in case the arsonist is located within the crowd.

Cases also exist where members of the fire service, security guards, or first responders set

the fires because they are seeking praise and recognition. They desire to be seen or looked at as a hero and that feeling is what motivates them to set the fire.

Excitement subtypes consists of: thrill seeker, recognition seeker, attention seeker, or sexual perversion. A thrill seeker is when an arson satisfies a personal need for excitement. A recognition seeker discovers or fights the fire and seeks to be recognized as the hero. An attention seeker is when one has a personal need for attention satisfied by the “attention” given by the authorities to the scene they have created, but they do not want to be recognized/identified for any role in the fire. Sexual perversion is when one is sexually aroused by fires or acts of arson.

“*Revenge* is the type of fire that is retaliation for a real or perceived injustice. This type of fire can result in deadly consequences” (Disbrow Jr., 2010). There can be a variety of targets when it comes to retaliation such as a person, institutional facility, or a group. For the fire investigator, there’s a chance that the firesetter can be identified by just looking into the area of origin and looking into what materials were involved in setting the fire. Sometimes with revenge motivated fires, the fire is set in the victim’s bedroom in places like their closet or the bed area.

When an arsonist’s motive for setting a fire is revenge towards an individual, they will often use the victim’s personal belongings such as the victim’s clothing to start the fire. These fires often result from a disagreement or are caused by personal issues, such as history of an affair or domestic violence. With this motive, the fire-setter will often go into an extreme emotional state. Revenge fires are usually not planned or well organized, but based on anger and the need for immediate revenge.

Institutional fire-setters target places such as corporations, medical buildings, religious facilities, and even educational facilities if they feel like they have been cheated out of something

or they feel like they were treated wrongly or indifferently. They are consumed with anger and they want revenge for perceived injustice. A former employee or an enraged employee or even a patient of a place or institution are examples of institutional firesetters. There are also societal firesetters that feel the need to strike out against society typically because they feel isolated. These type of firesetters are usually serial arsonists because they are not satisfied with just a single arson event.

According to the FBI, 41% of fires are motivated by revenge. Some characteristics of revenge motivated fires may include:

- trying to right a real or imagined injury
- may be a one time occurrence with the target belonging to the person who “wronged” the subject
- the focus of the attack may be toward an individual, business, government structure or group
- women are often of the “revenge arsonist” group
- crime often occurs on weekends, but may be months or even years after the perceived injustice
- live close to target but leave scene and don’t return

“*Crime concealment* is an attempt to conceal another type of crime such as murder, burglary, or an attempt to destroy documents or records by fire” (Disbrow Jr., 2010). The arsonist truly believes that any physical evidence that is left behind or even the identity of the victim will be destroyed by the fire, although this is hardly ever the case. Some fragile evidence will be destroyed and unrecoverable, but evidence items like guns, knives, and bullets will survive the fire to a certain degree.

According to the FBI, 5% of fires are caused for crime concealment. Some characteristics of fires used for crime concealment may include:

- arson is secondary to commission of another crime
- often set with an abundance of liquid accelerant
- more of a disorganized crime scene
- likely a male, adult from lower socioeconomic background
- commits crime in evening or early morning hours
- will flee the crime scene

“The *profit* motivated fire is set for monetary gain or material gain” (Disbrow Jr., 2010).

Profit motivated fires are usually set to escape financial problems, increase property values, commit insurance fraud, or simply as an intimidation. For example, if someone is struggling to make payments, they may report their vehicle as stolen or even set it on fire to get out of financial obligations or as a means to collect a big insurance payment. According to the FBI, 5% of fires are motivated by profit. Some characteristics of profit motivated arson may include:

- sets fires for material gain
- failing business, collect insurance, deplete inventory
- tends to be single and lives alone more than a mile from the scene
- tends to be away from scene when fire starts and may have an accomplice

Fraud is often identified as a motive for arson because owners of property or businesses may feel like the only way to get out of a financial issue is to burn down their house, property, or business. There are two categories of fraud: residential and commercial. Residential fraud is when a homeowner or someone else sets a fire to a home with the expectation of defrauding the

insurance carrier. Different motivations exist for residential fraud including an inability to rent the property, increasing taxes, or physical deteriorations.

Commercial fraud is often used to get rid of or destroy records or equipment to collect insurance payouts. When investigating these fires, it is important to check the office areas for any items that may have been removed from the office before the fire was started. This may help in determining whether or not the fire was intentional or accidental.

“*Extremist* firesetting is used to further political, social, or religious causes” (Disbrow Jr., 2010). Extremists, may work as individuals or work in groups. They are very organized and they take their time in selecting a particular target of interest. Extremism can be narrowed down into two categories: terrorism and riot or civil disturbance. Terrorism is usually aimed to create fear and/or anarchy. When terrorists select their target, it usually has something to do with political significance and they go after identifiable places such as government offices, universities, military bases, fire or police stations, etc.

These incidents often happen after a high profile event resulting in a civil disturbance such as any acts of violence that include things such as acting out in riots, actions of violence, rebellions, illegal obstructions or assemblies, or other disorders detrimental to public law and order.

Case Examples of Motive

The Brandy Currigan Case - Vandalism

Recently, in August of 2018, 40 year old Brandy Currigan was arrested in Pasco County, Florida. Currigan painted graffiti and threw paint throughout the house. At three separate origin sites, she set a fire inside the house. Upon other drug charges, Currigan was arrested on scene for

arson. Currigan vandalized the home by graffiti and fire. She didn't do it for profit or insurance money. She just did it to vandalize the place as she was on a high with drugs in her system.

Vandalism played the motive in this case.

The Monica Louise Berlin Case - Excitement

More recently in July of 2018, 39 year old Monica Berlin was taken into custody after a pursuit by the police. Berlin was taken into custody not only for initiating a pursuit, but originally from being suspected of setting fire to more than 1,600 hay bales at a farm in Half Moon Bay in California. When Berlin was taken into custody, she did not believe that what she had done was wrong and claimed to just be having a good time. She didn't believe that what she was doing was illegal in any way. The fires she set to the hay bales caused an estimated \$10,000 in damage and destroyed 765 bales of hay. Berlin got a thrill from setting the fires and getting a chase by the police and even live streamed a video of it on facebook at the time of the chase. Her motive was no other than the thrill of the fire and the *excitement* of it.

The Francine Wilson Case - Revenge

Francine Wilson actually had a movie made about her that was inspired by her case. Wilson killed her husband by setting a fire to their home in Michigan in 1977. Wilson stated that her husband had abused her for years and it became known as a landmark battered wife case. Wilson was abused for over a dozen years and she was not found guilty by reason of insanity of first degree murder. This particular case became the turning point in the growing movement against domestic violence. Her family witnessed the abuse as she was raising her children in the home with her abusive spouse. She became known as a hero to her family when she finally got rid of the monstrous abuser. She went on to live her life without gloating or bragging about what she had done. She went on with her life as if she were given another chance. Although she was

acquitted by reason of insanity, based off of the facts, the motive would most likely fall under *revenge*.

The Dawn McIntosh Case – Crime Concealment

In New York, a 46 year old woman named Dawn McIntosh was arrested for the murder of her boyfriend, Shawn McWhorter. McIntosh shot her boyfriend twice and tried to get rid of the evidence and the body by pouring lighter fluid on him and starting a fire. McIntosh tried to pretend that she had not seen her boyfriend in a few days. She thought she was in the clear since police were unable to find a murder weapon at the scene. However, at the scene, on the body, crime scene technicians found a fingernail. During an interview with McIntosh, the Chief Detective noticed she was missing a fingernail and she began to confess to all of it. Dawn McIntosh set a fire in hopes to cover up a heinous crime. This particular motive would fall under *crime concealment* because the fire was set to cover up the initial crime of murder.

The Thu Hong Nguyen Case - Profit

Some Americans may have heard of Thu Hong Nguyen. She was a 46 year old nail salon manager from Kansas City, Missouri that was convicted of murder. Arson played a huge role in these murders as her brutal act of setting this fire killed two Kansas City firefighters as well as seriously injuring two others. But what was her motive? Did she intentionally kill these firefighters? Does it matter? Nguyen set a fire in her nail salon's storeroom and as it turns out, she also had a habit of burning businesses for the insurance money. In reality, her motive wasn't to cause harm. Her motive was for pure *profit*.

The Tnuza J. Hassan Case – Extremism

A former student of St. Catherine University in Minneapolis, Tnuza J. Hassan, 19 years old, allegedly set multiple fires across the campus. According to her charges, Hassan set fires in

retaliation for the U.S. military intervention in Iraq and Afghanistan. Her goal was to intentionally hurt people. Hassan was ordered to surrender her passport on top of her charges. After further investigation it was noted that there were eight fires set in seven buildings on campus. Her roommates have reported unusual behavior of Hassan writing letters of her plans. Hassan's motive was *extremism* because she selected a particular target at a university in attempt to hurt or harm a large group of American people.

Arson Charges in Oklahoma

Arson in the state of Oklahoma is considered a felony. There are four different degrees of the crime of arson: first-degree arson, second-degree arson, third-degree arson, and fourth-degree arson.

First-Degree Arson

In the state of Oklahoma, first-degree arson is defined as a fire that has been set to any type of structure with the use of any accelerant or other device and the structure is possibly occupied by a person or persons at the time of the fire. First degree arson carries a fine of up to \$25,000, and/or a prison sentencing term of at least thirty-five years. If a fire occurs in the same occupied structure as a result of the manufacturing or use of illegal drugs in violation of state law, the individual responsible will be charged with drug possession/manufacturing and with first-degree arson.

Second-Degree Arson

Second-degree arson in the state of Oklahoma is when a fire has been set to a building that is not occupied and is classified as a felony for which the punishment is up to \$20,000 in fines along a possible prison sentencing term of up to possibly twenty-five years.

Third-Degree Arson

Third-degree arson applies to fires set intentionally to property other than a building, facility, or a structure, such as vehicles, motorcycles, land, boats, or anything over the price of fifty dollars. Third-degree arson applies when the targeted property is insured and the fire was intentionally set to defraud an insurer. In Oklahoma, this type of arson crime is punishable by \$10,000 in fines and/or imprisonment for up to fifteen years.

Fourth-Degree Arson

Fourth-degree arson is a fire that is set with the intent of causing damage to any other type of property not already mentioned. “Similarly, the placing of any flammable, explosive or combustible material or substance or any device in any building or property with the intent to set it on fire later, is considered to be arson in the fourth degree. Arson in the fourth degree can carry up to \$5,000 and imprisonment up to ten years.

Who Commits Arson?

Arson crimes are typically associated with troubled kids trying to express their anger through a destructive crime. However, juveniles constitute only a very small portion of the individuals setting fires. People of all ages and genders commit arson. It would be beneficial to determine the motivations of arsonists and how they differ across age and gender. This study in particular focuses on the motivations that trigger female firesetters to do something so destructive and damaging, and the common behavioral characteristics and motives shared by this one subset of offenders.

When researching the motivators and triggers of any arsonist, it is important to consider factors such as past experiences, trauma, anger and revenge, the target, political/religious

affiliations and victims, all of which are significant contributing factors which shape an offenders motivation. Establishing predictive patterns of behavior to help investigate and prevent future arson crimes is a worthwhile undertaking, as is helping those who use arson as a coping mechanism.

Currently, there is a lack of research on female arsonists. Previous research addresses motives, treatments, mental health issues, and the backgrounds of female arsonists. The contemporary theory on motivation is that women are crazy and only set fires out of revenge. Indeed female arsonists seem to be motivated by emotional factors more than their male counterparts, and more thorough analysis is needed to fully understand this causal relationship. A study analyzing female arsonists of all ages instead of focusing on certain age groups will assist in gaining a more comprehensive perspective of female firesetters.

Review of the Literature: Previous Research

A few studies over the motives and behaviors of female arsonists exist in the literature. These studies contain valuable information and are closely related to the types of variables and factors analyzed in this study. The previous research on female firesetters does not incorporate the possibility that motives among female firesetters may vary significantly by region. However, this particular study focuses on female firesetters of all ages specifically in the state of Oklahoma.

Female Juvenile Arsonists:

An Exploratory Look at Characteristics of Solo and Group Arson Offenses

A study done by Hickie and Roe-Sepowitz (2010) explored the characteristics associated

with solo and group offenses of female juvenile arsonists. A solo offense is committed by one person and a group offense could be committed by two or more people. Their study examined a sample of 114 female juveniles in a large juvenile justice system that had been found guilty of the act of arson. The subjects were from a large, unspecified southern state in the United States (U.S.).

The research included all juvenile girls within the system that were charged with arson over a five year period from 2001 to 2005. The research focused on the backgrounds of the arsonists to include experiences of family disorganization, abuse and neglect, school issues, substance abuse, mental health issues, and crime characteristics.

The research indicated that the majority of the juvenile female arsonists came from an unstable home environment, exhibited aggravated behavior in school, and had difficulty with attendance in school. It was also found that the solo acting female juvenile subjects had either little or no contact with at least one of their parents and were dealing with a crisis at the time they committed the arson offense, a concept referred to as a prior stressor or trigger.

Compared to the group offenders, the solo acting female firesetters lived in a more unstable home environment, had more limited contact with one or both of the parents, experienced greater feelings of anger, and were more likely to express suicidal thoughts. The research suggests that solo female juvenile arsonists present different risk factors and more immediate problems than those females who commit acts of arson in groups. Many of those convicted for their role in a group arson were “followers” as opposed to dominant actors. This dictates the need to analyze them differently and apply different treatments. This study correlates juvenile arson crimes with youth distress.

This particular study focused on mental health issues and negative home life experiences

as the triggers of the juvenile girls. Results may not generalize to all woman, particularly older woman. It is important to consider motivations beyond the juvenile population. Motive was not a factor discussed in this study nor were differences in race taken in to account.

Female Arsonists: Key Features, Psychopathologies, and Treatment Needs

In a study conducted by T.A. Gannon in the United Kingdom (2010), female arsonists were examined with regard to their behaviors, and treatment needs. Gannon's researched suggested that female arsonists could essentially be similar in comparison to other female offenders in regards to race. Gannon found that education, IQ, and socioeconomic status are factors that are associated in motivation of arson. Moreover, "numerous professionals have noted that female arsonists' developmental experiences are characterized by physical, emotional, and sexual abuse, neglectful parenting, separation from one or both biological parents, and a reliable family environment."

Considering the limited research on female arsonists compared to other female offenders, it is difficult to draw well-founded conclusions. Dr. Gannon identified two common characteristics exhibited by female arsonists:

"First, female arsonists are more likely to have been separated from one or both biological parents during their childhood. Second, female arsonists are more likely to report having experienced early sexual experiences and/or sexual abuse as children" (Gannon, 2010).

The study initially focused on female arsonists and their personality disorders, personality traits, neurological disorders, general pathology, ad sexual pathology. It later explored the motivators in female arson and compared them with motivators of male firesetters.

According to Gannon, no exceptional differences were identified between motivations of female arsonists in comparison to their male counterparts. However, Gannon did establish that the motive of attention-seeking or “cry for help” was more apparent for female arsonists in studies that focused exclusively on female arsonists and in those studies associating the relative prevalence of this motivation in female arsonists relative to male arsonists.

Dr. Gannon examined treatment needs for male and female arsonists and concluded that there is a lack of standardized treatment programs or intervention groupings for recovering arson patients. Dr. Gannon (2010) stated:

“Given the lack of research dedicated to examining the treatment needs of both arsonists generally and female arsonists, it is imperative that researchers pinpoint, more effectively, those factors empirically associated with risk and severity of arson. One set of stable risk factors associated with female arson might relate to developmental experiences.”

Dr. Gannon’s (2010) study examined the main characteristics, psychopathologies, and potential treatment needs of female arsonists. There are very few studies that have compared female arsonists to other types of female offenders or to male arsonists which makes developing generalizations about the population of female arsonists relatively difficult. Gannon suggested that professionals think carefully about including comparison groups when studying female arsonists, and making gender based comparisons when including female arsonists in large overall units.

Although Dr. Gannon’s motive classifications are not the same as those used in law enforcement, the findings are still useful and relative in research. Dr. Gannon focused based her motivational classifications on psychological aspects of a female arsonist compared to law

enforcement's more general motives. Dr. Gannon's research delves deeper into psychological reasoning of prior stressors that trigger the motivations of a female arsonist.

Dr. Gannon's classifications included past history, personality disorders, personality traits, neurological disorders, general pathology, sexual pathology, education and socioeconomic status while law enforcement had basic groupings of motivations and motivators.

The Present Study

Hypotheses

The present study focuses on the behavioral and motivational characteristics of female firesetters of all ages in the state of Oklahoma over the time period 2012 - 2017. The prevailing theory is that female arsonists are motivated most often by revenge. This research seeks to define the current underlying motivations of female arsonists in Oklahoma and refute or support the contemporary revenge theory. It is feasible to hypothesize that other motives are worthy of consideration when an arson is investigated, and that motivational factors could assist in an initial assessment regarding the sex of the offender. The range and particulars of these motives and intentions are documented in this study.

Research Question: What is the primary motive of female firesetters in Oklahoma?

Hypothesis: Revenge is the primary motive of female firesetters in Oklahoma to the same extent as other female firesetters throughout the United States.

Significance of the Study

Previous studies and literature on arson have examined the motives and behaviors of firesetters in different areas, such as different states or regions, or different ages and different

genders. A review of the current literature reveals that female offenders commonly choose arson as a form of revenge stemming from anger over past experiences or perceived injustices. Arson is the tool of revenge as individual or societal payback. There are many studies quite similar to the present research that look into behavioral characteristics of firesetters in general. These provide powerful frameworks and methodological designs. There is limited research, however, on adult female arsonists or female arsonists of varying ages and no current literature specific to female arsonists in Oklahoma. The previous studies do not address female firesetters' behavior in terms of the importance of motive to arson investigations. This study will focus on the motives of this subset of offenders which may prove valuable to investigators in the state of Oklahoma and throughout the region.

Methodology

In the present study, thirty-three (33) solved female arson cases from the state of Oklahoma were analyzed. This sample represents all the known arsons committed by females in Oklahoma during the 5 year time period from 2012-2017. The information from each case was coded using a coding sheet (Appendix A) and the results were compared and contrasted using the Statistical Package for the Social Sciences (SPSS) software program for statistical analysis. The coding form was organized into sections on *Offender Characteristics* and *Crime Characteristics*. Each section captured characteristics that were selected in order to identify the most common behavioral characteristics and motives across the 33 cases. This research will hopefully provide useful information to investigators in the state of Oklahoma regarding the behaviors and characteristics associated with female arson crimes.

The present study employs an exploratory research design that takes a qualitative approach to analyze the behavioral and motivational characteristics of female firesetters. This research will hopefully assist law enforcement in determining predictive or theorized patterns of behavior and/or motivation in fires set by female firesetters.

Sample/ Participants

This study collected its case data from the Oklahoma State Fire Marshal's Office. The investigative files were reviewed for information such as: age, location, time of day, race, motive, etc. The sample size for this study is thirty-three (33) cases of female arsonists from the state of Oklahoma that meet the requirements for the current study. The current study eliminated male offenders' case files. The sample was selected based upon all Oklahoma female arson cases. This study was approved by the University of Central Oklahoma, Institutional Review Board (IRB) on July 6, 2017.

Data and Procedures

The data in this study was collected from case files of the Oklahoma State Fire Marshal's Office. Variables were defined and coded for statistical analysis. The primary focus of the data collection was *Offender Characteristics* and *Crime Characteristics*. *Offender Characteristics* dealt with offender information and location demographics, and *Crime Characteristics* focused on information regarding the crime itself.

Offender Characteristics:

1. Offender ID (Name or Number)
2. Age
3. Population of Locate
4. Motive
5. Offender Race
6. Relation of Offender to Target Owner
7. Offender Accomplice (Male or Female)
8. Repeat Offender (Arson)

Crime Characteristics:

9. Date of Fire
10. Time of Day
11. Target
12. Prior Threat
13. Admission to Target Owner

Attempts were made to account for any missing information by utilizing additional references or documentation that contained relevant information. All data was thoroughly examined and compared to determine any commonalities between the offenders. Motive was the primary focus of this study. All variables related to each female arson case were coded using the form included in Appendix A. Of the 33 cases examined, 23 cases included information on the subject's motives, and 10 cases contained no information on motive.

Data Analysis

The data was analyzed to determine the distribution of motivations among female firesetters in Oklahoma. The six motives tested were: vandalism, excitement, revenge, profit, crime concealment, and mental disorder. These six motives were chosen as they were the most common motives among female firesetters identified by previous studies.

Results

The graph (Figure 1) shows a higher proportion of female firesetters who were motivated by revenge. There was a significant percentage that expressed the difference. The results of Figure 1 concluded:

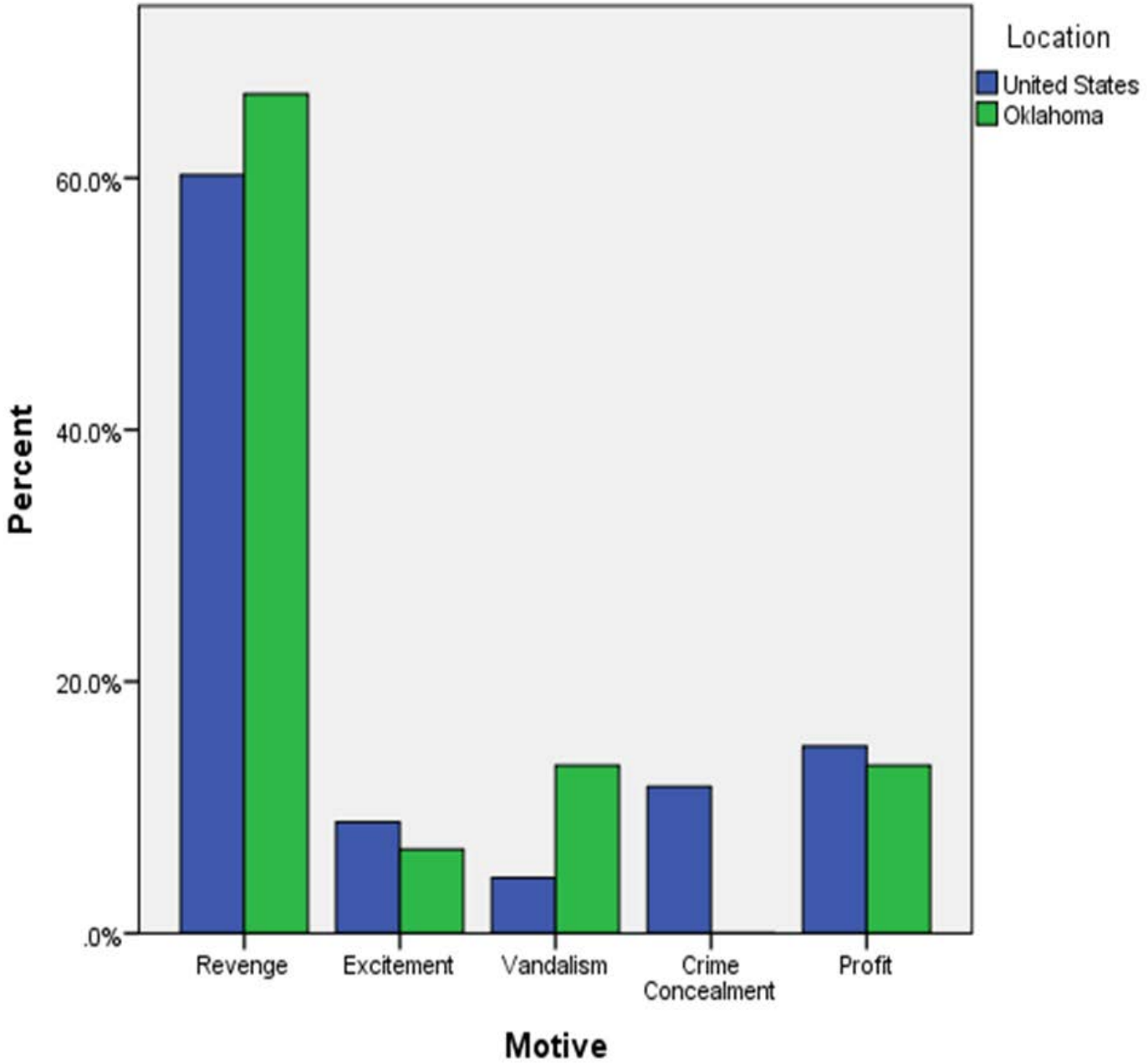
- Revenge measured to be approximately 60% in the U.S. and 65% in Oklahoma
- Excitement measured to be approximately 9% in the U.S. and 8% in Oklahoma
- Vandalism measured to be approximately 4% in the U.S. and 11% in Oklahoma
- Crime Concealment measured to be approximately 10% in the U.S. and 0% in Oklahoma
- Profit measured to be approximately 12% in the U.S. and 11% in Oklahoma

Using the *One Sample Proportion Test*, the test compared the motive of revenge from Oklahoma to the motive of revenge from the nationwide results. A *One Sample Proportion Test*

is used to measure whether a population proportion is significantly different from a hypothesized value.

This test was not ran within the SPSS program. It was ran by hand calculation using the equation: $(10/15) - .6 / \frac{\sqrt{.6(.4)}}{15} = .53$ which gave a p-value of .5982 on the Table of The Standard Normal Cumulative Distribution Function. With the result of .5982 being more than the .05 level of significance, it tested as insufficient. The test failed to reject the claim that they are equal, but cannot state that they are not equal either. This test shows that the results are insufficient. However, using the graph in Figure 1, it provides a visual that expresses the significance of the results from the data gathered.

Figure 1. Motivations behind females committing arson and their value counts in Oklahoma vs The United States



Cases weighted by Count

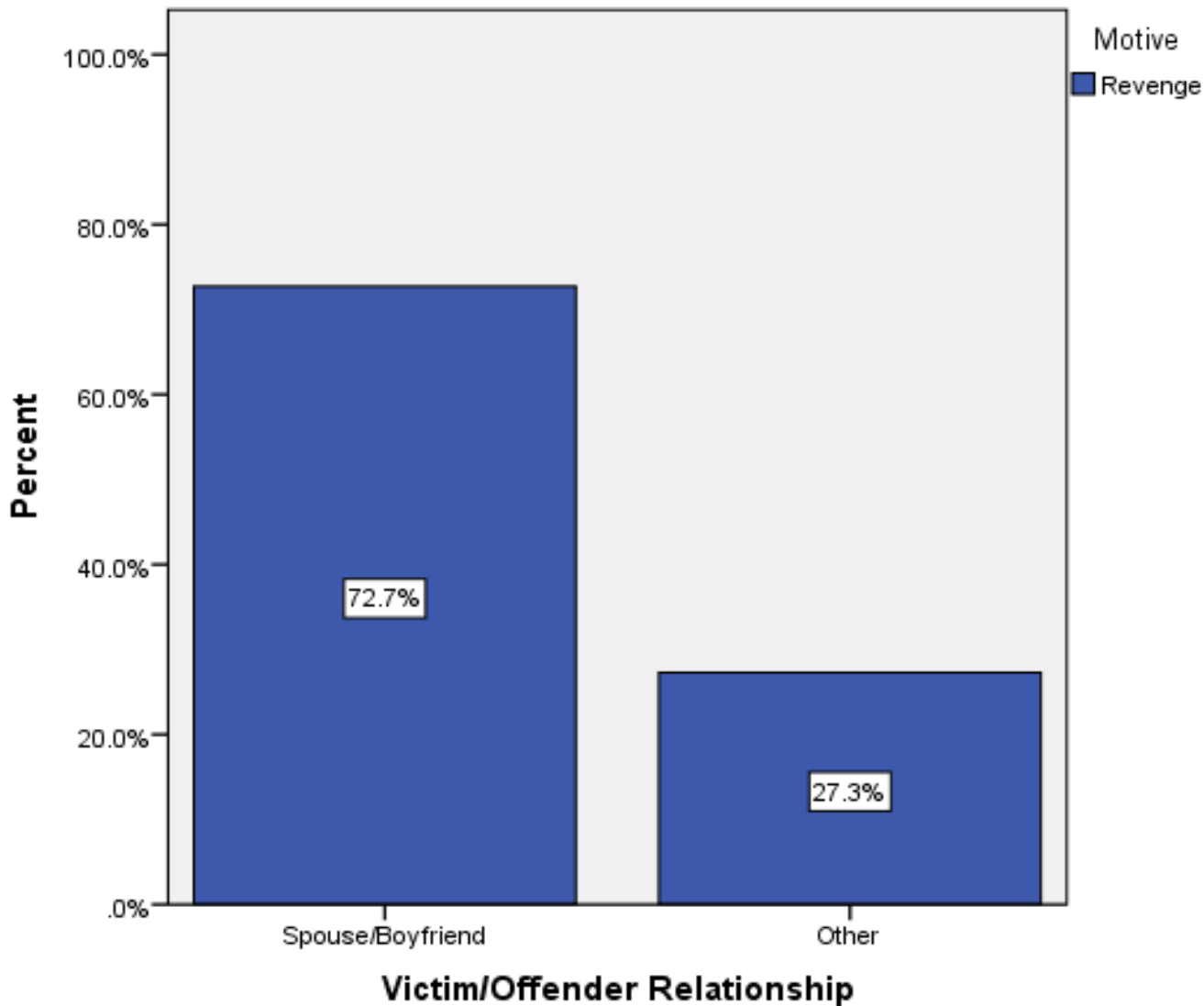
Therefore, an alternative *Effect Size Test* was used to determine if the sample size was large enough. The *Effect Size Test* is a simple way of quantifying the difference between two groups, and has many advantages over tests of statistical significance alone. The *Effect Size Test* is used to emphasize the size of the difference, rather than confusing this with sample size itself. This test was also not ran through SPSS, but with an attempt to use on a website with an Effect Size Test calculator of *Cohen's D Effect Size Calculator for Z-Test*.

Unfortunatly, the sample was not large enough for the test to substantiate that they are the same and was unable to provide any results. This results in the test being insufficient regardless. However, this does not reject the hypothesis, but it does not substantiate it either, which leaves the hypothesis neutral until a larger sample size exists to run the test more effectively.

Rather than using the chi-squared tests, the *Fisher's Exact Test* (Figure 2) was used to more effectively measure the small sample size to determine whether a victim such as a partner or significant other is targetted and motivated by revenge for females committing arson. The results of the *Fisher's Exact Test* (Figure 2) were significant showing a relationship exists between target audience and motive with a P-Value of 0.

Revenge expressed to be the predominate factor when targeting a spouse or partner. The test showed that 72.7% of spousal target cases were motivated by revenge, while 23.3% targeted a different victim with the same motivation.

Figure 2: Summary of Fisher's Exact Test showing target audience and percent against target



Cases weighted by Count

Footnote

Table 1A. Summary of percentages reflecting motive on target**Target * Motive Cross Tabulation**

		Motive		Total	
		Revenge	Other		
Target	Spouse/Boyfriend	Count	8	0	8
		Expected Count	3.8	4.2	8.0
	Other	Count	3	12	15
		Expected Count	7.2	7.8	15.0
Total	Count	11	12	23	
	Expected Count	11.0	12.0	23.0	

Table 1B. Summary of Fisher's Exact Test results (P-Value = 0)**Chi-Square Tests**

	Value	df	Asymptotic Significance (2- sided)	Exact Sig. (2- sided)	Exact Sig. (1- sided)
Pearson Chi-Square	13.382 ^a	1	.000		
Continuity Correction ^b	10.368	1	.001		
Likelihood Ratio	16.829	1	.000		
Fisher's Exact Test				.000	.000
N of Valid Cases	23				

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 3.83.

b. Computed only for a 2x2 table

Discussion

While there is a handful of literature addressing motives of male and female firesetters, empirical research is deficient with regard to the time period captured from this study. The study period includes the interval of the last five years and captures the behavioral and motivational characteristics of female firesetters. Through the utilization of an exploratory research design, the purpose of this qualitative study was to evaluate the motivations of female firesetters during this particular five-year period. It was hypothesized that female firesetters in Oklahoma are motivated by revenge to the same extent of all female firesetters throughout the United States.

The results of the study were insufficient due to sample size and didn't support the hypothesis that revenge was the primary motive in cases of female firesetters in Oklahoma. However, it did not refute the hypothesis either. The results maintained neutral. If there were more cases to evaluate and add to the sample, the results could have prompted some sort of significance in the study. The number of cases, however, is beyond the control of the researcher. Although the sample size was too small for the typical tests, if the cases continue to follow the pattern, the trend would lead to presenting a significance that revenge is the highest and most consistent motivator in female arsonists.

According to statistics received from Bureau of Alcohol, Tobacco, Firearms and Explosives, Bomb and Arson Tracking System report for female arsonists dated from January 1, 2008 to December 31, 2017, the motive of revenge surpassed other known motives across the United States. That appears to be the case in Oklahoma as well. In the United States, 150 out of 1237 females were motivated by revenge when committing an arson crime. Also, in Oklahoma, 10 out of 33 females were motivated by revenge when committing an arson crime. With that being said, if motive was considered and documented in all arson case files, those numbers could

potentially and continuously rise.

The category of “Unknown” includes incidents selected by the user as “Unknown” and those incidents where the motive was not reported or left blank by the user. The trend of not reporting a motive is very prevalent. In the 2017 Arson Incident Report, 73% of all incidents reported in BATS had no motive identified. The motive in arson cases or arson reports are not often noted or considered because in an arson case, motive doesn’t have to be proven for successful prosecution. In an arson case, an arson investigator just needs to prove the elements of the offense which does not include motive.

The law is not necessarily concerned with motive, but more with intent. There is an important distinction between motive and intent. According to the National Fire Protection Association 921:

Intent refers to the purposefulness, or deliberateness of the person’s actions or, in some instances, omissions. It also refers to the state of mind that exists at the time the person acts or fails to act. Intent is generally necessary to show proof of crime. The showing of intent generally means that some substantive steps have been taken in perpetuating the act.

Motive is the reason that an individual or group may do something. It refers to what causes or moves a person to acts or not to act and the stimulus that causes action or inaction. Motive is generally not a required element of a crime. For example, a person with indications of “financial difficulty” could experience a fire to his insured property that is ignited by his falling asleep with a lit cigarette. While this person may have motive to cause a fire, that person did not intend to have a fire. Thus, no element of intent existed.

Figure 3: Statistics received from Bureau of Alcohol, Tobacco, Firearms, and Explosives Bomb and Arson Tracking System report for female arsonists dated from January 1, 2008 to December 31, 2017.

Type of Motive	United States	Percentages	Oklahoma (2012-2017)	Percentages
Revenge	150	12%	10	30%
Excitement	22	1.7%	1	3%
Vandalism	11	0.8%	2	6%
Unknown*	979	79%	10	30%
Crime Concealment	29	2.3%	0	0%
Other	9	0.7%	8	24%
Profit	37	2.9%	2	6%
Total	1237	~100%	33	~100%

The study also sought to determine if youthful female firesetters in Oklahoma (under the age of 20) were more likely to be motivated by vandalism, a fact that could assist law enforcement in developing investigative strategies based on these particular patterns. However, there were no significant statistical findings to support that vandalism would be the predominant motive for youthful female firesetters. Throughout the state of Oklahoma, of the 33 cases that were collected and observed in this study, only two females displayed the motivation of

vandalism.

The study also sought to determine if there were any other significant findings in the target audience based on motive. The *Fisher's Exact test* was able to establish that revenge was the most consistent motivator among a spouse or partner and their target. Many cases that have the target of a spouse or partner end up being the result of revenge to portray their anger. For example, in Florida recently, a woman set fire to her house in three different locations to get revenge on her estranged husband for wanting a divorce.

Overall, revenge was the most consistent motives associated with female firesetters in Oklahoma during the time period for this study.

Descriptors and Trends

Although the sample pool was low and couldn't support or refute my hypothesis, I was still able to gather pertinent information within my study regarding perceptible trends gathered from my data in order to make my study more valuable in other aspects:

Age Group	Number	Total Percentage
Under 18	2	~6%
18 - 25	5	~15%
25 - 30	3	~9%
30 - 35	5	~15%
35 - 40	0	0%
40 - 45	0	0%
45 - 50	8	~24%
50 +	10	~30%

Based off of the ages grouped, it was interesting to observe the majority of firesetters were women ranging 45 years old or higher. When reading through the reports that provided descriptive information about the case, those elderly women actually targeted their significant others or boyfriend's in most cases with revenge being the consistent motive.

Race	Number	Percentage
Caucasian	23	~69%
African America	2	~6%
Latino	2	~6%
Asian	0	0%
Indian	6	~18%
Other	0	0%
Unknown	0	0%

Another interesting trend observed was Caucasian being the race of the majority of the firesetters in Oklahoma. However, the second most common race in firesetters was American Indian.

Offender Accomplice	Number	Percentage
Male	10	~30%
Female	0	0%
None	19	~57%
Unknown	4	~12%

As part of the offender characteristics, it's necessary to know whether or not the firesetter has an accomplice when committing the arson crime(s). Out of the 33 cases in Oklahoma, a trend was observed that a female firesetter often operates alone, or has a male accomplice. In the cases where the female firesetter had a male accomplice, the motive was mostly crime concealment, profit, or both.

Target	Number	Percentage
House/Residence	26	~78%
Vehicle	3	~9%
Other	4	~12%
Unknown	0	0%

Out of the 33 cases observed, 26 offenders chose the target of a house or a residence. Although these targets were established in a case report, it is undetermined what the actual target was inside of a residence. For instance, clothing or personal belongings could have been the target which resulted in a residence catching fire.

It is unknown what the motive was each time due to the lack of information in most reports. I was able to gather targets within all reports, but was unable to obtain motive for each. However, it was be reasonable for arson investigators to log the motive per case for reference and theorizing patterns of firesetters.

Limitations

This study was conducted both precisely and methodically, however, inevitable limitations exist due to limitations on the specificity of the data available in the case files. In some case files, there was information that was not documented at the time of the crime or time of the prosecution. One key limitation is that the motive is not required for the successful prosecution of arson and, therefore not always documented. A motive of arson and documentation suggesting motive was not present in many of the case files. Many cases lacked the specific information needed for coding the data, resulting in the case file having limited value for this particular study.

Recommendations for Future Research

This study was able to identify considerations for future research involving a need for supplementary empirical research on periods of arson by females. Literature on this particular topic is extremely limited. Therefore, it would be beneficial to accurately investigate those unique patterns and characteristics to gain a better understanding of the concept warranted.

Future research should focus on whether or not the results maintain consistency. Research and investigation could determine if there are specific patterns that correlate with female firesetter's that could possibly lead to earlier detection. In addition, it would be worth evaluating and exploring both negative and positive influences that contribute to female firesetter's.

It could also be beneficial to future research for an expansion of the sampleon population of female firesetters to determine if the research remains constant with the results from this all female sample. A deeper, broader investigation into unique patterns would be significant in order

to determine whether there are any other motivations or factors that significantly contribute to a female committing arson crimes.

This could be accomplished by expanding the time period studied, for example from 5 to 10 years, or expanding the geographic area of the study beyond the state of the midwest or southwest region. The feasibility of this would depend greatly on the access to investigative files of the newly incorporated jurisdictions.

References

- Arson. (n.d.). Retrieved November 7, 2016, from <http://www.merriam-webster.com/dictionary/arson>
- Campbell, R. (2017, July). Intentional fires. Retrieved from <https://www.nfpa.org/News-and-Research/Fire-statistics-and-reports/Fire-statistics/Fire-causes/Arson-and-juvenile-firesetting/Intentional-fires>
- Davis, J. A., & Lauber, K. M. (1999, August). Criminal Behavioral Assessment of Arsonists, Pyromaniacs, and Multiple Firesetters: The Burning Question. Retrieved November 26, 2016, from <http://ccj.sagepub.com.vortex3.uco.edu/content/15/3/273>
- DeHaan, J. D., & Icove, D. J. (2007). *Kirk's Fire Investigation* (7th ed.). New Jersey: Pearson.
- Dewyer, C. (2017, May). Email interview. Bureau of Alcohol, Tobacco, Firearms, and Explosives Bomb and Arson Tracking System.
- Disbrow Jr., R. (2010, December 13). Arson Investigation - The Six Motives for Firesetting | Firehouse. Retrieved November 18, 2016, from <http://www.firehouse.com/article/10464930/arson-investigation-the-six-motives-for-firesetting>
- Fires in the U.S. (2016). Retrieved December 06, 2016, from <http://www.nfpa.org/news-and-research/fire-statistics-and-reports/fire-statistics/fires-in-the-us>
- Gannon, T. A. (2010). Female arsonists: Key features, psychopathologies and treatment needs. *Psychiatry: Interpersonal and Biological Processes*, 73, 173-189. doi: 10.1521/psyc.2010.73.2.173.
- Glossary of Wildland Fire Terminology. (n.d.). DefinedTerm: Firesetter. Retrieved from <https://www.definedterm.com/a/definition/123073>

Hickle, K. E., & Roe-Sepowitz, D. E. (2010). Female juvenile arsonists: An exploratory look at characteristics and solo and group arson offences. *Legal & Criminological Psychology*, 15(2), 385-399. doi:10.1348/135532509X473913

How is Arson in Oklahoma Defined? | Muskogee Attorney | (918) 913-0725 | Wirth Law Office. (2015, December 21). Retrieved November 23, 2016, from <http://www.muskogeeattorney.pro/muskogee-lawyer-blog/2015/12/arson-in-oklahoma/>

Inside Edition. (2015, August 31). Woman Arrested for Killing Boyfriend After Cops Allegedly Find Her Fake Fingernail on His Body. Retrieved from <https://www.insideedition.com/headlines/11718-woman-arrested-for-killing-boyfriend-after-cops-allegedly-find-her-fake-fingernail-on-his-body>

Intent.(n.d.).Retrieved August 22, 2018, from <https://www.merriam-webster.com/dictionary/intent>

Labree, W., Nijman, H., Marle, H. V., & Rassin, E. (n.d.). Backgrounds and Characteristics of Arsonists. Retrieved November 26, 2016, from <http://www.sciencedirect.com.vortex3.uco.edu/science/article/pii/S016025271000018X>

Motive. (n.d.). Retrieved August 22, 2018, from <https://www.merriam-webster.com/dictionary/motive>

NFPA 921 Definitions. (n.d.). Retrieved November 26, 2016, from <https://cramberry.net/sets/37799-nfpa-921-definitions>

Stephens, A. (2017, May). Email interview. Bureau of Alcohol, Tobacco, Firearms, and Explosives Bomb and Arson Tracking System

Redsicker, D. R., & O'Connor, J. J. (1997). *Practical fire and arson investigation: 2nd ed* (2nd ed., CRC). New York: CRC Press.

Ross, M. (2018, July 09). Woman suspected in Half Moon Bay arson fires live streams pursuit by police. Retrieved from <https://www.mercurynews.com/2018/07/07/suspect-in-half-moon-bay-fires-live-streams-pursuit-by-police/amp/>

Xiong, C. (2018, January 20). Charges: Former student set fires on St. Catherine campus in retaliation against U.S. military intervention. Retrieved from <http://m.startribune.com/charge-former-student-set-fires-on-st-catherine-campus-in-retaliation-against-u-s-military-intervention/470144173/>

Webteam, W. (2018, August 25). Deputies: Woman painted graffiti, dumped paint inside house before setting it on fire. Retrieved from <https://www.abcactionnews.com/news/region-pasco/deputies-woman-painted-graffiti-dumped-paint-inside-house-before-setting-it-on-fire>

What is Stressor? Definition and meaning. (n.d.). Retrieved from <http://www.businessdictionary.com/definition/stressor.html>

Appendix A: Offender Coding Form

Offender Characteristics

1. Offender ID (Name or Number)
2. Age
 - a. 1 = Under 18
 - b. 2 = 18-25
 - c. 3 = 25 – 30
 - d. 4 = 30 – 35
 - e. 5 = 35 – 40
 - f. 6 = 40 -- 45
 - g. 7 = 45 – 50
 - h. 8 = 50 or higher
 - i. 9 = Unknown
3. Population
 - a. 1 = 0 – 1,000
 - b. 2 = 1,000 – 5,000
 - c. 3 = 5,000 – 10,000
 - d. 4 = 10,000 – 15,000
 - e. 5 = 15,000 – 20,000
 - f. 6 = 20,000 – 30,000
 - g. 7 = 30,000 – 40,000
 - h. 8 = 40,000 – 100,000

- i. 9 = 100,000 – 500,000
 - j. 10 = Over 500,000
 - k. 11 = Unknown
4. Motive
- a. 1 = Revenge
 - b. 2 = Excitement
 - a. Thrill Seeker
 - b. Recognition Seeker
 - c. Attention Seeker
 - d. Sexual Perversion
 - c. 3 = Profit
 - d. 4 = Crime Concealment
 - e. 5 = Vandalism
 - f. 6 = Mental Disordered
 - g. 7 = Mixed
 - h. 8 = Terrorism
 - i. 9 = Other
 - j. 10 = Unknown
5. Offender Race
- a. 1 = Caucasian
 - b. 2 = African American
 - c. 3 = Latino
 - d. 4 = Asian

- e. 5 = Indian
 - f. 6 = Other
 - g. 7 = Unknown
6. Relation of Offender to Target Owner
- a. 1 = Stranger
 - b. 2 = Family Member
 - c. 3 = Spouse
 - d. 4 = Employer
 - e. 5 = Boyfriend/Girlfriend/Intimate Partner
 - f. 6 = Friend
 - g. 7 = Other
 - h. 8 = Unknown
7. Offender Accomplice
- a. 1 = Male
 - b. 2 = Female
 - c. 3 = None
 - d. 4 = Unknown
8. Repeat Offender (Arson)
- a. 1 = Yes
 - b. 2 = No
 - c. 3 = Unknown

Crime Characteristics

9. Date of Fire
10. Time of Day
 - a. 1 = 12:00am – 8:00am
 - b. 2 = 8:00am – 4:00pm
 - c. 3 = 4:00pm – 12:00am
 - d. 4 = Unknown
11. Target
 - a. 1 = House/Residence
 - b. 2 = Vehicle (Car, Boat)
 - c. 3 = Other
 - d. 4 = Unknown
12. Prior Threat
 - a. 1 = Yes
 - b. 2 = No
 - c. 3 = Unknown
13. Admission to Victim
 - a. 1 = Yes
 - b. 2 = No
 - c. 3 = Unknown