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Classifying Unsolved Murders as Serial Crimes

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Walden University

College of Social and Behavioral Sciences

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Rajub Bhowmik

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Walden University
2020

Abstract

Classifying Unsolved Murders as Serial Crimes

By

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PsyD, California Southern University, 2018

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Dissertation Submitted in Partial Fulfillment

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Psychology

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Abstract

Serial murders have a destabilizing and traumatizing effect on society, making it beneficial for law enforcement to classify certain homicides as serial murders, which would help link cases together and solve all of them. The purpose of this qualitative phenomenological study was to examine which evaluative strategies homicide investigators use to classify unsolved homicides as the work of serial murderers or non-serial homicides. Semistructured interviews were conducted with a population of 10 police professionals. Data were analyzed using NVivo 12 software. Thirteen themes emerged: (a) similar and unusual *modus operandi*, (b) motive and relation, (c) time period, (d) physical evidences, (e) intuition, (f) investigative techniques, (g) technological advancement, (h) collaboration and communication, (i) effective investigation, (j) reputation of the suspect, (k) legal boundation, (l) technology with a human aspect, and (m) procedure—no, experience—yes. These findings can be used to improve police procedure in murder investigations, help identify and direct resources toward serial murders and their prevention and encourage further research insights into the police work connected with unsolved murder cases and identifying serial murders.

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Dedication

This dissertation is dedicated to those in law enforcement who have altruistically sacrificed their lives in betterment of our society. And to those who have gone beyond the call of duty, often without fanfare or recognition. This dissertation is specifically dedicated to Sergeant Paul Tuozzolo of New York City Police Department, a dear friend and a mentor who made the ultimate sacrifice on 11/04/2016.

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Chapter 1: Introduction to the Study

Background

A serial murder is a murder committed by the same person with at least one other murder in a sequence with a period between each murder (Hickey & Harris, 2013). In the criminal justice and law enforcement fields, serial murders are often identified by some commonality: shared characteristics of the victims, common *modus operandi* (MO), or the same or similar places and times (Greenall & Richardson, 2015; Hickey, 2013; Miller, 2014; Simon, 2015). However, there is little consensus on the best way to identify an unsolved homicide as the work of a serial murderer compared to an unconnected, isolated act (Hickey, 2013). This evaluation is usually a judgment call on the part of the authorities investigating the crime (Simon, 2015).

Serial murders have a major and at times disproportionate impact on society. The possible existence of a serial murderer involves increased media attention that alarms the public (Hickey, 2013; Morton, 2014). For example, in the early stages of an investigation, it can be difficult to predict where the next serial murder might occur (Greenall & Richardson, 2015; Morton, 2014). However, the media may lead a certain demographic of society to be overly cautious (Hickey, 2013). In this way, the existence of a serial murderer can be a destabilizing influence on society. Therefore, having a better understanding of serial murders can help both the criminal justice system and society.

The investigative approach of police authorities changes substantially if a string of murders appears connected and the investigators hypothesize that the murders are a

result of an individual serial murder (Morton, 2014). The focus of police investigation might shift to a scrutiny of the common factors among the murders (Hickey, 2013). They also might investigate previous unsolved murders to see if they have any connection to the current investigation (Morton, 2014). There can also be a sense of urgency if it appears that a serial murderer is actively committing murders, and a given class or category of persons (prostitutes, homeless persons, college-age women, etc.) may perceive themselves to be in significant danger (Balemba, Beauregard, & Martineau, 2014; Miller, 2014).

Additionally, there is no agreed-upon protocol for changing a police investigation from an unsolved homicide or homicides to a serial murder. However, a protocol for this process would remove the subjective nature of such evaluations. Due to this gap in practice, this qualitative, phenomenological study was performed to examine which evaluative strategies homicide investigators use to classify unsolved homicides as the work of serial murderers or as non-serial homicides with the goal of obtaining the perspectives of police professionals in a large urban setting regarding the best ways to classify and identify possible unsolved serial murders. Additionally, I attempted to ascertain which of these strategies' officers believe are most effective. Data were gathered through semistructured interviews with police homicide investigators in New York City (NYC).

The Study Problem

Serial murders have a destabilizing and traumatizing effect on society (Knight & Watson, 2017). Thus, classifying existing homicides as the work of a serial murderer if warranted can be beneficial (Simon, 2015), as linking cases together can help in solving them (Chan, Beauregard, & Myers, 2015), and knowing that a serial murderer is active can increase awareness of a potential murder (Hickey, 2013; Simon, 2015). The general problem was that there is no agreed-upon protocol for linking together unsolved murders to identify them as the work of serial murderers. Although crime linkage systems like the Federal Bureau of Investigation's (FBI's) Violent Criminal Apprehension Program (ViCAP) do exist (Bennell, Snook, MacDonald, House, & Taylor, 2012), there is a lack of empirical research on their effectiveness. Additionally, participation in these programs is voluntary. The specific problem was that lacking such a protocol means that serial murders are not identified as quickly as they could be, even though such identification could assist investigators in homicides and serial murders. If a set of murders goes unsolved, and more murders are committed by the same serial murderer, the public is potentially at greater risk.

Further, the topic of serial murderers and their actions and methods has been examined in the literature, but there is a lack of literature on classifying and identifying unsolved murders with the goal of determining whether they are the work of a serial murder. It is essential to distinguish serial murder from others because an investigation changes when it becomes classified as a "serial crime." For instance, more resources are

mobilized, special units are dispatched, a task force is set up, and there is extra scrutiny from policymakers. There is also more pressure on investigators and a need to coordinate early and often with the prosecutor, who will be more involved in searches and other procedural tasks. Because a serial murder creates a great deal of fear in a community, prosecutors and investigators are expected to arrest the individual responsible for a serial crime.

Purpose of the Study

The purpose of this qualitative, phenomenological study was to examine which evaluative strategies homicide investigators use to classify unsolved homicides as the work of serial murderers or as non-serial homicides with the goal of obtaining the perspectives of police professionals in a large urban setting regarding the best ways to classify and identify possible unsolved serial murders. There are four assumptions inherent in the use of computerized crime linkage system such as the FBI's ViCAP, but none of these assumptions had been tested empirically : (a) that data in the systems can be reliably coded, (b) that the data are accurate, (c) that serial offenders exhibit consistent but distinctive patterns of behavior, and (d) analysts have the ability to use the data in the system to link crimes accurately (Bennell et al., 2012). Therefore, this study involved semistructured interviews with police detectives in NYC to examine the methods used to identify unsolved murders as the work of serial murderers or of unrelated individuals. The overall benefit of this study could be a more effective method to identify and apprehend serial murderers.

Research Questions

The following research questions were designed to address the study problem and fulfill the study purpose:

Research Question 1: What strategies do police investigators use to classify unsolved homicides as committed or not committed by serial murderers?

Research Question 2: What do police investigators believe are the most significant factors that suggest that an unsolved homicide may be the work of a serial murderer?

Research Question 3: In the opinion of police investigators, are existing protocols for identifying unsolved murders as the work of serial murderers adequate, and if not, why not?

These questions are fundamentally qualitative in nature. Qualitative, subjective data collected from experienced professionals may provide insights that the analysis of numerical data cannot provide. The questions asked in the semistructured interviews were constructed with the goal of eliciting answers to address the research questions.

Theoretical Framework

Bounded rationality, developed by Herbert Simon in 1978, which has since been expanded and modified, states that an individual's decision-making capacities are limited by factors beyond the individual's intelligence and control (Ren & Huang, 2018).

Bounded rationality focuses on how people are limited in their decision making because they do not have comprehensive information about outcomes, a short span of time to

make decisions, no alternatives to decisions, and flawed cognitive capabilities. In other words, people tend to make satisfactory or adequate decisions rather than optimal or best decisions (Batista, Zhao & Leclerc, 2018).

This theory helps to suggest why investigators may have limited information and how this limits their ability to recognize serial crime linkage. If there are no systematic methods for identifying serial murders in the course of homicide investigations, then initial investigators of a homicide investigation will not be able to link serial crimes and forward to a specialized investigative unit for further investigation. Additionally, specialized unit investigators lacking comprehensive information about the case limits their decision making and leads to a further exhaustive investigation. Further, in urban areas where murders are a common phenomenon, initial investigators also have a short span of time to make decisions and forced to make satisfactory or adequate decisions rather than the optimal or best decisions. They tend to close the case on their own without crime linkage, and this limit special unit investigators in recognizing serial crime linkage as well (Mahmoudi & Pingle, 2018). Thus, I believe that bounded rationality theory, applied to the study problem, is best addressed by qualitative research.

Nature of the Study

This qualitative, phenomenological study was used to examine homicide investigators' strategies to classify unsolved homicides as the work of serial murderers or as non-serial homicides. This design helped in obtaining the perspectives of individuals who have direct experience of it: police detectives and their supervisors in NYC. To

collect data, I conducted semistructured interviews with a population of 10 police professionals, a sample size recommended for interview-based phenomenological research (Malterud, Siersma, & Guassora, 2016). In these interviews, I began with research-constructed interview questions designed to elicit answers to the research questions. Participants were also encouraged to take the discussion in any direction they felt would be helpful.

I audio-recorded the interviews and transcribed them. After this, I employed thematic analysis of the data. This involved three steps of coding: open coding, where I identified and name themes; axial coding, where I identified relationships between and among themes; and selective coding, where I classified these themes according to their importance by criteria such as frequency of occurrence. I used NVivo or another recognized thematic coding software such as ATLAS.ti or MAXQDA. My analysis of the results suggested findings based on the emergent, dominant, and recurring themes that I identified. The nature of this phenomenological inquiry helped in my attempt to relate these themes and answer the research questions as well as address the study problem.

Definitions of Terms

Modus operandi (MO): For the purposes of this study, MO is a method or technique of murder that is repeated by a serial murderer (James & Proulx, 2016).

Serial murder: A serial murder is a murder that is committed by the same person as other murders, often following a sequence or pattern (Hickey & Harris, 2013).

Serial murderer: A person who has committed two or more murders, nonsimultaneously, which are usually connected in some way as to common characteristics of the victims, similarities in MO, or time and place of the murders (Hickey, 2013).

Signatures: A signature is an artifact of a crime left behind by the perpetrator. If the same signature exists at multiple crime scenes, this suggests that the crimes were committed by the same person, especially if the signature is unusual (Canter, Hammond, Youngs, & Juszcak, 2013).

Assumptions

Assumptions are premises that the researcher assumes to be true for the purpose of conducting the study. For this study, these include that participants were honest and forthcoming with their answers. I considered that the participants may not wish or be allowed to discuss details of ongoing investigations. I also assumed that the participants have little or no personal bias in discussing serial murder cases. Additionally, I assumed that though it may not be true in all cases, that the investigators were correct in their conclusions when investigations led to the identification of serial murderers.

Delimitations

Delimitations are limitations of the study that are imposed by the researcher. For this study, one delimitation was the choice of location. Although NYC is a major urban area and its police force deals with all kinds of crime including serial murders on a regular basis, it may not be typical of other large cities in terms of how and where crime

occurs and how police handle it. A further delimitation was my choice of a homogenous group from which to gather data. Police professionals could provide insight on the procedures used to identify and classify serial murders; however, I did not consult these types of individuals. Lastly, a delimitation was inherent in the semistructured interview method. Though I intended for the discussions to be open-ended, I started the interviews with questions I constructed to meet the study's purpose. Asking different questions could yield different data, possibly leading to different results and conclusions. This is a delimiting factor that can be adjusted for by future researchers.

Transferability is the extent to which the findings of the study may be applicable to other populations or settings, which is also known as generalizability. Generalizability is limited when a population or setting has unique characteristics. I chose a single (though large) site for my research because although serial murderers operate everywhere, NYC has a history of high-profile serial murders. Thus, the results of this study may have limited generalizability to other locations and populations. Furthermore, what is true for a large urban location may not be true for a smaller city or town. However, rich data were obtained in the high-profile, heavily populated setting of NYC. Additionally, a police department in a setting such as NYC deals with many of the same problems as other large urban locations, so the factors and themes uncovered in the course of data collection and analysis may be common to similar locations.

Limitations

Limitations of the study are factors that are inherent to the nature of the research or methodology. For the current study, these include my choice to use qualitative data only in addition to not using the extensive databases on serial murders. A further limitation was the time frame of the study, which did not involve examining how police investigative procedures change over time. A further inherent limitation was the sensitive and controversial nature of the data, especially when the participants and I discussed open investigations. However, this discussion was encouraged because I was seeking current rather than historical data on investigators' perceptions and strategies in homicide investigations.

Another potential significant limitation was that the participants may have been constrained by dictates from their supervisors and/or department policy in terms of what they were allowed to discuss. Further, the subjective impressions and opinions I gathered may be contrary to the overall policies of the department. A given police professional may have his or her own way of doing things. Therefore, a limitation of the study was that the participants may have been reluctant to fully disclose the personal methods they employ to investigate and classify homicides.

Significance of the Study

This study will play a significant role in the positive social change in the following ways. First, the results could improve police procedure in murder investigations. Second, the findings of this study may help to identify and direct

resources toward serial murders and their prevention. Third, the data from professionals in the field can provide new insights into the police work connected with unsolved murder cases and identifying serial murders. Last, because serial murders are disruptive in society, especially in densely populated urban areas, lessening the danger and fear of serial murders by improving police procedure could improve the quality of life for the general population.

Summary

Serial murders are high-profile crimes that have a major negative impact on society. One aspect of solving serial murders is identifying unsolved murders as the work of a serial murderer. However, no agreed-upon protocol exists for this identification. Thus, I conducted this qualitative, phenomenological study to examine which evaluative strategies homicide investigators use to classify unsolved homicides as the work of serial murderers or as non-serial homicides. I conducted semistructured interviews with a population of 10 police professionals in NYC. This study may provide insights into the best ways to classify and identify serial homicides, which can help make police work more efficient and could prevent future serial murders. The potential value of the study is significant, and a preliminary examination of the literature indicates the need for it. In the next chapter, I present a survey of the literature on the study topic.

Chapter 2: Literature Review

Introduction

This chapter contains a comprehensive review of the literature regarding police and investigative work in the field of identifying and apprehending serial murderers. This supports the research objectives of the current qualitative, phenomenological study to obtain the perspectives of investigators on the best protocols and procedures that can be used to identify homicides as the work of serial murderers. This study also addresses the problem that there is no agreed-upon protocol for this identification, making the classification of murders subjective.

The research on serial murderers is extensive because serial murders have a large social impact. However, there is a gap in knowledge related to police and investigative work happens at the local level, where authorities do not always agree on how and when to classify murders as the work of a serial murderer. Therefore, this study was an attempt to collate and classify the perspectives of law enforcement. I start this chapter with a description of the search strategy I used for the literature review. I then present a discussion of reasoned action theory and how it can be used to form a perspective on the motivations behind criminal acts. Next, I provide an overview of serial murderers and serial murders, including a historical perspective. I follow with a discussion of police and investigative procedure used to detect and apprehend serial murderers and the profiling and identification techniques used to identify homicides as the work of serial murderers. Next, I examine what special resources and procedures are used by police and

investigators when serial murders take place. I then identify and discuss the research gap, which was the impetus for this study. I conclude the chapter with a brief discussion and summary.

Literature Search Strategy

I used many types of database while conducting literature review such as EbscoHost, JStor, Google Scholar, Academic Search Complete, Business Source Complete, Health and Psychology Instruments, Primary Search, PsycARTICLES, PsycBOOKS, PsycCRITIQUES, PsycEXTRA, PsycINFO, SocINDEX with Full Text, PsycTESTS, and Mental Measurements Yearbook with Tests in Print databases. I used primarily sources from 2013-2018, except when discussing seminal works and/or those dealing with the theoretical framework for this study. Approximately 90% of the resources used are from the previous 5 years. A similar proportion of the works examined are journal articles from scholarly publications; I also examined some published books on the study topic.

In my search, I used the terms *crime*, *serial murderer(s)*, *serial murder(s)*, *classification of murders*, *criminology of serial murderers*, *characteristics of serial murderers*, *theories of crime*, and *reasoned action theory*. I used these terms alone and in combination with Boolean parameters such as “and,” “or,” and “not.” I used other terms not listed here where such use seemed appropriate, but the search was centered on the above terms.

Theoretical Framework

In the following section, I will discuss the theory of reasoned action as it pertains to criminology. The theory forms the underpinning for this study in that I am positing that understanding the motivations that drive serial murderers is an important aspect of identifying and classifying unsolved murders as the work of a serial murderer. The theory itself was explained in the theoretical framework section of Chapter 1.

Reasoned Action Theory Explaining Motivation and Behavior

Reasoned action theory states that an individual's motivation and effort to perform a behavior increase depending on the desired outcome from that behavior (Montano & Kasprzyk, 2015). From a criminologist standpoint, this means that crimes have motivations or motives. The criminal commits the crime because he or she expects a certain outcome. This is useful for examining serial murders because it helps to understand their motivations.

The primary use of this theory in criminal investigations is to assume that the perpetrator expects to achieve a desired outcome from his or her actions. However, often this is a dispassionate calculation (Cornish & Clarke, 2014), particularly in the case of white-collar crime. The risk-reward ratio is calculated by the offender, and they decide whether the potential gain from the crime is worth the risk of apprehension and punishment (Cornish & Clarke, 2014). This calculation varies according to the potential gain and the likelihood of being caught and punished. For example, Hwang, Lee, Kim, Zo, and Ciganek (2016) examined software piracy in Jordan and observed that the

software pirates were rational actors because they could make money from their actions and the likelihood of being caught and punished was small.

Though it might seem that reasoned action theory does not apply to serial murderers because they rarely realize any material gain other than through petty robbery, which they could perform without actual murder, the gain does not have to be material (Montano & Kasprzyk, 2015). The theory only stipulates that an individual's actions are motivated by a goal or objective. In the case of serial murderers, the goal could be a number of compulsions such as hatred of a particular group or type of person. A choice to commit a crime may not be rational, but the person committing a crime has a good reason within his or her own conceptual worldview (Lilly et al., 2014). People have definable reasons for committing crimes, as they do for other actions, so a criminological perspective of crime must include an examination of motives (Lilly, Cullen, & Ball, 2014).

Another aspect of reasoned action theory important to discuss is situational action theory. In criminology, situational action theory states that crime is often an act of opportunity, meaning that the criminal has a goal and seizes the opportunity to achieve that goal (Mann, Garcia-Rada, Hornuf, & Tafurt, 2016). Crime is often the result of a sober cost–benefit assessment by the criminal (Hwang et al., 2016; Lilly et al., 2014; Mann et al., 2016). The more valuable the goal is to a rational-acting criminal, the greater the cost he or she will be willing to risk (Mann et al., 2016). For example, structured crime involves goals, setting those goals, and calculating that the likelihood of achieving

them is worth the risk attendant to committing the crime (Messerschmidt, 2013).

Additionally, white-collar crimes and violent crimes are likelier to be committed by men rather than women, regardless of the calculation or reward and risk (Messerschmidt, 2013)

Discussion. The first step in identifying multiple murders as the act of a single serial murderer is to identify commonalities among the murders. One commonality could be the gain that the murderer realized from the murders (robbery, sexual assault, murdering of perceived enemies or despised individuals, etc.). The theory of reasoned action helps explain that individuals have reasons, or goals and benefits, that they hope to attain from their actions. Thus, although a serial murderer may not commit all his or her murders for the same reason, the theory provides a perspective that investigators can use to try to discern motive or motives. However, there is still a challenge in linking murders together as the work of a single individual, especially if a serial murderer chooses victims at random. But other clues may be available such as time of and intervals between the murders, location, MO, and other factors. Therefore, reasoned action theory can be a start in forming the perspective needed to identify serial murders.

Literature Review Related to Key Concepts

Serial Murders and Serial Murderers

Serial murder involves two or more murders committed by the same person at different times as individual acts (Hickey & Harris, 2013). For a murder to be classified as a serial murder, the only connection necessary is that it was committed by a previous

murderer. Although there is often some kind of connection among the victims (such as common age, gender, profession, location, etc.), there is just as often no connection (Gurian, 2017). In the latter case, it is often difficult for authorities to classify the subsequent murder or murders as the acts of a serial murderer. Furthermore, the time interval between serial murders can vary. Sometimes years can elapse between murders by the same individual; other times, it is only a matter of days (Hickey & Harris, 2013). Investigators may be able to identify a pattern, but this only emerges after several murders and some common MO or similarity between the victims is often needed to identify the murders as serial murders (Hickey & Harris, 2013). These and many other difficulties face investigators when trying to identify a series of murders as the work of a single serial murderer. The following section is an overview of the history of serial murderers and of investigative work used to identify them. This includes the initial recognition that serial murders exist, which is required for the systematic gathering of criminological data.

Historical overview. It is probable that serial murders have occurred throughout society ever since large populations began to live in proximity. However, the definition comes from the recognition that the same person may have committed a series of murders, which is a matter of forensics and investigation (Simon, 2015). The classification of a set of murders as the act of a single individual is often referred to as *profiling* (Pistorius, 2012). Profiling is a relatively new approach to policing and forensics, having been first used in the United States in the 1940s (Pistorius, 2012). A

major aspect of profiling serial murderers is understanding their psychological motivations and pathology (Allely, Minnis, Thompson, Wilson, & Gillberg, 2014). Serial murderers are fairly diverse in their psychological makeup, but they share some common characteristics such as psychological dysfunction (Allely et al., 2014). However, these characteristics do not help with profiling because anyone who commits multiple murders is manifesting psychopathology by those acts (Allely et al., 2014).

This understanding of the psychological makeup and motivations of serial murderers has impacted police investigations (Hickey, 2013). The process of identifying a serial murderer cannot begin until two murders are connected in some fashion, but frequently the connection is hypothesized but not accurate (Hickey, 2013). However, researchers have still tried to classify serial murderers based on historical data by psychological type. For example, Miller (2014) noted that serial murderers have basic drives and dysfunctions that when combined create the compulsion to kill. Additionally, Sansone and Sansone (2012) also identified the presence of psychopathy, though this involves the inherent assumption of psychopathy without distinguishing between other potential dysfunctions. Fox and Levin (2014) also found that serial murders had lack of empathy toward their victims and a manifestation of social personality disorder seemed common.

Another classification model was put forth by Taylor, Lambeth, Green, Bone, and Cahillane (2012), who sought to test whether the two classifications (organized or disorganized) within the four typologies used by the FBI (visionary, mission, hedonistic,

and power/control) were valid. In two studies of 40 serial murderers each, the authors noted that the data did not cluster as would be expected if they were valid. Taylor et al. observed that most serial murders displayed an organizational pattern: evidence that the crimes were planned. One difficulty, which relates to the present study, is that the FBI profiling criteria are usually only used in federal-level investigations of serial murders such as when the murders that have been identified as the work of a serial murderer occur in multiple states (Taylor et al., 2012). At the local level, entirely different classification protocols (or no formal protocols at all) may be used (Simon, 2015). Further, no typology has been accepted as a guide to police investigative procedure, meaning that one police department may link together two murders as having a common perpetrator when another may not even when presented the same evidence.

Another method of serial murderer profiling is in the common characteristics of their victims, if any. Famously, Jack the Ripper only targeted prostitutes (Forsyth, 2015). Additionally, in a review of serial murders from 1970-2009, 32% of the female victims of serial murderers have been prostitutes (Forsyth, 2015). This implies that multiple murders of prostitutes over a period of time are more likely to be the work of a serial murderer than murders of other females and that there is something about how the murderers perceive prostitutes that suggests their motivation to kill (Forsyth, 2015). This might suggest that even two murders of prostitutes, if occurring in the same area and close together in time, might be the work of the same person.

Adding to the difficulties of profiling and classification is the fact that the definition of serial murder is not universal. For example, Adjorlolo and Chan (2014) proposed a definition of three or more murders committed over a period of days, weeks, months, or years and that the murders are premeditated. This differs from Hickey and Harris (2013), who set the threshold at only two murders and Forsyth (2015) who used the criterion of four or more murders as a serial murder. Therefore, the criminal investigative procedure of serial murders can differ depending on the criteria being used to define a serial murder. Police investigations have failed to solve serial murder cases due to a lack of agreement on whether the initial murders in a case were connected (Fox & Levin, 2012).

Discussion. Based on the literature review, there is no scholarly consensus as to what constitutes a serial murder. There also appears to be a divide between how serial murders are perceived and handled at the federal level versus the state and local levels. But given the high profile of serial murders, it is important to agree on how to identify, classify, and investigate them. Serial murders in a given jurisdiction, such as NYC, the site of the current study, do not appear to follow any given pattern; there can be a period of relative quiet, then a rash of murders. This tends to fragment the efforts made to combat such murders.

Modus Operandi of Serial Murderers

One tool that investigators have available to classify murders as the work of serial murderers is an examination of the MO of the murders. The more unusual the method,

the more likely it is that its use in two or more murders is not coincidental. However, not all murders have such a distinctive element, often called a “signature.”

One area where signatures and distinctive MO are seen is in sexually motivated serial murders (James & Proulx, 2016). In cases where the victims were all prostitutes and their bodies were left in similar locations, authorities have identified the homicides as the work of a single individual (Brents, 2012). The murderer may also engage in some kind of sexual act with the victim’s corpse, which have a distinctive signature and make it is easy to identify them as the work of a serial murderer (Higgs, Carter, Stefanska, & Glorney, 2015). In a case of a serial murderer whose nine victims were all young girls, his MO was identifiable, enabling police to link the murders early in their investigation (Hodgkinson, Prins, & Stuart-Bennett, 2017). Additionally, he worked with his wife, which suggests that it is important for investigators to determine if a serial murderer is working as part of a team (Hodgkinson et al., 2017).

Serial murderers also often become acquainted with their victims as a way of obtaining access to them or getting them to lower their guard. For example, Lubaszka, Shon, and Hinch (2014) examined the phenomenon of serial murderers posing as healthcare professionals to gain access to hospital patients and then murdering them. The MO in such cases was that the murderers were confident men gaining access and trust (Lubaszka et al., 2014). For investigators, the MO would be implied early in the investigation, as the question of how the murderer was able to obtain access to the victim would naturally present itself (Lubaszka et al., 2014).

A further aspect of MO is the murderer's choice of weapon. Auxemery (2015) observed that while the majority of simultaneous mass murders had been performed with firearms, most serial murders were not. Auxemery noted that serial murders, especially those that had a sexual component, were usually performed by knifing, strangulation, beating, etc.—all more “intimate” and involving closer contact with the victim than shooting. This concept is a further tool used by investigators, in that a murder by close personal violence is possibly the work of a serial murderer, especially if it has a sexual component, either pre- or post-mortem, and especially if it is one of two or more recent similar murders (Auxemery, 2015).

One of the most disturbing trends in crime in the last few years has been mass school shootings. These shootings often have a common MO in that the murderers act out some kind of fantasy and often dress the part (Böckler, Seeger, & Sitzer, 2012). These murderers often do little to hide their intentions, telling acquaintances what they plan to do and engaging in antisocial behavior (Böckler et al., 2012). The authors' position was that media dynamics played a significant role in how these murderers felt their crimes “should” be committed, such as while wearing a dark trench coat, the chosen garb of the Columbine school murderers (Böckler et al., 2012). While the authors examined mass shootings rather than serial murders per se, their perspective suggests that imitative crime signatures—distinctive elements of a murder that may have been borrowed from another high-profile murder or murders—can be a valuable tool to use in linking investigations together (Böckler et al., 2012).

A given class or type of serial murderer often will have a common MO. Harrison, Murphy, Ho, Bowers, and Flaherty (2015) examined the MOs used by female serial murderers. The authors, in an examination of female serial murders from 1821 to the present, found that the crimes were most often committed for financial gain, their victims were often the weak or helpless—children, elderly, etc.—and the chosen MO was poisoning. Harrison et al. (2015) noted that this effect was so significant that investigators who found that a murder victim had been poisoned tended to suspect that a woman rather than a man was the murderer.

A further element of MO is the murderer's choice of location. In the case of serial murderers, this usually applies only to planned crimes and not crimes of opportunity (Hering & Bair, 2014). However, even a crime of opportunity can occur where the murderer is lying in wait for a random potential victim to come by (Hering & Bair, 2014). The authors' observation was that serial murderers tended to choose crime-positive areas (isolated or concealed locations, less foot traffic, etc.) to a lesser extent than other murderers did (Hering & Bair, 2014). Hickey and Harris (2013) also observed that serial murderers who stalked their victims chose specific locations to carry out the murders, though unlike Hering and Bair (2014), they did not find that those locations tended to be more visible than those chosen by other, non-serial murderers.

Investigators also must distinguish between MO and signature. From a definitional standpoint, an MO is a method used to actually commit a crime, while a signature is a distinctive marker, not necessarily related to the crime itself, that identifies

the murder as being the work of a particular murderer (Drawbridge, 2016). Viorel noted that signature does not necessarily imply MO, as the signature is often placed after the crime has been committed. This observation was supported by Vasile (2013), who noted that while serial murderers tended to have certain commonalities in their MOs, the signatures they left (if any) were highly individualistic. Vasile (2013) also noted that MO and signature could be linked, especially in cases where the murderer's MO was unusual.

Discussion. MO is a tool that investigators use to identify crimes as the work of a single individual, in that criminals more often than not employ the same MO in the commission of multiple crimes. This applies to serial murderers, perhaps even more often than most, as most serial murders are planned. The review of the literature showed that in linking together murders as the possible work of a serial murderer, MO is most valuable as a tool when it is unusual, as two unrelated murderers are unlikely to have used the same distinctive MO.

Reasoned action theory, discussed in a previous section, also provides a perspective on MO. A serial murderer, by definition, has been successful in the commission of at least one murder (in other words, not being apprehended for previous murders). Reasoned action theory suggests that the serial murderer will tend to repeat an MO that has worked in the past. This, of course, excludes totally random and unplanned murders, but those are the exception rather than the rule in serial murders. Also, from a practical standpoint, totally random serial murders are very hard to identify as such (i.e.,

as the work of a single individual), so investigators should use the theory to investigate murders that have identifiable MO linkages.

Profiling Serial Murderers

The science of criminal profiling is based on the premise that criminals have certain characteristics, and those characteristics tend to indicate the crimes they commit. Also, certain crimes suggest that they have been committed by certain personality types. Psychopathology of criminals includes antisocial personality disorder, psychopathy, lack of empathy for others, etc. In the case of serial murderers, it is a safe assumption that anyone who kills several people has some kind of psychological disorder, but that is as far as any generalization can go; serial murders are committed by all sorts of individuals for a myriad of reasons.

Kocsis & Palermo (2016) referred to work he had done earlier in 2004 in a study of the psychological profiles of various types of criminals, including serial murderers. He observed that popular culture, including crime fiction, had created the impression that criminals had distinct and easily identifiable psychological profiles and the recognition of such could be used to identify and apprehend them. Kocsis & Palermo (2016) found that such profiling had limited value, because the psychological profiles of criminals are as varied and nuanced as those of other individuals. The author discussed serial murderers in this regard and stated that contrary to popular belief, it was almost impossible to unequivocally state that a series of murders, even if strongly suggestive of a single perpetrator, corresponded to a given psychological profile (Kocsis & Palermo, 2016).

One aspect of profiling has a practical aspect to it: geography. A serial murderer will often choose his victims based on their proximity to him/her (Hongqiang & Xinyan, 2017). The authors referred to what they called journey-to-crime as a means to determine a serial murderer's home base. This concept has implications for investigators: for instance, a series of serial murders that takes place in a relatively isolated community strongly suggests that the murderer lives in (or at least, operates from) that community (Hongqiang & Xinyan, 2017). Similarly, if a murderer operates in a large city that is near another such city, the assumption is that if the murderer were from that nearby city, he/she would probably choose that city as the location of his targets instead (Hongqiang & Xinyan, 2017). These findings were somewhat contradicted by Canter, Hammond, Youngs, and Juszczak. (2013), who found that serial murderers showed no consistency in the spatial distribution of their murders: some clustered them tightly geographically, while some were widely scattered. However, the authors' study was based in the United Kingdom, making its findings not well generalizable to other areas (Canter et al., 2013).

A further examination of geographical profiling was provided by Goodwill, Allen, & Kolarevic (2014), who sought to determine what mathematical models could be used to predict the decreasing frequency of crimes from the criminal's home base. The authors referred to this as a decay function. They found that the likelihood of a criminal committing a crime decreased as a logarithmic function of the distance from his/her home base. For serial murderers and murderers in general, the likelihood of a murder occurring drops sharply as the distance from the murderer's home base increases, suggesting the

corollary that most serial murders are committed close to the murderer's home base (Goodwill, Allen, & Kolarevic, 2014).

Discussion. In criminal investigations of serial murders, offender profiling can be a valuable tool in predicting where a serial murderer will strike next. In terms of after-the-fact evaluation, profiling can help to establish that a given murdering is the work of a serial murderer by identifying common offender profiles based on the characteristics of the crime. The concept of profiling also relates to MO, in that some MOs suggest a particular mindset or psychology on the part of the criminal.

Review of Studies on the Characteristics of Serial Murderers

Following is a discussion of investigative procedures and the types of analysis used to both predict and solve these crimes. These procedures are based on attempts to understand the nature, characteristics, and motivations of serial murderers. The discussion includes demographics, psychological makeup, and motivations of murderers, as well as the commonalities in their victims and how they select them.

Serial homicides are a relatively small proportion of all murders, but their impact is major. The F.B.I. speculates that there are at least 500 serial murderers operating in the United States at any given time (Bonn, 2014). Because a serial homicide offender is often referred to as someone who has already killed at least three or more individuals during three or more incidents, research into the pattern of murdering, profile of the murderer, and his/her purpose for murdering could help law enforcement to more quickly identify the serial homicide offender and perhaps reduce the threat to their communities

(Boschken, 2014; Bonn, 2014). Research into the characteristics of serial homicide offenders reveals known patterns of behavior that, if compiled, could provide law enforcement with a way to characterize serial murderers and therefore develop the tools to intervene before more homicides are committed.

Characteristics of Serial Homicide Offenders

Serial homicide is a worldwide phenomenon. However, serial homicide offenders are often viewed as specific to the United States and countries significantly influenced by American societal norms (West, 2016). These crimes are by no means confined to the U.S. or the West, however. The impression that they are a manifestation of Western culture could stem from the treatment of serial murderers in popular culture (West, 2016).

Traditionally, serial offenders commit their crimes in the areas that they frequent most or within close proximity to their home (Goodwill, Allen, & Kolarevic, 2014). In addition, many serial murders have two primary types of motivation, which are internal psychological gratification and sexual gratification (Kerr & Beech, 2015). Kass-Gergi (2012) states that the United States has developed a culture of death, in which serial murderers have become a part of the American cult of celebrity, which has made the both the threat and investigation of serial homicide issues of public health.

Demographic characteristics. According to Hickey (2013), 90% of serial homicide offenders are male and 10% female. About 45% of those serial homicide offenders target only females, while 20% target only males and only 35% kill both males and females (Hickey, 2013). Interestingly, 55 percent of male perpetrators killed at least

one male, though the majority of victims of serial homicide have been female (Hickey, 2013). Female serial homicide offenders exclusively killed males 43% of the time and females 21% of the time.

Historically, serial homicide has been seen a “white man’s crime,” and to an extent that is true, as Caucasian males have committed four fifths of the reported serial homicides in America (Hickey, 2013). In their 2014 study of African American serial homicide offenders, Lester and White (2014) concluded that because the media had been less interested in serial murder by African Americans, the recent rise in African American serial homicide offenders had gone unnoticed. A serial murderer had, according to Lester and White (2014), increased from 38 to 54 percent between 1970 and 1990, and the rate of Black serial homicide offenders had increased by 80% since the 1990s.

Lester and White’s 2014 study analyzed demographic data collected from true crime books, encyclopedias of murders, newspaper accounts, and court documents to identify 307 American serial murderers. The results indicated that 19 percent of the offenders were African American, and 67 percent were Caucasian. The study revealed subtle differences in serial murderer behaviors and motivations based on racial or ethnic makeup. Black serial homicide offenders had fewer victims overall and were less likely to be labeled sexually deviant, but more likely to rape their victims. African American serial murderers compared to those of other ethnicities also showed less aberrant behaviors regarding the cannibalization of their victims and engagement in necrophilia, mutilation, or other bizarre sexual acts (Lester & White, 2014). Interestingly, the

presence of psychiatric disorders in either the serial homicide offenders' parents or themselves did not differ based on race or ethnicity; thus, no differences in style of murdering could be attributed to the presence or absence of psychological disorders. The authors of the study speculated that the absence of deviant behavioral or psychological characteristics among African American serial homicide offenders might in fact make them less marketable to the media, thus explaining the lack of coverage of their crimes. The authors ultimately called for future researchers to incorporate a more standardized psychological autopsy to ensure that the information obtained is more reliable, and that a larger sample size of non-White serial homicide offender activity could be utilized (Lester & White, 2014).

Typologies of Serial Homicide Offenders

Hickey (2013) explored the four basic types of serial homicide offenders as classified by earlier research. The researcher listed typology according to their psychology and motivation as follows: the power- and control-based serial homicide offender, the visionary serial homicide offender, the missionary serial homicide offender, and the hedonistic serial homicide offender. The sections below provide detailed explanations for each.

Power- and control-based serial homicide offenders. Serial homicide offenders who feel and experience the internal gratification of completely dominating and humiliating their victims, are referred to as power- and control-seeking serial homicide offenders. These murderers base their behavior on the socio-pathological attitude and

rule setting used within their personal lives as guidelines in order to obtain self-satisfaction. Serial homicide offenders motivated by power and control tend to receive more satisfaction from exercising dominance over their victims, rather than from bloodlust, and the desire for power and control can lead to an extension of the murdering process in order to prolong their pleasure (Weist, 2016).

Visionary serial homicide offenders. Visionary serial homicide offenders are those for whom the motivation to perpetrate serial homicides has its basis in a response to auditory and visual hallucinations, or visions. The visions that lead them to murder have a tendency to hold a religious theme and thus the murders are committed quickly, the murdering seen only as a way to complete the assignment given to them by God, a demon, an angel or other supernatural or religious forces. Visionary serial homicide offenders are usually found to be out of touch with reality and may be psychotic or schizophrenic, as they feel compelled to commit murder by their visions or voices in their head (Wiest, 2016). David Berkowitz, known as the “Son of Sam,” the infamous serial murderer who operated out of NYC in the mid-1970s is a classic example of a visionary serial homicide offender (Harmening, 2014). Berkowitz murdered six people and injured several others between 1976 and 1977 and professed to have been compelled to kill by his neighbor, “Sam,” who sent him messages through his dog.

Missionary serial homicide offenders. The serial homicide offender who attempts to kill a specified group of people based on conflicting values is referred to as a missionary serial murderer. The need to kill members of the specified group may be

based on religious differences, racial conflicts or differentiated interpretations of morality mission-oriented serial homicide. Offenders are not typically psychotic but have strong feelings of animosity towards vulnerable groups of people such as children, prostitutes, and homosexuals (Weist, 2016). An example of the missionary homicide offender can be seen in the MO and motivation of serial bomber Theodore Kaczynski (aka The Unabomber), who was against industrialization and modern technology (Taylor, 2013).

Hedonistic serial homicide offenders. Hedonistic serial homicide offenders feel a high degree of pleasure and gratification from sexual violence and from torturing, humiliating, and mutilating their victims. They kill people in order to obtain positive feelings (Sewall, Krupp & Lalumière, 2012). The goal of Sewell et al.'s (2012) study on two typologies of sexual homicide was to propose a model of serial murderer behavior that identifies the perpetrators of serial homicide as “psychopathic, competitively disadvantaged, and sadistic offenders” (p. 85). Although many of the behaviors associated with serial homicide offences reside within the broader category of antisocial behavior, historically, the homicide itself did not exist within that category. Serial homicide offender Jeffrey Dahmer is characteristic of a hedonistic serial murderer, as his crimes included mutilation and torture for his own gratification (Sewell et al., 2012).

Organized and disorganized serial homicide offenders. Sewell et al. (2012) discussed two other categories of serial homicide offenders. They delineated the ways in which serial murderers fit categorically according to the nature of the crime scene that they create, i.e., organized and disorganized. The 2012 study used the biographical data

of 82 male serial sexual homicide offenders who had committed three or more homicides that included sexual activity before, during, or after the murder. The organized/disorganized model of sexual homicide was tested and resulted in mixed support for the typology. This showed that serial sexual homicide offenders are not categorically identifiable as organized and disorganized only, and that there are many variations amongst this offender type. Thus, the authors posited that because serial sexual homicide offenders are such a highly heterogeneous group, it is possible that further research to develop a typology, may fail to properly capture the variance (Sewell et al., 2013, p. 98).

Serial homicide offenders who commit homicides based on premeditated planning are referred to as organized serial homicide offenders. Planning typically includes managing evidence of the crime, targeting the victim, and selecting the murder location. It has been speculated that organized serial homicide offenders would be considered psychopathic and their planning reflects their intelligent nature and socially competent behavior at the crime scene (Fawcett & Clark, 2015). An example of an organized serial homicide offender would be that of the BTK murderer, Dennis Rader, who planned his attacks thoroughly and used restraints on his victims (Rosen, 2014). He showed his social competence by eluding capture for 30 years as he lived what would be considered a normal life outside of his murdering. He even served as president of his church congregation (Rosen, 2014). Other examples of organized, psychopathic serial homicide

offenders include Gary Ridgeway, Ed Gein, Ted Bundy, Jeffrey Dahmer, John Wayne Gacy and Ed Kemper (Rosen, 2014).

According to the literature, a disorganized serial homicide offender leaves a crime scene that suggests spontaneous and impulsive behavior. There is lack of the pre-murder planning about the location, victim and remaining evidence so the homicide is often random, sloppy, and the result of sudden violence. Often, these serial homicide offenders have below-average intelligence, and their management of the crime scene occurs after the homicide is committed. Disorganized serial homicide offenders are typically easier to identify after the crime compared to the organized type of offender (Fawcett & Clark, 2015).

Pathological Trends of Serial Homicide Offenders

The qualitative study conducted by Allely et al. (2014), studied the connection between neurodevelopmental mental health disorders and serial homicide offenses. The researchers utilized guidelines from the Preferred Reporting Items for Systematic Review to search Internet-based bibliographic databases to find scholarly papers relevant to the study criteria, and ultimately included 165 studies of serial homicide offenders who had been apprehended after 1985 and had killed more than three people (Moher et al., 2015). Accepted case studies of serial homicide offenders were then categorized by the presence or absence of Autism spectrum disorders, brain injury and/or psychosocial stressors. The data were then analyzed to determine the level of severity of the Autism spectrum disorders or brain injury and cross-referenced with psychosocial stressors in childhood.

Of the murderers whose history included definite and possible brain injury, 15 percent also had evidence of Autism spectrum disorders traits (Allely et al., 2014). Of cases that were determined to have a definite brain injury, 81 percent also had psychosocial stressors, and of those with possible brain injuries, 53 percent had psychosocial stressors such as physical and sexual abuse. The researchers concluded that the psychopathology of a serial homicide offender includes an array of rare behaviors occurring since childhood related to biological, sociological, and environmental situations. This is the basis for the psychology of a serial murderer. The serial homicide offender tailors his or her behavior to the perceived needs of the victim and a potential audience. S/he needs to identify the feelings of pain and fear in the victim by engaging the victim in the process of transference of frustration and depression, and s/he needs the audience to prove his or her the superiority and acceptance as a fearful serial murderer (Allely et al. 2014).

Willmott, Boduszek, & Robinson (2018) qualitative study used information gleaned from a case study of psychopathic sexual serial homicide offender Frederick Walker Stephen West to study the possible effects of head trauma and psychological stress on serial homicide offender behavior. The researcher studied the biological approach to criminology as well as the psycho-social approach as they related to West's biology and upbringing, and determined that interactions among biological, psychological and sociological factors came together to encourage criminal behaviors in this serial homicide offender.

The biological factors that were involved in the psychopathology of this serial homicide offender included the chemical and genetic mutations or abnormalities in the brain, which, in turn led the individual to the development of criminal or psychopathic traits. In West's case, two serious brain injuries may have contributed to a loss of control over subcortical and limbic structures that were directly involved in the control of primitive, aggressive, and sexual impulses (Willmott, Boduszek, & Robinson, 2018).

Along with biological abnormalities, several social and behavioral factors need consideration in the investigation of the psychopathology of a serial murderer. Ineffective, incompetent, and inconsistent parenting can be related to the development of psychopathic tendencies when combined with damage to the prefrontal cortex, low self-control, a sense of entitlement, and sexual impulsivity (Willmott, Boduszek, & Robinson, 2018). Additionally, a study by Allely et al. (2014) delineated biological, psychological and sociological factors that indicated the possibility of neurodevelopmental and psychosocial risk factors in serial homicide offenders. Data about 165 serial homicide offenders were examined from peer-reviewed literature, and the data was cross-referenced to data indicating head injuries and/or diagnosis of autistic spectrum disorders. Researchers discovered that many factors which could be etiologically significant to the study of the serial homicide offender. Regardless of etiology, serial homicide offenders displayed a series of atypical and aberrant behaviors such as lack of empathy for others, rape and sexual violence, violence against animals, domestic violence, inappropriate relationships or marital arrangement, possessiveness, jealousy, stalking, suicide attempts,

prior police involvement, prior criminal history, threats of murder, alcohol or drug addiction, and attempts to kill or abduct children. Often, these offenders had adverse experiences in childhood that included mental or physical torture and sexual abuse. The authors speculated that the resulting paranoia, schizophrenia, depression, and inability to maintain employment had been responses to past abuse and psychological stressors that motivated the offender to kill (Allely et al., 2014).

Monetary Motivations for Serial Homicides

Cameron's (2013) study examined whether serial homicides could be motivated by monetary gain. Contract murders, though not the only way in which people kill for monetary gain, speaks directly to the issue of committing serial homicides for pay. The author used data from 163 cases spanning the years 1989 to 2002. The goal of the study was to shed light on the existence of these contract serial homicide offenders and to study the characteristics of these offenders. Their average age was 37.2 years, with victims averaging 41.7 years, and the individuals who hired them had an average age of 42.6 years. Cameron (2013) determined that the offenders were hired by individuals who had suffered failed relationships, making these murders motivated not only by monetary gain but also by sexual issues. The serial offenders committed their offenses in a number of different ways, such as kidnapping, theft and contract murders in which they demanded money either from a source (e.g. ransom) or from the victim.

Victimology

Victimology refers to the characteristics and behavior of the victim and the method by which the offender uses to lure and victimize his or her intended victim (Pemberton, 2016). The primary aspects of victimology include the choice and selection of victim, location where the victim will be targeted, methods by which the crime will be executed, behavior of the victim in response to the crime and the disposal of the victim. In case of the serial homicide offender, these situations are often discussed with the victims. In their chapter on patterns of serial murder, Fox and Levin (2014) posited that the primary reason for choosing a victim is vulnerability. Thus, any individual that appears easy to dominate can be vulnerable to selection by a serial homicide offender.

Selection of victims. Sexually motivated serial homicide offenders often select their victims from public places or rest rooms (Pemberton, 2016). They look for people who are either vulnerable or isolated such as cult members, are soliciting funds on sidewalks or waiting at bus stations, those who are mentally ill, and individuals who are drug or alcohol addicted and are wandering along the streets or roads (Pemberton, 2016; Fox & Levin, 2014).

Karakasi, Vasilikos, Voultos, Vlachaki, & Pavlidis (2017) examined methods used by serial homicide offenders to approach or gain access to their victims. The authors used a sample of data from 122 single victim homicide cases and 9 serial homicide offenders and categorized them using the homicide profiling index, version 3. The researchers sought to determine if the patterns of criminal offences that occurred

before a criminal escalated to the commission of single or multiple homicides were applicable to a single framework. They did this by comparing the criminal histories of single-victim and serial homicide offenders (Karakasi et al., 2017). During the study, the authors identified three common approaches to the victim: the surprise, the con (as in deception) and the pre-existing trust approaches. In the surprise approach, the serial homicide offender has gathered information about the victim's activities and where these are located, so that the offender can pursue the victim by going to the location at the designated time of the victim's activity, and then surprising the victim, followed by murdering them. In the con approach, the serial homicide offender appeals to the victim's sympathy by asking for assistance. This enables the offender to be physically close to the victim in order to overpower the victim and take physical control of him or her in order to commit the homicide. In the trust approach, the serial homicide offender has initiated a relationship with the victim fostering trust. When trust has been established, the offender moves in and betrays this trust by murdering the victim.

Serial Murder Investigative Procedures

The investigative procedures used by law enforcement to solve serial homicide cases require detailed observation and analysis of the facts of the case. A serial homicide investigation typically consists of criminal profiling and behavioral and crime scene analyses. Investigative procedures for serial homicides have evolved to include demographic features such as age, race, ethnicity, and gender of the victims (Brents, 2012). Procedures may also include the study of crime scene characteristics that may

reveal key features of the offenders and their crimes, such as whether the murderer was organized or disorganized, their relationship to the victims, whether it was a sexual homicide or if the murderers' MO contained hedonistic elements (Brents, 2012).

Additionally, investigative procedures seek to reveal the level of psychopathology of the offender, to determine the developmental issues that motivate the murderer and to determine each murderer's victimology. Because of the complexity involved in these procedures, criminal investigations of serial homicide offenders are often fraught with challenges and issues related to the complexity and non-uniformity of the cases (Brents, 2012).

Criminal profiling. Criminal profiling is the first step in a criminal investigation, and it involves the inference and analysis of the traits of the criminals and homicide offenders in order to understand the nature and behavior of the offender. Criminal profiling is still particularly helpful in the case of serial homicide offenders, but the crimes themselves are generally harder to solve due to the often-seeming lack of motive and randomness of the acts themselves (Bartol & Bartol, 2012). Although criminal profiling is used largely as a means to "narrow the field of investigation," it does not find the specific murderer's identity (Douglas, Resser, Burgess & Hartman, 2014, p. 402). Criminal profiling of the offender includes data about the grounds that are involved in the homicide case, the mental health of the offender, physical evidence, and the personal observations of the investigator (Wiest, 2016).

The successful use of criminal profiling helps to identify the writers of anonymous letters, such as have been used by serial homicide offenders in the past to contact law enforcement and media outlets (Douglas et al., 2014). Using psycholinguistic techniques, investigators can compose a “threat dictionary” by examining the use of vocabulary in such messages as a “signature” that is unique to the offender. In this way, law enforcement investigators can determine if a known individual wrote the letter and thus connect a suspect to a crime (Douglas et al., 2014).

Similarly, police investigators have found criminal profiling to be particularly helpful in the identification of rapists and arsonists, whether involved in single or serial homicides. According to Douglas et al. (2014), the criminal investigator creates a personal profile that uses details about the behavior of the criminal to determine personality characteristics. Profilers then match those characteristics to possible subjects, which can aid them in conducting interviews (Douglas et al., 2014).

Behavioral analysis. According to James and Proulx (2016), behavioral analysis, or behavioral evidence analysis, is a combination of crime scene analysis and criminal profiling. Law enforcement investigators examine and interpret physical evidence, forensic victimology and crime scene characteristics for behavioral patterns and relevant characteristics of the offender. Behavioral evidence analysis bases its conclusions on deductive reasoning and is ideographic based on the fact that it uses forensic analysis to study case materials (James & Proulx, 2016).

During behavioral analysis, an in-depth data summary of the homicide offender/homicide offense is provided to understand characteristics of the crime scene and the offender. The behavior of the homicide offender is analyzed on the basis of the physical evidence at the crime scene, characteristics of the victim, offender motivational factors and the characteristics of the offender. Thus, analysis is based on critical thinking, scientific method and deductive logic. The results of this analysis can be used for predicting the offender's characteristics by forensic investigation of each of the aspects involved in the murder that can be helpful to understand the crime nature, attitude and psychology of the offender (Brents, 2012). Lehman, Goodwill, Hanson, and Dahle's (2015) study looked at how detailed crime scene analysis was conducted on a sample of 247 rapists in Berlin, Germany. They were assessed using Behavioral Thematic Analysis, which revealed attitudes of hostility, criminality, pseudo-intimacy, and found that hostility, criminality, and pseudo-intimacy were valid predictors of sexual recidivism (Lehman et al., 2015). Because serial homicide offenders often have criminal histories that predate their serial homicides, it may be helpful for investigators to do a thorough behavioral analysis.

Behavioral evidence analysis, according to James & Proulx (2016), exists within two contexts or time frames: the investigative time frame and the trial phase. The investigative time phrase includes all analysis that occurs prior to the arrest of a subject, and the trial phase occurs during the suspect's criminal proceedings. Popular fiction concerning criminal behavioral analysis focuses on the investigative stage and has a

tendency to focus on serial homicides and the offenders who carry them out. The trial phase does not garner much attention by the media of popular fiction, and is not as high-profile, thus being less marketable to popular media regarding serial homicide cases (James & Proulx, 2016).

Crime scene analysis. Crime scene analysis can assist in the accuracy of risk assessment through the use of behavioral indexes that predict risk factors for sex offenders, and by association, serial sexual homicide offenders. Because homicide is a result of a transaction between individuals and their relationships, understanding the nature of the homicide can be accomplished through the examination of the offender's behavior towards the victim during that transaction (Salfati, 2016). In her study, Salfati (2016) discussed the patterns of co-occurrences in criminal actions as they relate to the behavioral occurrences at the scene of a homicide. The study indicated that offenders behave in patterns that can be placed into either expressive or instrumental groups (Salfati, 2016). The similarities of the crime scenes in a series of murder cases can assist law-enforcing agencies in the analysis and identification of the serial homicide offender through the behavioral patterns implied by a crime scene. Furthermore, the crime scene analysis is also helpful in gathering the available evidence and forensic details for the purpose of comparison with past and future crimes committed by the murderer (Wiest, 2016).

Crime scene analysis can neither identify nor eliminate a suspect, but it can help investigators to identify behavioral patterns, which in turn help the investigator to

characterize an offender (Fox & Levin, 2014). It can help investigators of serial homicides to decipher the MO of a known suspect, and the use of DNA analysis during the investigation often provides clues that may either implicate or eliminate a suspect (Fox & Levin, 2014). Crime scene analysis can also help investigators to recognize criminal signatures, which remain stable and are unique to each murderer, and to identify a staged crime scene, or one staged in an attempt to lead investigators away from the suspect (Douglas et al., 2014).

James & Proulx (2016) interpretation of crime scene analysis indicates that analysis does not begin until after the crime scene has been processed. The criminal investigator's responsibility then, is to glean from the scene, a specific set of characteristics related to the offender's behavioral decisions regarding the victim, the offense itself, and *their contextual meaning* (James & Proulx, 2016). In this way, crime scene analysis differs from crime scene processing, which is only concerned with the recognition, documentation, collection, and preservation of physical evidence. Crime scene analysis often relies on the crime scene investigation, as the analysis of DNA evidence, crime scene reconstruction and interpretation of laboratory results fall into this category and are often essential to accuracy of the crime scene analysis (James & Proulx, 2016).

Interpreting the Motivations of the Serial Homicide Offender

The identification of the motivational factors behind a homicide can be helpful in solving the crime and apprehending a criminal. Investigating teams utilize the patterns of

evidence at the crime scene in order to predict the subjective values and choices of the offenders regarding the victim, location and the methods of murdering powered by their motivational factors like sexual activity, power or domination acquirement, financial needs or discriminatory behaviors (Wiest, 2016). Serial homicide cases can be difficult for investigators to solve due to the lack of means to categorize offender and offense data that suggest patterns of behavior, which could provide a potential pool of suspects. The goal of the present study was to examine which evaluative strategies homicide investigators use to classify unsolved homicides as the work of serial murderers or as non-serial homicides.

A significant aspect of the data is the reasons that the murderer has for performing his/her acts. Reasoned action theory suggests that regardless of how heinous a murderer's actions may seem, those actions make sense to him/her. This literature review has highlighted the many reasons why a serial murderer may perform his/her crimes. These include sexual motivation, hatred of a particular group, a psychological need to kill in order to fulfill some kind of drive, a sense of needing to complete a mission, and many other motivations. The commonality was that serial murderers tend to have consistent motivations throughout the course of their murders. Therefore, a critical element of determining whether a murdering is the work of a serial murderer (i.e., can be linked to other unsolved murders due to some commonality between or among the crimes) is the examination of clues that suggest the motivations of the murderer. These can be blatant,

such as notes left by the murderer at the crime scene, or subtle, such as the murderer's choice of victims.

Research Gap

There is a wealth of information on the characteristics of serial murders, the motivations of serial murderers, the particular criminal psychopathology of such persons, and many other aspects of serial homicides and those who commit them. However, that information is scattered in nature. There is very little consensus on even such fundamental concepts as the very definition of a serial homicide. Thus, police investigative procedure varies from jurisdiction to jurisdiction. If a serial murder occurs in two or more jurisdictions, the investigative bodies there may share information, but they will usually continue their investigations separately.

The FBI has standard protocols for identifying and classifying serial murders, but even then, there is extensive variation from office to office. Furthermore, a given murder does not become a federal case initially unless it is committed in a location that is under federal jurisdiction. A multiple murder case that crosses state lines may become the purview of the FBI, but first, it must be identified as the work of a single individual rather than two or more unconnected homicides. This means that virtually all serial murder cases, as a practical matter, are handled at the local level.

This constitutes the research gap. There is no scholarly consensus as to the best way that investigative authorities can classify and identify homicides as the work of serial murderers. The wealth of information on the topic has not been systematically collated by

researchers. Critically, no studies have been performed that measured how effective one investigative procedure or protocol was compared to another in correctly identifying unsolved homicides as serial murders (or as isolated, unconnected crimes). However, based on my review of the literature, a protocol can be defined for the investigation of serial murders. This protocol could serve as a guide for investigators nationwide. It would be especially valuable in cases where local law enforcement had little experience with serial murderers. Historically, many serial murderers have been able to operate for long periods of time in areas where law enforcement resources are limited and/or geographically dispersed. At the other end of the spectrum, an agreed-upon protocol could help separate precincts in a large urban area, such as NYC, the setting for the present study, coordinate their efforts to identify serial homicides.

Benefit from closing the research gap. The review of the literature shows that unsolved serial homicides must be investigated differently than non-serial homicides. The makeup of the murderers, their victims, and the crimes themselves are usually markedly different from “regular” homicides. Thus, failure to identify a series of homicides as the work of a single serial murderer can fragment the investigation, slowing it down and possibly preventing the murders from being solved at all. The benefit from closing the research gap could be swifter and more effective investigations of homicides, both in serial murder and other homicide cases.

Summary

In this chapter, I described the findings of the literature search I conducted in support of the present study. I examined the extant literature on the nature of serial homicides and those who commit them. I provided a review of reasoned action theory as a lens through which to understand the actions and motivations of criminals, particularly serial murderers. I provided an overview of police and investigative procedure in serial homicide cases. Also, I examined the literature on the types of serial murderers (in terms of motivation) and the characteristics of their victims. This led to the identification of the research gap, which is that there is little or no scholarly consensus on the best way to identify murder cases as the work of serial murderers.

In the next chapter, I will provide a comprehensive overview of the methodology of the current study, including the research questions, methodological choice and the justifications for it, population and sampling, data collection, and data analysis procedures. I will also discuss methods to ensure confirmability and reliability of the data, as well as ethical safeguards and procedures.

Chapter 3: Research Method

Introduction

The purpose of this qualitative, phenomenological study was to examine which evaluative strategies homicide investigators use to classify unsolved homicides as the work of serial murderers or as non-serial homicides. The goal was to gather police professionals' perspectives regarding the best ways to classify and identify possible unsolved serial murders. This was done by conducting semistructured interviews with police detectives regarding the approaches and strategies they use to help them with such identification and enable them to conduct the investigations accordingly.

In this chapter, I first explain the research design and the rationale for it. Then I explain my role as the researcher in this study. This is followed by a detailed explanation of the study's methodology. Instruments, data collection, and participant criteria and selection are discussed. Next, I provide a discussion of such issues as data credibility and reliability. I close with a discussion of ethical procedures and a chapter summary.

Research Design and Rationale

This phenomenological, qualitative study was conducted to address the purpose of the study and answer the following research questions addressing a lack of standardization in protocol for murder investigations:

Research Question 1: What strategies do police investigators use to classify unsolved homicides as committed or not committed by serial murderers?

Research Question 2: What do police investigators believe are the most significant factors that suggest that an unsolved homicide may be the work of a serial murderer?

Research Question 3: In the opinion of police investigators, are existing protocols for identifying unsolved murders as the work of serial murderers adequate, and if not, why not?

The central concept of the study was that there is a lack of consensus among law enforcement agencies over how to identify and classify unsolved homicides as the work of a serial murderer. This is exacerbated by a lack of consensus on fundamentals such as what the definition of a serial murder is. Furthermore, serial murders often occur in multiple jurisdictions, which underscores the need for cooperation and consistency among law enforcement agencies.

I chose a qualitative approach because past studies of a phenomenon such as serial murders have been qualitative in nature, though there is a much quantitative data on serial murders, particularly in the United States. In seeking to understand a phenomenon, interviewing those who have directly experienced it or have direct knowledge of it is valuable. Thus, the primary source of data in this study was interviews with police investigators who work on homicide cases.

Role of the Researcher

My role in this study was that of an observer/participant. I observed the phenomenon through my archival search of data on serial murderers and my presence in

the police facilities where the interviews took place. My participation was in active administration and recording of interviews with the study subjects. I used an interview protocol of my own design; thus, I had a direct influence on the data gathered.

Acknowledging potential bias, I had no preconceived notions about serial murder investigations. I also did not have any professional or personal relationship with the study population, nor did I have any professional standing with the police department(s) where the interviews took place. I currently do not have any work relationships with the location or the participants. Therefore, I expected issues of personal bias to be minimal.

Research Methodology

Participant Selection

The chosen population for the study was police investigators in NYC. This included those who work in the boroughs of Manhattan, Queens, Brooklyn, and the Bronx (but not Staten Island). The primary criterion was that participants must have worked on at least one serial murder investigation in their careers.

I used purposive sampling, asking potential participants if they had experience with serial murder cases and including them in the study if they met this criterion. When I could not reach the needed sample size this way, I used snowball sampling, asking participants to contact or provide me with contact information for colleagues who met the criteria of professional standing as homicide investigators and experience investigating serial murderers.

I contacted precinct/detective bureau commanding officers and asked for permission to interview homicide investigators who work in their precincts/units. When granted permission, I contacted investigators by phone or e-mail and explain to them the purpose of the study and what their participation would entail. I asked them at that time if they had experience in serial murder investigations, which was verified through my later archival data search.

If potential participants expressed interest, I e-mailed or physically presented them with an informed consent form. I did not conduct the study with any participant without a signed consent form. I also made it clear to participants that they were free to withdraw from the study at any time. I did not offer any material inducement for participation and there were no negative consequences to those who declined to participate or withdraw before the study's completion.

The number of participants was 10. This was an appropriate sample size for data saturation in an interview-based qualitative study (Marshall, Cardon, Poddar, & Fontenot, 2013). Data saturation in an interview-based study occurs when at least three interviews take place and no new information is obtained (Marshall et al., 2013). The sample size in a qualitative interview-based study is typically 10-12 (Ritchie, Lewis, Nicholls, & Ormston, 2013), and due to the idiosyncratic nature of the data (the opinions of experienced professionals), I aimed for this sample size.

Procedures for Recruitment, Participation, and Data Collection

Before recruitment, I obtained Walden's Institutional Review Board approval to conduct this study (approval # is 06-26-19-0343667). Then I contacted commanding officers of several large precincts and detective bureau (including major crime squad, homicide squad, and violent crime squad, etc.) in NYC for permission to contact police investigators for participation in the study. When permission was given, I sent e-mails to potential participants describing the purpose of the study and the degree of participation it required. As NYC is a large city and has thousands of police officers working there, I did not anticipate any difficulty obtaining the needed sample size. However, when I had difficulty finding enough participants who met the primary study criterion (having worked on serial homicides), I employed snowball sampling to reach the desired sample size (see Arne et al., 2018).

After receiving replies to my e-mails, I contacted potential participants by phone and set up a time for the interviews. I met with each participant at the police facilities where they work at a time of the participant's choosing. I made myself available at a variety of times to accommodate their schedules. I allowed a time frame of 4 weeks to complete the interviews because of participants' schedules. I also expected the participant recruitment process to take at least 2 weeks. I anticipated that the interviews would take 30-45 minutes each to complete. The locations of the interviews were in meeting/conference rooms at the police facilities, which I obtained permission to use.

Police facilities almost always have meeting and interview rooms available for various purposes, so this was easy to arrange.

I audio-recorded all the interviews for later transcription, making it clear to participants that I did so. These recordings were supplemented by notes. At the end of the interviews, I debriefed the participants by checking my notes with them and answering any questions they may have. When they wished, I provided them with the contact information to access the completed study, as they may be interested in the findings.

Data collection instrument. The chosen data collection instrument was a researcher-constructed interview protocol. The interviews were semistructured and open-ended, with the interview questions based on the research questions. However, participants were encouraged to take the discussion in any direction they felt was relevant after answering the initial questions.

A further source of data was my notes taken at the time of the interviews. As a means of data triangulation, I employed member checking to make sure that my notes reflect the interviews properly to assist in thematic coding. This also ensured content validity. Member checking helped avoid any misunderstandings and allowed me to interpret the data faithfully. A third source of data was my search of archives for information on those cases that are most often mentioned by participants; this was also a means of triangulation to verify whether a participant remembered an investigation accurately (see Arne et al., 2018).

Data Analysis

Analysis of the data was conducted to identify themes and patterns in the reported experiences and perspectives of the participants, which I did with thematic coding.

Thematic coding is the assignment by the researcher of short phrases, or codes, to concepts mentioned in the interviews and analyzing those codes. I used NVivo thematic coding software to assist with thematic coding.

The thematic analysis of the transcripts involved three steps of coding. First, I assigned names to the themes I identified (e.g., victim demographics or murder weapon) as part of open coding. Then, I analyzed how these themes occurred for pairings and groupings as part of axial coding. The last step was selective coding, where I organized and ranked the themes by importance according to certain criterion such as frequency of occurrence. The goal of this analysis was to identify recurrent, emergent, and dominant themes with the objective of answering the research questions (see Arne et al., 2018).

When the coding and analysis was completed, I cross-checked my thematic analysis with the notes I took during the interviews. This helped me to identify any discrepancies in my coding. Furthermore, I checked publicly available archival data on serial murder cases that were mentioned frequently by the participants to see if their recollections were accurate. It was possible that there would be outliers in the data such as one participant reporting the details of a case differently than others. Additionally, one participant may have opinions regarding police work that differ from the majority. These

divergences are important to record and analyze along with the rest of the data, so no outlying data are disregarded (Arne et al., 2018).

Issues of Trustworthiness

The validity of the research depends on the issues of the trust and faith of the participants and the researcher. The validity may remain internal or external, which this researcher will address through the development of effective and efficient strategies. The accuracy of the interview responses that are recorded will be checked. I did so by taking notes during the interview and recording salient points brought up by the participants. I did then, at the end of the interviews, check with the participants to see if my notes are accurate. This type of validity check is referred to as member checking (Dempsey, 2018).

Additionally, I did throughout the solicitation and participation process endeavor to assure the participants that I did represent their views honestly and accurately; that I did ensure that no bias on my part will affect my data evaluation; and that at no time, then or in the future, will they be at personal or professional risk from their participation in the study. Establishing trustworthiness in this manner did help to ensure the completeness and accuracy of the data.

Credibility

Credibility is the internal validity of the study data. I intended to ensure credibility of the data by member checking. Furthermore, my notes and archival data search did serve as a method of data triangulation. I did not have any opportunity for peer review, but if I feel clarification is needed, I did briefly talk to the commanding officers who I

initially solicited to clear up any misunderstandings. During the interviews, I did strive to avoid any ambiguity or misunderstandings, and will ask participants for clarification should anything be unclear (Helen, Mike, Peter, Emma, & Rebecca, 2018).

Internal validity is the process of verifying the accuracy of the data through the use of multiple data sources. This process is often called triangulation. The process involves using three or more data sources to examine the same situation. In the case of the present study, the “triangle” was a) the interview transcripts, b) the researcher’s member-checked notes, and c) archival data on the cases that were discussed. This last was important in order to smooth out the effects of personal bias or simple lack of recollection on the part of participants regarding past serial murder cases.

Transferability

Transferability is the external validity of the study data. I intended to obtain rich, thick descriptive data. This, I believe, is one of the strengths of the open-ended interview method. Participants were given the scope and latitude to explain their experiences and perceptions in depth. Furthermore, I expected that the participants will report different experiences from one another; even though they will work in the same city, that city is large and diverse. I fully expect that the results of this study will be transferable to other urban locations (Helen et al., 2018).

Dependability

Dependability is the extent to which the chosen methodology is appropriate to address the study problem and fulfill the study purpose. Also, it is a matter of whether

future researchers can replicate the research. I intended to make my methodology and procedures as clear as possible during the course of performing this study. I have already mentioned the delimitation of choosing only a single location for the research. It would add to the body of knowledge for other researchers to replicate this study in other locations. The best way to ensure that that can be done is describe the study in sufficient detail and with sufficient accuracy that another researcher can replicate it simply by reading the dissertation associated with it. I accordingly intend to follow accepted procedures for presenting the study's methodology, findings, results, and conclusions.

The dependability of the data was ensured by the triangulation methods I described above. It is critically important, I feel, that I supplement the interviews with extensive notes and that I compare those notes with participants. This did help to mitigate the unavoidable subjective element of my later coding and analysis (in that another researcher could code and analyze the same data much differently) (Laura & Anna, 2018).

Confirmability

Confirmability refers to the extent to which the data are free of researcher bias and represented faithfully and accurately. Confirmability also refers to the extent to which the research could be confirmed or corroborated by other researchers. This is an inherent danger in the qualitative interview thematic coding process, in that my identification and classification of themes will no doubt be different that a hypothetical second researcher would be, using the same data. It is impossible to remove personal

point of view from this process; however, it is possible, indeed mandatory, to reduce personal bias. I recognized that I have my own opinions and biases regarding the topics of crime, police work, serial murders, etc. What I did was being aware of those biases and preconceptions and strived to not allow them to affect how I obtained (conducting the interviews), recorded (transcribing), and represented (analyzed) the data. I did take proper steps to help certainty as far as possible, ensuring that the recorded data will be objective, meaning that the findings remain the result of the experiences and ideas of the informants, rather than of my characteristics and preferences. The most important element of adjusting for bias is to be aware that it exists and be ready to minimize it.

Confirmability is also ensured by auditing the data and checking for anomalies. I intended to make such an audit the final phase of my data analysis. My search through archival data on the crimes discussed was helpful in this regard. It is possible, even likely, that some participants will have recollections of high-profile cases that differ from others. I was on guard for instances of this and did decide whether such outlying data are inaccurate or not (Laura & Anna, 2018). I did not intend to employ any assistance in the coding process. However, I did engage in a second phase of coding in order to “smooth out” the analysis of the data. This is sometimes referred to as establishing intra-rater reliability.

Ethical Considerations

I have obtained preliminary permission from police department to contact potential participants and to conduct the study. I did ensure that the study is described in

sufficient detail so that the participants can give informed consent. I did seek permission to use the police facility as study sites (to conduct the interviews). I did not talk to any participant without obtaining permission from his/her supervisor first. At that time, I did explain to the supervisor the purpose and methods of the study. I did obtain departmental written approval before commencing with the participant solicitation process.

If, after my initial contact, potential participants express interest in the study, I did email them a consent form describing the goal and purpose of the study, what their participation will entail, and how I intend to conduct the study. I did not proceed any further with a participant until I have a physical, signed copy of the consent form.

I did make sure that participants are aware that no personal or professional consequences will accrue to them as a result of participation. At all times, I did maintain confidentiality, and I did assure them of this. They were also informed that their participation was strictly voluntary and can be withdrawn at any time with no penalty of any kind.

In my entire interactions with participants, I did endeavor to reassure them that at no point in the study will they be placed in any kind of personal or professional jeopardy as a result of their participation. During the data collection phase, I did urge the participants to not provide any information, even inadvertently, that could serve to identify them as participants or could be used to identify a third party. Should I, upon listening to the audio recordings, perceive such information, I did not include it in the transcripts. I did assign code numbers to the participants and at all phases of the study, I

did refer to them only by those codes. It is not possible for anyone reading the study's dissertation to identify those who participated in it.

When the study was approved, I did obtain IRB permissions, approval # is 06-26-19-0343667. At that time, I did provide the interview protocol for the study as well as copies of the email solicitations and consent forms I plan to use. I did also provide a copy of the letters I have sent the police department.

Treatment of the data. The researcher has the strict obligation to safeguard the data collected, in all the forms it takes. The data will consist of audio recordings of the interviews, my written notes, and collected archival research data. I will safeguard all electronic data on a password-protected computer to which only I have access. Physical data was stored in a locked file cabinet to which only I have the key. Also, when I performed the transcriptions, I stored any written versions of those transcriptions in a locked file cabinet. Insofar as electronic data are concerned, I did perform all work and stored all data on a password-protected computer to which only I have access. I did not transmit or otherwise made available any of the data to any other person. I did use appropriate passwords and software to make sure that no other person can access my data or research.

At all times, it will not be possible for anyone to identify the participants. In the transcribing and coding, I did refer to the participants only by code numbers that I assign to them. If participants inadvertently identify themselves during the interviews, I did not include that in the transcriptions.

After three years have elapsed from the completion of this study, I will physically destroy all media. This includes destroying all tapes, CDs, etc. on which data are stored. I will shred all written documents. Also, I will electronically erase all data files. I will take particular care to ensure that such erasure is permanent.

Other ethical issues. I did not anticipate any further ethical issues. I had no professional or personal relationship with any of the potential participants. Furthermore, I had no personal experience with serial murderers or serial murder other than my academic interest in the topic. There were no conflicts of interest or issues with power relationships. The interviews were simply an academic researcher talking to professionals in his field of interest.

Summary

In this chapter, I outlined the methodology of the proposed qualitative phenomenological study. I restated the study purpose and research questions. I discussed the study design and the rationale for it. I followed this with a discussion of my role in the research. I then discussed the study methodology, including participant criteria and selection, data collection methods, data analysis, and data triangulation. Issues of trustworthiness were discussed. I ended with a discussion of ethical concerns.

Chapter 4: Results

Introduction

This study was undertaken to analyze which strategies homicide investigators use to classify unsolved homicides as the work of serial murderers or as non-serial homicides. I obtained the perspectives of police detectives and their supervisors in NYC regarding these strategies and the best way to classify unsolved murders. There is no agreed-upon protocol for linking together unsolved murders to identify them as the work of serial murderers. Although crime linkage systems such as the FBI's ViCAP (Bennell et al., 2012) do exist, there is a lack of empirical research on their effectiveness. Thus, this study can provide information on classifying murders, which can assist investigators in solving homicides and serial murders. The following research questions were posed to address the study problem and fulfill the study purpose:

Research Question 1: What strategies do police investigators use to classify unsolved homicides as committed or not committed by serial murderers?

Research Question 2: What do police investigators believe are the most significant factors that suggest that an unsolved homicide may be the work of a serial murderer?

Research Question 3: In the opinion of police investigators, are existing protocols for identifying unsolved murders as the work of serial murderers adequate, and if not, why not?

In Chapter 4, I explain the settings and procedures I followed in the face-to-face interviews conducted with 10 participants. This chapter also highlights the demographics of the participants as well as the method of collection and analysis of the data. The chapter ends with a summary of the results.

Research Setting

To safeguard the comfort and convenience of the participants, interviews were conducted in the police facilities where the participants work. Before scheduling, I offered the flexibility of choosing the interview date and time per their schedule, so participants could schedule ample time for the interview. The interviews were expected to be between 30 and 50 minutes but ranged between 18 and 45 minutes. Before initiating the interview, participants were given a copy of the consent form that explained the purpose of the study and their consent for recording the process. Prior to recording the interview, I read the consent, purpose, and description out loud and informed all participants about the recording and transcribing process of the interviews, after which each participant signed the form before interviews began. I also informed participants that their participation was voluntary, and they could be withdrawn at any time. No participants withdrew from the study. No gift vouchers or incentives were provided for participation in this study.

Demographics

The only condition participants had to fulfill was to have experience investigating serial murders. The study did not demand any data regarding the demographics of the

participants. Thus, there were no questions asked related to the demographic characteristics of the participants like race, gender, sex, age, and religion. All participants were police investigators who have experience in investigating serial murders.

Data Collection

This study included 10 participants selected with snowball sampling. Participants were identified and filtered according to their experience in the phenomenon, which was investigating a serial homicide. The research questions were qualitative and aligned with the questions asked in the semistructured interviews. Although I asked the same questions to all participants, they may not have been asked in the same sequence because the interview was semistructured, allowing for participants' answers to emerge. If a participant did not understand a question, I provided clarification. Follow-up questions were added based on the response of the participant and questions were explained in an unbiased manner whenever required. The study questions were open-ended, as it was not feasible to limit the answers to a certain list of options. With the help of open-ended questions, I gained the perspective and opinion of participants that could not have been possible if the questions were closed-ended. The risk of bias was also eliminated with the help of the open-ended questions (Yin, 2017).

Data Analysis

The primary data collection process was face-to-face interviews. I recorded all interviews on an electronic device and later saved each recording on a password-protected computer. The recordings were transcribed by the researcher. The written

interview data allowed me to gain an understanding of participants' experiences because I could return to the recordings and written transcripts many times to listen to responses and reread the data. The pauses and tone of voice captured in the recordings helped me have a better understanding of participants' experiences. To maintain privacy, I assigned anonymous names to all participants (e.g., Participant 1 = P1, Participant 2 = P2, Participant 3 = P3, and so forth). The equipment used to record interviews, the datasheets, soft and hard copies of information, and other devices are safely placed in a locked cabinet in my house.

The coding procedure I followed consisted of open, axial, and selective coding as explained in Chapter 3. Table 1 presents each coding type and its description.

Table 1

Coding Techniques

Coding Type	Description
Open Coding	Concepts are labelled, described, and categorized depending on their nature and dimensions.
Axial Coding	In the process of axial coding, the concepts described in other methods are related to each other via the process of inductive and deductive thinking.
Selective Coding	This is the final stage where concepts from axial or open coding are completely analyzed to determine whether they serve the purpose of data analysis (Creswell, 2018).

The process of analysis started with a repetitive examination of all the records and descriptions of interviews. At this stage, I listened to the audio recordings of each

interview so I could recall expressiveness and emotions participants had during their responses. I also used colored highlighters to relate different themes while coding them manually. I did a double and mixed examination of themes and participants' lived experiences.

The thematic analysis produced the conclusion that *how* participants felt were *what* they experienced. It is impossible to remove personal point of view during the thematic analysis process; however, it is important to reduce personal bias (Yin, 2017). I recognized my own opinions and biases regarding the topics of crime, police work, serial murders, and other tenets of crime investigation. I was aware of these biases and preconceptions and strived to not allow them to affect how I obtained (conducted the interviews), recorded (transcribed), and represented (analyzed) the data. I took proper steps in ensuring the recorded data were objective, meaning that the findings remain the result of the experiences and ideas of the informants, rather than of my characteristics and preferences (Creswell & Creswell, 2018).

Discrepant Cases

During the analysis of the responses from the 10 participants, no discrepancy was found. I did not encounter any indication of disapproval or denial. The responses of the participants met my expectations.

Evidence of Trustworthiness

Credibility

To strengthen the reliability, all participants were asked the same questions; however, due to the nature of the study, the questions were not asked in the same sequence. Follow-up questions were added based on participant responses, and questions were explained in an unbiased manner whenever required. The names of participants were kept anonymous, and questions related to demographics were not asked because this information was not relevant to the analysis.

Further, I audio-recorded the interviews, which gave me a more accurate understanding of participants' experiences. I also repeated participants' responses to get confirmation; I cross-questioned participants wherever further explanation was required. To foolproof my record, I asked participants to explain certain terms used in their narratives (Yin, 2017).

Transferability, or External Validity

Transferability is the extent to which the findings of the study may be applicable to other populations or settings; this is also known as generalizability (Creswell, 2018). Generalizability is limited when a population or setting has unique characteristics. I chose NYC as the single source of information because it has a particular history of high-profile serial murders. Thus, the results of this study may have limited generalizability to other locations and populations such as a smaller city or town. However, the data from the high-profile, heavily populated setting of NYC was rich. Additionally, police

departments in a setting such as NYC deal with many of the same problems as other large urban locations, so the factors and themes uncovered in the course of data collection and analysis may be common to similar locations.

Dependability

Dependability is the extent to which the chosen methodology is appropriate to address the study problem and fulfill the study purpose. Dependability is a matter of whether future researchers can replicate the research (Yin, 2017). My methodology and procedures were clear during the study. I chose a single location for the research. Other researchers may replicate this study in other locations to further add to the body of knowledge. The best way to ensure replication can happen is to describe the study in sufficient detail and with sufficient accuracy that another researcher can replicate it simply by reading the manuscript associated with the study (Creswell & Creswell, 2018). I followed accepted procedures for presenting the study's methodology, findings, results, and conclusions.

Confirmability

Confirmability refers to the extent to which the data are free of researcher bias and represented faithfully and accurately. This is an inherent issue in the qualitative interview thematic coding process because identification and classification of themes will be different than other researchers using the same data. Additionally, it was important to reduce personal bias by recognizing that I have my own opinions and biases regarding the topics of crime, police work, and serial murders. Being aware of these biases helped me

to not allow them to affect how I collected and analyzed the data. I also took steps to help ensure that the recorded data were objective, meaning that the findings remain the result of the experiences and ideas of the informants rather than of my characteristics and preferences. The most important element of adjusting for bias is to be aware that it exists and be ready to minimize it (Yin, 2017).

Research Results

The semistructured interview guide with eight questions was created so the research questions could be answered in a genuine and unbiased manner. Eight themes emerged from the responses to answer Research Question 1: (a) similar or unusual MO, (b) motive and relation, (c) time period, (d) physical evidence, (e) intuition, (f) investigative techniques, (g) technological advancements, and (h) collaboration and commitment. Each theme is presented in Figure 1 and described in the following discussion. Further sections address themes related to the other research questions.

01	Similar and Unusual MO	<ul style="list-style-type: none"> • Similar methods, weapons, pattern, type of victim
02	Motive and Relation	<ul style="list-style-type: none"> • Unrelated victims and incidents • Relation of suspect and victim
03	Time period	<ul style="list-style-type: none"> • Cooling Off period • Time lapse in investigation • Time for "cold case"
04	Physical Evidences	<ul style="list-style-type: none"> • New and Old way of collecting evidences
05	Intuition	<ul style="list-style-type: none"> • Gut feel and Realization
06	Investigative Techniques	<ul style="list-style-type: none"> • Interviewing and Listening skills • Connecting the crimes and evidences • Victimology • Minimize witness intimidation
07	Technological Advancement	<ul style="list-style-type: none"> • Databases/Software • Technical evolution
08	Collaboration and Communication	<ul style="list-style-type: none"> • Previous detective squads • Other agencies • Interviewing witnesses and people

Figure 1. Themes for Question 1.

Research Question 1: What Strategies Do Police Investigators Use to Classify Unsolved Homicides as Committed or Not Committed by Serial Murderers?

Although most participants stated that their assigned homicide case or cases were never left unsolved, eventually some cases “go cold.” This concept was described by three participants. P1 stated,

The unsolved homicide, as it moves forward, we’re constantly working on it. It’s a case that us as a homicide detective will have until we either solve it or another unit takes it, like a cold case unit or a federal task force unit. And, you work side by side with the precinct detective.

P5 also said, “We classified them as open cases, open cases, that still was going to be worked on—a new set of eyes, as we say—by the cold case squad.” Finally, P10 expressed,

I don’t really personally believe that there are any homicides that are unsolvable. I think that it just takes time, effort, and maybe a little bit of luck. But every homicide is solvable in one way or another. I think that it’s important to be relentless and to never stop your efforts. You have to employ every means necessary and if they don’t bear fruit, then you start all over again, or you think of a new way.

Theme 1: Similar or unusual modus operandi. All participants acknowledged that serial homicide offenders have similar MO. They follow similar patterns, weapons used, methods, or types of victims for their crimes. P4 stated, “I assume to figure that

would be the MO. If it's similar MO. And, maybe even you know, obviously, not just the MO, the weapon, the victim, the locations, you know." This description was consistent with the reports from various researchers that MO is the manner in which crime is committed (Hickey, 2013). However, characteristics of the MO include different facets such as time and place, victims, method of controlling or killing the victim, dumping locations, and weapons or tools used to commit the crime (Drawbridge, 2016).

Participants also reported that although some serial homicide offenders may have unusual MO, an unusual MO is not always an indication of a serial killing. As stated by P10, "It's not the unusual nature of the murder; it's the indication that there are additional victims on separate occasions."

Theme 2: Motive and relation. In order to classify if the murder was committed by a serial homicide offender or not, participants acknowledged they check the motives of the murder. In most cases, the initial thought is that finding the motive behind the homicide helps officers distinguish if the work is of a serial killer. Gurian (2017) mentioned that serial killers are hard to identify as the motives are not explicit. Two participants confirmed this notion. P2 said, "I would say what would lead me to an initial thought without diving into the case would be the method of operation. That's it, you know, and the reason why it occurred." P9 also stated, "the strategies and procedures would be, what's the motive? Who would have a, if there was a personal problem between the victim and another?"

Moreover, the relationship between the suspect and the victim is another way of finding the offender (James & Proulx, 2016). In most cases, if there is a relationship between the suspect and the victim, the homicide is not a serial killing. P8 described, if there's a case where there is a homicide as a result of domestic violence where both parties are known to each other and there's a history of, you know, domestic violence, or if there's a dispute between two people, and it's as a result of that, I think you could kind identify right away what the relationship or what the reason was.

On contrast, P9 stated a case in which the serial killer had killed his grandmother, and later it was identified that he had also killed one prostitute, with similar MO.

Participants stated if they notice unrelated incidents and unrelated victims the probability of it being a serial killing is high. P4 shared, we've also had cases in the past where the person was a suspect in two separate cases relatively close, closer together in time. But, two unrelated victims and unrelated incidents.”

Theme 3: Time period. Participants shared that serial killers have a cooling-off period. James and Proulx (2016) described cooling-off periods as the period in which the offender returns to his usual way of living between commission of homicides. P10 stated, He [serial killer] has to have done it several times with a cooling-off period in between. In my description, at least three times, with a cooling-off period in between.” Moreover, Hodgkinson et al. (2017) and Hickey and Harris (2013) acknowledged the cooling-off period is a significant factor in categorizing serial homicide.

Another aspect noted is time-lapse in the investigation. The amount of time to solve a homicide can vary between days and decades. While sometimes this lapse of time works in favor of the investigation, in certain cases it may work against the detectives. With time, people or witnesses overcome their fear, evolve as a person, or are away from the proximity of the offender and tend to open up and give real and genuine information to the police (Chan et al., 2015). P8 described the scenario this way:

[We say,] “We see that you were interviewed 20 years ago, and we’d just like to, you know, get a fresh start on it. We’re re-interviewing all the original witnesses.” And, believe it or not, a lot of people, when their, when their life situation has changed, or when they’re a little older, a little more mature, or when they’re not living in close proximity to the perpetrator, will be a little bit more forthcoming in regards to providing information in regards to what they actually did see or hear or know about the case.

The participants also reported that cold cases that are started afresh and investigated from a fresh perspective have a higher likeliness of being committed by a serial killer. This is because serial killing patterns are one of the important factors for the clearance of cold cases (Siegel, 2016). Due to the time gap, there is a possibility that offenders may have conducted a series of other crimes or murders in that period, which helps in the investigation (Boschken, 2014).

When asked how a case is classified as a cold case, participants had different responses. While one of the participants stated there is no such time period (P4), another

participant stated they classify the case as a cold case after three years (P3), and another one reported the timeframe to be six months (P7).

Theme 4: Physical evidence. The significance of physical evidences in solving any case is unquestionable. Participants acknowledged that evidences like DNA, ballistics, fingerprints, videos, cell sites, license plates, and EZ Pass are ways that help investigators to classify if the murder is conducted by a serial killer. These are considered as new-age tools for collecting evidences. Old ways to collect evidence include forensics and interviews. As quoted by P10:

You have to be able to employ the old methods of investigation as well as the new methods. By that I mean, the present-day investigative tools that a lot of detectives' use are cell sites from cell phones, and video surveillance because there's a video all over the place. EZ Pass or all sorts of things like that.

When asked to share more about the old ways of collecting evidences P10 stated, "You're doing investigations. You're doing forensics. You're doing interviews."

In the case where there is a lack of physical evidence and the MO is similar, there are times police fail to classify the murder as a serial homicide:

Same MO in that. So, so, we weren't able to get him to admit to the homicide. We needed him to give a confession because there was no video at the time; no stuff.

We know it's him; unfortunately, we couldn't get him to give the confession on it.

(P3)

Theme 5: Intuition. It was noted that investigators also rely on their intuition, gut feelings, and instant realization to classify if the murder is by a serial killer. P2 shared, you kind of realize right out of the gut that this not something, you know, this is not a serial killer incident.

According to Willmott et al. (2018), these intuitive skills develop over a period of time as knowledge is gained and, hence, are said to come with experience. The detectives should rely on their gut feelings as much as they rely on technology and modern tools for evidence collection; doing so will help them solve the crimes. Moreover, Siegel (2016) revealed that investigators' and detectives' intuitive ability let them do elaborated reasoning for homicide based on the crime scene information like gender, location, and MO. However, an investigator needs to be self-aware of the bias that can get associated with the gut feelings and hence, they should make sure they have strong evidence to support their intuitions.

Theme 6: Investigative techniques. The investigative techniques used by the detective squad play a critical role in classifying a homicide as the work of a serial murderer. The investigator needs to know as much as possible about the victim and, in the case of homicide, it is possible only with the help of the people to which the victim was related, be it family, spouse, friends, relatives, or colleagues. P3 acknowledged the importance of victimology for the inferences as noted by Bonnan-White (2017):

We'll look at you know, who was connected to this person? What was this person about? You know. The victim—we want the victim to almost talk to us. You

know, like, what was this victim's life? What's this person do? We triage the case, we go through the family, the victimology. You know, we go through the victimology, we go through what the detectives have in the case prior; we'll review their cases.

Apart from this, investigators have their confidential informants who help them in getting out the information that people are directly afraid of accepting or giving a statement in front of the cops. P1 shared, "we have confidential informants out there. We have people that hear things. Sometimes, these perpetrators make direct statements. These people get arrested." The people are hesitant, fearful and nervous to speak to the police because of various reasons. Some of the informants are offenders from the same neighborhood, had a bad experience with police officers, are fearful of getting disclosed or being labeled a snitcher, have pressure from family, or are not willing to get into the mess (Bonnan-White, 2017). As stated by P1:

I think just people grow up in this neighborhood, very often are witnesses to the murder, know the victim and the perpetrator, 'cause they're from the same area. They don't want to be labeled as snitching. Eventually, they have to return to that area if they do cooperate with us. So, there's a fear instilled in cooperating with the police and testifying.

Hence, the responsibility of the investigator or detective squad in such a scenario increase. It is the detective's job to ease the people down, make them comfortable, and convince them to talk. As stated by P10:

You have to, one of the most important things that you need to do as a detective is to be able to talk to people. You have to be able to talk to people who are resistant to talk to you, whether they are afraid, or they don't like the police, or they don't want to be involved. There're numerous reasons for people not to want to cooperate with you. They may feel that they'll be put in danger. You have to relieve their fears. You have to convince them that what they're doing is important, and what they're doing is right, or that they have no choice to cooperate. We're going to find out anyway. But, it's extremely important to be able to talk to people.

P6 acknowledged another technique is revisiting the suspect so the suspect confesses the crime in rage and anger. P6 shared,

And now, he gets agitated and says, "I tried to help you guys 40, 30 years ago;" you know. "There was no deal made for me; I'm stuck here. You guys gave me a 40 to a life sentence," he goes. "And now, you're asking me for help?" And, we were like, "Yeah. We are." And he goes, "Well, I'm not helping you." He gets up, slams his fist on the table and goes, "And, I'm not telling you who hired me to kill that cop!" And he walks out. And me and the other two detectives that were there, we look at each other, like, "He just admitted it. He just admitted it."

Thus, it was noted that serial homicide offenders tend to admit their crimes when they are revisited or are agitated.

Theme 7: Technological advancement. Technology helps in both fighting against the crime and collecting physical evidences of the crime. Leveraging the evolved technology, it is easier for the police department to collaborate, communicate, and connect with different agencies, departments, and witnesses (Bennell et al., 2012). The responses of different participants demonstrated many instances where detectives acknowledged the importance of advanced technology to classify the homicide as committed by a serial killer. The police department has a centralized database for DNA, fingerprints, and other evidence that helps detectives find the “hit” or “match.” The participants’ responses that reflect the use and acknowledgment of technology in the investigation. P1 stated,

DNA evidence ends up in databases. Fingerprints evidence ends up in databases. Ballistic evidence ends up in databases. So, crimes can be connected that way and you can get more information or more evidence that way, by connecting crimes. . . it’s [fingerprint] put into a computer and it’s analyzed, and it’s categorized. And so, what it does is that we can connect ballistics from evidence from all over the city to our crime. If it comes up as a match.

P3 added, “You know, computers have made our job great; DNA has made – technology is incredible.” Further, P4 said,

now we have a lot more things, we have a lot more investigative avenues to go down, you know, with DNA, that even 20 years ago, or 10 years ago they didn’t

have. You know, other forensics that we could use – the videos that are out there, you know.

P5 also said,

And there was no real DNA technology back then to assist them further in that stuff . . . see if they can analyze them due to the new technology and see if we can find any, find DNA that is not attributed to the victim. And, if so, we want to see what is that hitting to. . . . And was the DNA left at the scene that was a DNA hit to each other where the same perpetrator cannot be excluded from participation you know, in that crime.

Finally, P9 stated,

If you have his DNA on file or if you get an abandonment sample . . . and you retrieve it. Or the DNA is on file in CODIS [Combined DNA Index System] from a previous conviction. You can get it that way; their fingerprints are on file through previous arrests. . . . Our computer records have increased drastically over the last 10, 15, 20 years.

The participants reported that databases like the Combined DNA Index System help them classify if the DNA of the suspect has a match with some previously committed crimes. This database evolves with time as it is continuously and consistently updated; it is a great help to solve cold cases even after years have passed. In fact, if the cold case is a serial homicide, the more time has passed, the more chances there are of solving the case with the help of DNA databases (Bennell et al., 2012). As P10 stated,

“There’s a lot of new technology, things can be resubmitted, and the technology may advance where a hit was not obtained before, maybe, may hit now, including fingerprints, or DNA technology, or other technologies.”

Theme 8: Collaboration and communication. The participants acknowledged that as the case goes cold there are several squads or specialized units that have already worked on the case. While it is always advisable for the new squad to start afresh, the power of collaborating with different departments and agencies or communicating with the previous detective squads cannot be questioned:

What we like to do is we get the district attorney’s office involved; we get other – the homicide squads – and other NYPD units. We’ll reach out to maybe our federal counterparts; we reach out to other police agencies such as say, Atlanta or Texas where we track the history, where they’ve worked. (P3)

P5 also said,

They’ll [Detective Squad] confer with the supervisors; they’ll confer with the Brooklyn district attorneys, Cold Case, and Forensic Science Bureau, to see if we can obtain - they act as a liaison with the Office of the Chief Medical Examiner - to see if there’s any probative DNA-related evidence such as you know, any clothing from the victim, or fingernail scrapings, etc.

This collaboration and communication across the departments and squads helps investigators find new hints or tips for serial homicides or any other homicide.

Research Question 2: What Do Police Investigators Believe Are the Most Significant Factors That Suggest That an Unsolved Homicide May Be the Work of a Serial Murderer?

To find the answer to this research question the participants were asked what they think are the most significant factors in an unsolved homicide and later, were asked if they believed these factors can indicate if the homicide was committed by a serial killer. After analyzing responses of the participants, it was found they believed the most important factors in the unsolved homicide are lack of witnesses and evidences, scared witnesses, and exhausted leads that leaves the case unsolved. In contrast, skills, creativity, and the investigator's experience with the help of the technology and related agencies ultimately solves the homicide case. The participants believed like any other crime; the factors of unsolved homicide may be the work of a serial killer. Hence, while analyzing if these factors indicate the unsolved homicide is committed by a serial killer, the following two themes displayed in Figure 2 emerged and are discussed in the following paragraphs.



Figure 2. Themes for Question 2.

Theme 1: Effective investigation. As per the responses from the participants, when the case is labeled as a cold case, it is recommended the case should be started from scratch. It should be viewed as if from fresh eyes. Detectives should review the crime scene pictures, evaluate the evidence, re-interview the witnesses, see if the evolved technology and databases can be of new help, and re-visit old places (Cameron, 2014).

As P10 expressed,

And, whether that homicide is three weeks old or 30 years old, what you do is you start from ground zero as if that body just dropped. And, everything that's done, do it again. Start from scratch. Start all the way from ground zero, and look at the forensics again, look at the witnesses again, look at all the statements, try to find new witnesses, try to find new forensic evidence. Re-examine the forensic evidence. Re-interview everybody, re-interview all the witnesses completely. Attempt to find new witnesses to interview, which is entirely possible.

The creative and out-of-the-box thinking of the detectives along with their experience, skills, and techniques are the most important aspects that suggest if the homicide is committed by a serial killer. P10 also added,

So, you have to do every investigative step over again, and you've gotta figure out how to employ new methods in addition to that. Start all the way from scratch and see it through. If you can't do it one way, you can do it another way. Be relentless; don't stop. Think outside the box.

For instance, if the suspect has any previous criminal record and has spent time in jail, speaking to the subject's cellmates may provide new information as there is a possibility the subject confessed their crime to their cellmate or shared the details of the crime with them. P2 shared,

If you don't have physical evidence, it's mostly interviews of witnesses and you know, relatives, and possibly if, you know, your suspect did jail time, possibly you speak to his cellmate, maybe he had made an admission to him at some point.

Moreover, the interviewing, listening skills and most importantly the human aspect of the squad, play a critical role in the findings. P3 said,

and again, science would also help that a little with the DNA and the type of MO and stuff, would lead to the serial killer MO. But I think the interview skills and detective skills—I still think you need that human aspect.

Some people or witnesses may resist speaking to the investigators for several reasons discussed earlier in the chapter. An effective investigation can be attained only

when the investigators put witnesses at ease. Moreover, the investigators must gain or establish the faith and trust of the associated people and witnesses. As P8 said, “and most importantly, is establishing a foundation or a trust with the people. You know, a lot of people have a distrust for the police, or maybe they’re intimidated by the police, or afraid of the police.”

The evolving technology also plays a significant role for investigators and an important factor that helps them distinguish if the work is of a serial homicide offender. Apart from DNA, fingerprints, and ballistics that have centralized databases for review, background checks can also be made more effective through computer records. P9 stated, “your crime scene evidence, your biological evidence, your fingerprints can lead you to that. And then, once you identify a suspect, computer checks may lead you to similarities in other cases.” When asked what kind of computer records P9 was referring to he stated,

criminal background checks that are inputted by the local police department. And then, some local police departments deal with other police departments that have joined them, so you might share the same records. And, if you don’t you make connections in your time as a police officer, you know.

Another important aspect of the effective investigation analyzed from the responses was communication and collaboration with different departments, agencies, and the associated squads. P5 said, “any of this evidence is there through the property clerk; reviewing with the property clerk, speaking with the medical examiner’s office, and if so, we have it re-tested.” P10 also stated,

I think that one of the biggest factors that would assist in identifying and prosecuting serial killers is mutual cooperation. Cooperation between agencies and between precincts and between boroughs. I think that the most difficult area in solving these cases is that these offenders are mobile, and they're often living in different boroughs, and indeed, different states.

Lastly, as the investigation progresses, the full length and depth of the work may reveal many aspects uncovered that lead to a different crime conducted in the same manner or same MO and thereby directs investigators toward the serial killer. P10 shared, if you broaden your spectrum of looking at the individual that you believe is responsible, you're looking at his past crimes and the crimes that he committed after that case. And, in that way, you may find additional victims that were killed in a similar manner. And, that's when it turns into a serial killer case. So, I think that your broad-spectrum investigation, the more you investigate each one of your cases, will increase the likelihood of finding additional murders committed by the same actor.

This in-depth investigation covering the aspects in full length can help in identifying the serial homicide offender.

Theme 2: Reputation of the suspect. After analyzing the responses of the participants, it was noticed the image or reputation of the suspect or offender in the eyes of the people or witnesses who know them is a critical factor that helps an investigator to

see if it is a work of serial homicide. Because of the perceived image of the offender, most witnesses back out or afraid of opening up. P1 stated,

If someone is on the street and he's a violent guy and his reputation within that say, neighborhood or project or area, "Yo, that's the guy that killed Jimmy two years ago. Now he just killed" they're not going to testify 'cause they know he's violent. And they know he's from there. So, having people to come forward to testify against these people on the street that are committing violent acts over a long period of time is very hard.

Background check, records checking, and interviewing, especially from the family members of the offender can lead to understanding the overall personality of the offender and thus, are some key drivers that indicate if the homicide is the work of a serial homicide offender.

Research Question 3: In the Opinion of Police Investigators, Are Existing Protocols for Identifying Unsolved Murders as the Work of Serial Murderers Adequate, and If Not, Why Not?

Almost all the participants stated that either there is no procedure or protocol of identifying unsolved murders as the work of serial murderers or they are not aware if any such procedure exists. P1 said,

If there is something out there, I don't know about it. If there is a unit or a people or you know, a database out there that's putting it together where people could be prosecuted for that, I don't know about it. I haven't heard about it.

P2 also shared, “I don’t know if there’s a specific procedure but one of the things that the police department has really identified and grasped is, you know, they’re very, very good at comparing physical evidence to numerous cases.” P4 added,

I don’t think we classify that now; I don’t think. We will identify – the units will, the precinct squads will, the homicide units will definitely know that it’s done by the same person. Whether it’s technically classified as that, no. There’s not a procedure that says, “Ok, we’re going to classify this as serial murder.”

Further, P7 said,

Nothing. There’s no set procedure like a template. Check these boxes and you’ll have identified a serial killer. It’s be as thorough as you can and conduct your investigation like you would any homicide. And, be aware of factors that will lend itself to “this might be a serial killer.”

Finally, P8 said, “At this time, not that I’m aware of, no.”

The participants acknowledged they get training and assistance from their supervisors but there is no procedure, guideline, or protocol they currently follow to conclude homicide investigations. P3 expressed,

Well, there’s the investigative guide, which, like I said, the detectives have you know, how you investigate crimes and what’s the best way of doing it. And it stops at the squad unit when we go to the homicide scene and it’s [indiscernible] zone. I mean, Chief [redacted name] is our chief, and he gives strict guidelines, so we have supervision.

Almost all the participants acknowledged that some measures can be taken to improve the working of the department in classifying unsolved homicide as the work of serial killer. P1 said, “I think, I think it would be very productive for the city to come up with something where we could classify them as serial murders to make the prosecution a little more aggressive.”

Figure 3 displays the three themes that emerged from the analysis of participants’ responses to this research question. Each theme is discussed in the paragraphs that follow.



Figure 3. Themes for Question 3.

Theme 1: Legal boundation. Some of the participants stated there are certain legal restrictions that hamper the classification of unsolved homicide as a work of serial homicide offender. Barriers can include dealing with the abandoned samples, compliance

of federal law at the state level, putting all crimes under one umbrella for effective justice, and dependence on other departments for certain data or profiling. P1 said,

If two or more murders, which is everywhere else, and federally, I believe there is a federal law out there, but we don't charge on the state level. So, I think if the state starts using that law as a prosecutable tool, I think we can get more people off the street. Like, rather take the two murders, or the three murders, or the four murders, and prosecute them all together and put them under one umbrella of serial murder. . . . Bring in everything you have under the umbrella of being a serial murder and prosecute him as a serial murderer, would make the case more effective.

P6 also said,

There's a lot of legal, a lot of red tape with this, especially with the DNA. You know, some states are not allowing you to do Paraben testing. . . . You cannot take [abandonment sample], that's what I learned; I've never done it, obviously, but you cannot go onto somebody's property and take that, take that sample. That is an invasion; it's not going to fly in court.

Further, P9 stated,

FBI has profilers. We do not, although we have a lot of information. There isn't a database for profiling, in particular, particular types of cases. We still refer to an outside agency like the FBI, Quantico, and we ask them to review everything we have.

Theme 2: Technology with human aspect. The participants acknowledged that technology helps investigators solve fresh and cold homicides cases and the effective use of databases is crucial. While a plethora of information can be fetched from the databases, wisdom to use that information is the critical factor that drives the success of the classification of homicide as work of serial homicide offender. The experiences and skills of the investigator can help the investigator effectively use the available information or else the investigator can get lost in the ocean of information. As stated by P10:

I think that localizing ViCAP has potential. I'm a big believer in any tool that you can bring to the table. But it has to be used properly. . . . If you bury a guy in information and tie him up with piles and piles of information, piles, and piles of questionnaires, you stand in danger of adding more work to the guy in the end, taking his time, his valuable time away from the investigation.

Theme 3: Procedures—no; experience—yes. The participants acknowledged that while there is an immense scope of enhancing the current system in terms of working for classifying unsolved homicide as work of serial homicide offenders, the use of procedures, checklists, and guidelines will restrict the scope of work and creative analytical thinking of the investigator. P2 said,

I think when you put a specific procedure, "I want you to investigate this specific case in this manner," good detectives, good supervision, they think out of the box.

They use experience. They use past, you know, experiences on cases. That's how the job gets done. It doesn't get done by, you know, a one-sentence blurb.

P10 also said,

If you bury guys in checklists and forms and stuff, you stand in danger of tying a guy's hands rather than assisting in an investigation.....it's extremely dependent on the personnel, and the experience of the personnel, the attitude of the personnel.

Instead of the procedures, some practical solutions should be provided to investigators that can help them conduct the process more effectively. As a result of the analysis of the responses of the participants, I look forward to proposing some of those recommendations in Chapter 5.

Researcher's Observation from Field Notes

I made sure not to indulge the majority of my time taking field notes, as I wanted to observe participants' body language. I wanted to communicate that I was attentive to whatever they said, and I wanted to maintain eye contact while the participants spoke. I also took a note of certain nonverbal cues and voice tone for further reflection. All the participants were polite and helpful. They were willing to explain terminologies for the purpose of the record. For instance, P5 explained DD5 while P6 defined abandonment sample. Some of the participants had a good sense of humor while all participants were considerate and professional. They were empathetic while describing the cases. One participant was extremely compassionate and looked as if he went back in time while

elaborating on the case. When he asked if he was rambling I made sure to ease him by telling him he was doing a great job for me by elaborating on the things he felt were important to share. Most of the participants engaged in greeting me at the beginning of the interview and thanking me for visiting with them at end of the interview. All the investigators were proud of their work, while some showed dejection while talking about helplessness in convicting the offender due to lack of evidence or proof.

Summary

In Chapter 4, I endeavored to find the results of all the research questions. The themes are bifurcated question-wise. For the first research question eight themes emerged which revealed that (a) similar and unusual MO, (b) motive and relation, (c) time period, (d) physical evidences, (e) intuition, (f) investigative techniques, (g) technological advancement, and (h) collaboration and communication are the strategies used by police investigators to classify unsolved homicides as committed or not committed by serial murderers.

For the second research question, 2 themes: (a) effective investigation and (b) reputation of the suspect/offender emerged. Findings revealed that to solve a cold case, the investigator must start the investigation from scratch, the effectiveness of which depends upon several factors like length and depth of the investigation, the evolution of technology, collaboration with different departments, skills, and experience of the squad. The reputation of the offender plays a critical role in determining if the murder is committed by a serial killer.

Lastly, for the third research question, three themes:(a) legal boundation, (b) technology with a human aspect, and (c) procedure-no; experience- yes, emerged. The results revealed there is no current procedure or protocol to identify unsolved homicides as the work of serial killer but with the help of laws, technology, experience, and skills of the squad, the process can be streamlined and directed towards quick closure.

Chapter 5 will provide the findings, limitations, and social implications of the study after articulating the purpose and objectives of the study. Additionally, I will offer recommendations for future research on the associated topic and thereafter, conclude my research work.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

Though the significance of serial homicide has existed for more than 150 years, interest elevated from the early 1980s and into the 1990s. However, studies related to serial killers are documented from the perspective of the offender, not from the perspective of investigators (Greenall & Richardson, 2015). Additionally, there is no agreed-upon protocol for linking together unsolved murders to identify them as the work of serial murderers despite programs like the FBI's ViCAP, and assumptions that the data in these systems are accurate and reliably coded has not been tested empirically (Bennell et al., 2012). This study was conducted to analyze what strategies are used by NYC police detectives to determine whether to classify unsolved homicides as the work of a serial homicide offender. Moreover, this study also highlighted significant factors that help investigators identify unsolved homicide as the work of a serial killer. I also examined whether there are any current procedures for this classification and whether the investigators are satisfied with these procedures and why. The results may provide learning various strategies used by these police detectives to classify unsolved homicides as the work of serial murderers or as non-serial homicides.

Interpretation of Findings

In this study, 10 investigators shared the details of serial homicides they have investigated in the past. Participants shared strategies and methods they use to classify unsolved or cold homicide cases as the work of serial murderers or as non-serial

homicides. The findings of this study revealed some important aspects of serial homicide investigation. Most participants mentioned there is no such thing as “unsolved” homicides; homicides are either solved or cold case squads have yet to solve them. This shows the sincerity, commitment, and dedication of the participants. All participants stated there are no prescribed or specific guidelines, procedures, or protocols for the investigators that can help them identify the work of serial murderers. P1 stated, “We very rarely classify any of our murders as, or perpetrators as serial murderers.”

The participants followed their routine procedures to solve the case through their gut feelings, experience, and assistance from their supervisors. Although technology plays a role in the criminal investigation, the procedure for solving any cold case related to homicide is the same regardless of the type of murder. However, anything that can help investigators classify the work of serial homicide at an initial stage will help them investigate the case. Another important finding that challenged the stereotype is that serial homicide offenders may have unusual MO, but not all unusual MOs are conducted by serial killers (Hodgkinson et al., 2017). As quoted by P10, “It’s not the unusual nature of the murder; it’s the indication that there are additional victims on separate occasions.”

Findings Related to Research Questions

The findings provided answers to the three research questions of the study. Figures 4-5 show the answers to Research Questions 1-3, respectively.

Research Question 1: What strategies do police investigators use to classify unsolved homicides as committed or not committed by serial murderers?

Research Question 2: What do police investigators believe are the most significant factors that suggest that an unsolved homicide may be the work of a serial murderer?

Research Question 3: In the opinion of police investigators, are existing protocols for identifying unsolved murders as the work of serial murderers adequate, and if not, why not?

In order to classify if the homicide is committed by a serial killer, investigators tend to use certain strategies during a homicide investigation. The first step is comparing the MO to other cases and looking to see if there is any indication this is an unusual MO (see Figure 4). This process is essential because serial homicide offenders tend to operate with similar MOs. They either have a similar method, similar weapons and tools, similar types of victims, or similar types of locations (Jefferson, 2013). P2 said, “And, I believe it was two; could have been two in Atlanta and three. And, they found two. And, it seems like he’s going to be connected to that as well. Same MO in that.” P4 also said, “I mean, the best way, I assume to figure that would be the MO. If it’s similar MO. And, maybe even you know, obviously, not just the MO, the weapon, the victim, the locations, you know.” Further, P6 said, “Yeah, it was always a gun. Always gun. It wasn’t any knives. It was always shootings. You know, as to who he worked.” Thus, the comparison and review of MOs helps investigators identify if the case is the work of a serial killer at the initial stage of the investigation. Moreover, although it is not always the case, sometimes serial murderers may have an unusual MO.



Figure 4. Research Question 1 findings.

Second, finding the motive behind the murder and the relationship between the suspect or offender and the victim is significant. This helps investigators classify whether the work is of a serial killer. Usually, a serial killer has no or distinct relation with the victim; furthermore, in the case of serial killing, the motive is either unknown or difficult to identify. For every case in which motive is difficult to identify, investigators cannot classify the homicide as the work of serial killer. There is no timeline or checklist to identify the same (James & Proulx, 2016). However, if a similar MO is found, investigators review the cooling-off period and, if a certain period is passed, checking for evidence helps investigators classify homicide cases. This is because if new homicides are committed in the lapse of time, then the case under investigation can be classified as the work of a serial killer (Hickey & Harris, 2013).

Moreover, finding and comparing physical evidence such as DNA, fingerprints, blood, semen, and saliva with the existing datasets in the database helps investigators

classify homicide cases. Looking for other evidence like cell-phone records, CCTV, and social media also help investigators apprehend the offender. But physical evidence has always been the most important aspect of the investigation, even after the eyewitnesses (Miller, 2014). P6 said, “DNA, fingerprints, hair, fiber, amylase—the spit. Semen, blood. You know, it’s all there. We just have to figure out how to sort it out, then take it to the police lab, and then the police lab will analyze it.” P8 added, “I think physical evidence is a very useful tool.” P9 also said, “It’s a matter of proving the case via video evidence, phone records, easy pass, license plates, readers in the city that place the person in that area, eyewitness accounts.”

Listening to investigator’s inner senses or gut-feelings is also important in a homicide investigation. Intuition comes with experience and most of the time, the first instinct while identifying the crime scene moves the case in the right direction. However, the concern is that investigators should be experienced enough to differentiate between the hunch and the personal biased opinion (Morton, 2014).

Along with their instinct and experience, investigators use their skills and creativity in interviewing the people and witnesses during an investigation. Their effective investigative techniques, especially listening skills, help investigators understand if the work is of a serial killer. With experience and analytical skills, investigators tend to go the individuals who can tell everything about the victim as much as possible. With the help of victimology training and investigation, investigators seek to know about the victim and their daily life by interviewing their family, friends, spouses,

relatives, and colleagues. Minimizing intimidation of the witnesses, setting them at ease, and comforting them or convincing them to open up are some of the skills experienced investigators use to convince witnesses and others to cooperate with the police (Morton, 2014).

Evolving technology also helps investigators keep up with their investigation. The established and continually growing criminal databases, high-quality CCTV footage, and evolved forensics helps investigators direct their investigation on the right path (Parvulescu, Butoi, & Stefan, 2014). As P8 said, “The most significant factors as far as solving an unsolved homicide; I mean, obviously, in this day and age with all the technology we have, forensic science is a wonderful thing. I mean, fingerprints, DNA.”

Lastly, the investigators acknowledged that serial homicide cases are not easily identified and classified; hence, it is essential that investigators should collaborate and communicate with other agencies, departments, and the squads that were previously working on the case. Although the fresh perspective gives drives the investigation, previous findings or records cannot be ignored (Parvulescu et al., 2014). P2 stated, “So, I think you have to put egos aside and you have to speak to other New York City police department personnel; you have to speak to federal agents; you have to speak to small-town police departments.”

The analysis of this study revealed that effective investigation by the investigator and the reputation of the suspect are also important factors that suggest an unsolved homicide may be the work of a serial murderer. When the cold case is investigated in

length and depth, some unknown and hidden aspects may be revealed from a fresh look at the case that further help in the classification of the homicide. As indicated in Figure 5, an effective investigation includes the use of technology and human skills in a blend.



Figure 5. Research Question 2 findings.

While most cases today get solved with the help of technology such as comparing and checking evidences on established databases, reviewing cell-phone records, and CCTV clips, in cases where these evidences are weak, human skills naturally takeover. Hence, interviewing and communicating with individuals and witnesses is an integral part of effective investigation. Making witnesses comfortable and earning the trust of people is another important factor that helps investigators gain insight about a case, especially when the physical evidences are weak. The investigators should take efforts in building relationships and trust with witnesses by being honest, truthful, and convincing (Pemberton, 2016). P8 said,

I think, is re-interviewing witnesses, trying to establish new witnesses, and most importantly, is establishing a foundation or a trust with the people. You know, a

lot of people have a distrust for the police, or maybe they're intimidated by the police, or afraid of the police. . . . Once you establish that trust and they see that you're respectful of them and their needs, that's how it starts...Just by being truthful, by being honest. Don't ever tell somebody something that isn't the truth. Because you'll lose them right away.

Communication and collaboration with associated agencies and departments cannot be overlooked. The social skills of the investigator help the investigator build connections for future investigations as well (Vasile, 2013). P9 said,

And, if you don't you make connections in your time as a police officer, you know. When you go to another police department in another case, "Oh, I made contact with Detective Smith in the Philadelphia Police Department. I want to make sure that Detective Smith remembers me because he's going to be my contact in the future. And, I want him to remember me; I'm more than welcome to help him in the future, and if he has something here, I'm the guy he's gonna call. And, now I've established a rapport with another police department, another agency.

Another important factor is the reputation of the suspect or the offender. The reputation or the perceived image of the offender helps police identify if the offender is a serial murderer. This reputation can be judged by interviewing family members, neighbors, friends, spouses, ex-spouses of the offender, checking criminal records,

running a background check, and checking the computer records for analyzing the criminal history (Angrilli, Sartori, & Donzella, 2013). P9 stated,

And sometimes you have to get through that before the family will commit to you and say, “Look, he was into this. He was into check frauds; he was into drugs. This is who he was dealing with,” and that’s how you start your road. You start with logic; if he was into some bad stuff or bad, sometimes, you know. There’s a saying was, “Where there are drugs, there are guns.” Where’s there’s criminal activity, there’s violence.

All participants involved in this study stated that either there is no protocol or procedure for identifying the unsolved case as work of serial killer or they are not aware if any such procedure exists. However, they firmly believed that resources they get from the police department for solving an unsolved homicide are adequate. As indicated in Figure 6, although no such procedures exist, most participants indicated they do not need such procedures to classify homicides. This is because procedures tend to restrict the creativity of the investigator. Investigators believed instead, guidance from experienced supervisors or investigators are always welcomed because it can often lead to identification and classification of a murder.

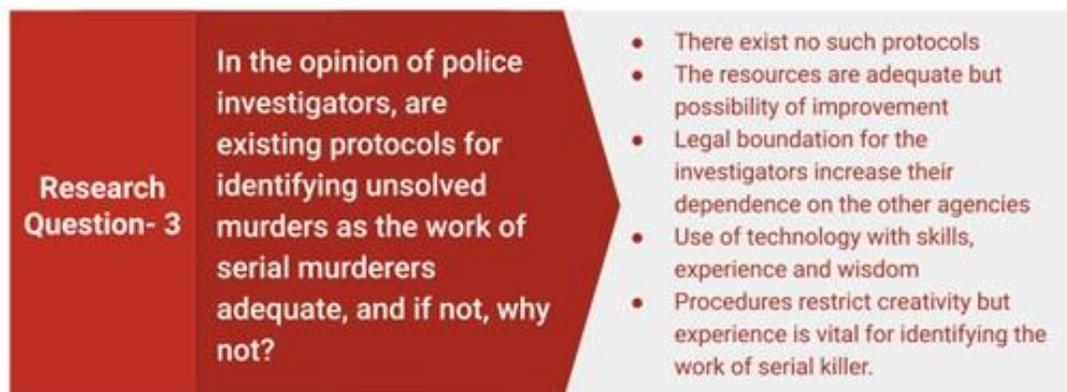


Figure 6. Research Question 3 findings.

The proper use of technology also comes with experience. While databases and ever-evolving technology can open up a plethora of information for the investigator, skill and wisdom to use that information come with experience. If the investigator lacks experience, the possibilities of losing track or going on the wrong path in the investigation are high. Lastly, the legal boundations and restrictions, like the use of abandonment samples as evidences, different federal and state laws, and dependence for access to certain databases (such as ViCAP), make the investigation tiring, frustrating, and time-consuming for investigators because it delays the investigation process. With the lapse of time, witnesses change their mind, may forget important details, or may get threatened (Brents, 2012).

Limitations

Limitations of the study are those factors that are inherent to the nature of the research and/or the methodology chosen. For this study, limitations include my choice to only use qualitative data. There are extensive databases on serial murders, past and

present. Those databases were not used in this study. A further limitation was the timeframe of the study. This study was be a snapshot in time; it was not, for example, a longitudinal study examining how police investigative procedures change over time. A further inherent limitation, the degree of significance of which became apparent as I conducted the study, was the sensitive and even controversial nature of the data, especially if the participants and I discussed open investigations. I did encourage the discussion to go in that direction, though, as I was seeking current rather than historical data on investigators' perceptions and strategies.

It should also be mentioned that a limitation that may be significant is that the participants may be constrained by dictates from their supervisors and/or department policy in terms of what they are allowed to discuss. Furthermore—and this may be quite important—the subjective impressions and opinions I did gather may be contrary to the overall policies of the department. A given police professional may have a personal way of doing things. Therefore, a limitation of the study was the participants might be reluctant to fully disclose the personal methods they employ to investigate and classify homicides.

Recommendations for the Future Research

Most of the studies around the serial homicide offender's topic emphasize biographies, case analysis, or the behavioral analysis of the murderers. Hence, this study is a fresh perspective the topic as the research was conducted from the perspective of the investigators as they stated what strategies and factors they believed are important for

classifying an unsolved homicide as a work of a serial murderer. Given the limitations of this study (i.e. qualitative study, restricted geography, and restricted time), future studies should be focused on using a quantitative approach and using rural areas as the research setting.

Moreover, a study can be conducted using multiple urban areas as well. This will help bring understanding of the working approach of the investigators in full length. A future study should also focus on the perspective of federal agents. This study did not include the demographics and experience of the participants. Therefore, it is recommended that researchers correlate experience, age, and gender with strategies investigators use for classifying an unsolved homicide as the work of serial murderers for future studies. This may give some useful insights into serial homicide investigations.

Implications for the Positive Social Change

This study contributes to positive social change in the following ways. First, the results could improve police procedure in serial homicide investigations. Second, the findings of this study could help researchers learn more about serial murders investigations and how to use various strategies to identify serial homicides. Third, the opportunity to gather subjective data from professionals in the field could provide new insights into the police work connected with unsolved murder cases and identifying serial murders. Lastly, since serial murders are a dominant, disruptive force in society, especially in densely populated urban areas, lessening the danger of serial murders by improving police procedure could improve the quality of life for the general population.

It is also worth noting that when serial murders are in progress (i.e., unsolved), they incite fear, panic, and capture community attention like few other issues and thus merit the effort to apply the maximum amount of human resources to bring them to a swift end.

This research analyzed the responses of 10 NYC investigators who had experience working on serial homicide cases; therefore, findings of this study, along with the results of other studies in this area, can be used as a tool for how to proceed with the classification of cold case homicides as the work of a serial homicide offender. Based on the results and findings of this research, there are currently no specific procedures or guidelines for this classification and formulating a specific protocol, checklist, or procedure may not be the solution. This is because the specific formulated guidelines are most likely to affect the creative and analytical skills of the investigator. Nonetheless, along with proper training and guidance, some effective tools and strategies can also be beneficial to serial homicide investigation. This may include localization of the ViCAP, enforcement of national laws at the state level, reducing the legal boundation of police, investment in technology, and creating a dedicated unit solely to apprehend serial killers.

Localization of ViCAP and a similar database will be a significant step in serial homicide investigation. It will reduce the dependence of local police on the FBI and other related agencies. One of the limitations of this step can be the cost and resources attached to it. Secondly, some of the investigators stated that certain laws are not enforced at the state level, which makes the serial homicide cases weak. For instance, in a possible serial homicide case where multiple homicides are involved, when evidences of one homicide

are strong and other homicides are weak, the offender gets charged with only the homicide that can present strong evidences or witnesses, even if the MO is similar. However, if certain laws are enforced that allow investigators to present all the cases under one umbrella, the offender may be prosecuted for all the crimes, rather than only those with strong evidence. Hence, this will help investigators present strong and effective case. Thirdly, all the participants acknowledged that technology has helped them to solve cases in most instances, so it is recommended that the government take a step forward to enhance these records and databases. Furthermore, it was suggested by investigators that government should collaborate with private companies and work together to enhance the quality of CCTV clips and images.

Summary

Studies of serial killers have been overshadowed by individual attention examining the biographies of offenders and the behavioral causes that lead to their actions. Serial homicide is one of the rarest types of murders that occurs when the offender has committed two or more murders with a “cooling-off” period between each homicide (Hickey & Harris, 2013). However, this limits the scope of the analysis of such crimes, as it ignores many of the characteristics of serial killing. This study provided insight into serial killing from the perspectives of police investigators and explored how investigators classify or identify any homicide as a work of serial killer. While the investigators do not have specific protocol or procedure for this classification at present, the primary investigation by experienced investigators can aid in directing the

investigation on the right path. While serial killing may be rare and account for less than 1% of homicide crimes, the seriousness of the crime is gruesome.

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Appendix: Interview Questions

Research Question 1: What strategies do police investigators use to classify unsolved homicides as committed or not committed by serial murderers?

Q1: Have you worked on an investigation where one perpetrator has committed more than one murder in two separate times? If so, can you share some details?

Q2: What types of strategies or procedures do you use to classify unsolved homicide?

Q3: What types of strategies or procedures do you use to classify unsolved homicides as committed by serial murders?

Q4: What types of strategies or procedures do you use to classify unsolved homicides not committed by serial murders?

Research Question 2: What do police investigators believe are the most significant factors that suggest that an unsolved homicide may be the work of a serial murderer?

Q5: What do you believe are the most significant factors in an unsolved homicide?

Q6: Do you believe those factors suggest that an unsolved homicide may be the work of a serial homicide? Explain, please.

Research Question 3: In the opinion of police investigators, are existing protocols for identifying unsolved murders as the work of serial murderers adequate, and if not, why not?

Q7: In your opinion, do you believe current procedures are relevant in identifying unsolved murders as the work of serial murderers?

Q7: If not, then please explain why not?

Q8: What do you suggest would be appropriate in identifying unsolved murders as the work of serial murderers?