Testing the Organized/Disorganized Model of Sexual Homicide

by

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Abstract

The FBI's organized/disorganized typology has been used extensively as a tool to classify sexual homicide and develop offender profiles. The classification approach, while ground-breaking and valuable to the field of criminal profiling, has not gone without criticism. It has been critiqued for its lack of empirical evidence, yet few studies have attempted to test its validity. This study examined the organized/disorganized model to determine if support exists for two discrete offender types among a sample of 350 Canadian cases of sexual homicide. Variables related to crime scene characteristics and the offender's modus operandi were tested using K-means and latent class analyses. Results from both methods suggest that sexual murderers can be separated into two distinct profiles that share similarities with the organized/disorganized dichotomy in terms of the detection avoidance strategies, control and type of violence used by the offender. The latent class results show further support for the FBI model in relation to the offender's approach, sexual acts, and post-mortem activities.

Keywords: Sexual homicide; criminal profiling; typology; offense characteristics, latent class analysis, K-means clustering

Table of Contents

Approval ii
Abstract iii
Table of Contents iv
List of Tables vi
List of Figures viii

Chapter 1. Introduction 1

Chapter 2. Literature Review 5
2.1. The Development of the Organized/Disorganized Model 5
2.1.1. The Organized Offender 8
2.1.2. The Disorganized Offender 9
2.1.3. The Addition of the Mixed and Sadistic Offenders 10
2.2. Criticisms of the Organized/Disorganized Typology 11
2.3. Classification Systems with Themes of Organization/ Disorganizaton 13
2.4. Empirical Support for the FBI's Model 20
2.5. Aim of Study 23

Chapter 3. Methods 24
3.1. Sample and Procedure 24
3.2. Measures 25
3.2.1. Victimology Variables 25
3.2.2. Detection Avoidance Variables 25
3.2.3. Control Variables 26
3.2.4. Offender Approach Variables 26
3.2.5. Sexual Acts Variables 26
3.2.6. Type of Violence Variables 26
3.2.7. Post-mortem Activities Variables 27
3.3. Statistical Analyses 28

Chapter 4. Results 32
4.1. K-Means Results 32
4.1.1. K-Means Cluster Analyses - Victimology 32
4.1.2. K-Means Cluster Analyses – Detection Avoidance 33
4.1.3. K-Means Cluster Analyses – Control 34
4.1.4. K-Means Cluster Analyses – Offender Approach 34
4.1.5. K-Means Cluster Analyses – Sexual Acts 35
4.1.6. K-Means Cluster Analyses – Type of Violence 36
4.1.7. K-Means Cluster Analyses – Post-Mortem Activities 37
4.1.8. K-Means Cluster Analyses – Final Two-Cluster Solution 38
4.2. Latent Class Results 40

4.2.1. Latent Class Model – Victimology 40
4.2.2. Latent Class Model – Detection Avoidance 41
4.2.3. Latent Class Model – Control 42
4.2.4. Latent Class Model – Offender Approach 43
4.2.5. Latent Class Model – Sexual Acts 44
4.2.6. Latent Class Model – Type of Violence 45
4.2.7. Latent Class Model – Post-Mortem Activities 46
4.2.8. Latent Class Model – Final Cluster Solutions 47
4.3. Supplementary Analyses 50

Chapter 5. Discussion 53
5.1. K-Means Findings: *Cautious* and *Careless* 53
5.2. Latent Class Findings: *Controlled* and *Impetuous* 62
5.3. Supplementary Analyses Findings 68

Chapter 6. Conclusion 70
6.1. Practical Implications 70
6.2. Limitations 72
6.3. Future Research 73

References 75

List of Tables

Table 2-1. Profile Characteristics of Organized and Disorganized Murderers 8

Table 2-2. Crime Scene Differences Between Organized and Disorganized Murderers 9

Table 3-1. Descriptive Statistics of Variables used in K-means Cluster and Latent Class Analyses 28

Table 4-1. K-Means Two Cluster Solution Using Variables Related to Victimology 33

Table 4-2. K-Means Two Cluster Solution Using Variables Related to Detection Avoidance 33

Table 4-3. K-Means Two Cluster Solution Using Variables Related to Control 34

Table 4-4. K-Means Two Cluster Solution Using Variables Related to Offender Approach 35

Table 4-5. K-Means Two Cluster Solution Using Variables Related to Sexual Acts 36

Table 4-6. K-Means Two Cluster Solution Using Variables Related to Type of Violence 37

Table 4-7. K-Means Two Cluster Solution Using Variables Related to Post-Mortem Activities 38

Table 4-8. K-Means Two-Cluster Model Using K-Means Cluster Solutions as Input Variables (*N* = 348) 40

Table 4-9. Latent Class Two-Cluster Model Using Variables Related to Victimology 41

Table 4-10. Latent Class Two-Cluster Model Using Variables Related to Detection Avoidance 42

Table 4-11. Latent Class Two-Cluster Model Using Variables Related to Control 43

Table 4-12. Latent Class Two Cluster Model Using Variables Related to Offender Approach 43

Table 4-13. Latent Class Two-Cluster Model Using Variables Related to Sexual Acts 45

Table 4-14. Latent Class Two-Cluster Model Using Variables Related to Type of Violence 46

Table 4-15. Latent Class Two-Cluster Model Using Variables Related to Post-Mortem Activities 47

Table 4-16. Fit Indices of Baseline Latent Class Models 48

Table 4-17. Latent Class Two-Cluster Solution Using Latent Class Solutions as Input Variables (*N* = 348)..... 50
Table 4-18. Chi-Square Analyses Examining External Crime Scene Characteristics in Relationship to K-Means Solution..... 51
Table 4-19. Chi-Square Analyses Examining External Crime Scene Characteristics in Relationship to Latent Class Solution..... 52

List of Figures

Figure 5-1. Results of K-Means Cluster Analysis for *Cautious* Cluster (*N*=137). 55

Figure 5-2. Results of K-means Cluster Analysis for *Careless* Cluster (N=211). 57

Figure 5-3. Results for Latent Class Analyses for *Controlled* Class (*N* = 243). 63

Figure 5-4. Results of Latent Class Analyses for *Impetuous* Class (*N* = 105). 65

Chapter 1.

Introduction

Sexual homicide is a crime that garners a great deal of attention from law enforcement and the public alike. Despite the fact that it is widely studied, the sexual murderer remains greatly misunderstood. As Chan and Heide (2009) point out, the study of sexual homicide, and the collection of accurate crime report data, are challenged by the lack of a standardized definition for the crime. Ressler, Burgess, Douglas, Hartman, and McCormack (1986a) have provided a sexual homicide definition that is both thorough and widely used. They propose that for a crime to qualify as a sexual homicide at least one of the following criteria must be observed: victim attire or lack of attire; exposure of sexual parts of the victim's body; insertion of foreign objects into victim's body cavities; or evidence of sexual intercourse (p. 275).

Many sexual homicide classification systems have been proposed over the years in an attempt to simplify this diverse group of offenders and aid in the investigation of these crimes. As Prentky and Burgess (2000) explain, "the more heterogeneous the area of inquiry the more critical the classification is" (p. 26). In criminology, the main purpose of these typologies is to determine the offender's associated level of risk. However, the potential utility of classification systems can be three-fold. First, sexual homicide typologies can serve as an important tool in investigative profiling. Both crime scene data and victimology information can be collected in order to develop an offender profile, potentially assisting law enforcement personnel in the apprehension of the suspect. Second, in the event that the offender is caught, classification systems may inform members of the criminal justice system of the offender's level of violence and likelihood of reoffending. The third potential benefit to the development of an offender typology is to inform those involved in treatment planning and clinical practices.

Therefore, the empirical exploration and validation of such classification systems is of great importance (Prentky & Burgess, 2000).

The use of classification systems in crime scene profiling was developed by the FBI in the1970s. While the idea of criminal profiling had previously existed, attention was really drawn to the approach by the FBI's research and published studies at that time (Canter, 2000). Initially, the profiling of criminals using crime scene characteristics was informal, but as these techniques became more useful in narrowing suspect pools, law enforcement requested that profiling services be readily available. The intent of criminal profiling is not to determine the specific identity of the offender, but is instead an attempt to narrow down the number of possible suspects by using personality and behavioral traits to determine the *type* of person most likely responsible for a given crime (Douglas, Ressler, Burgress, & Hartman, 1986; Turvey, 1997). Criminal profiling can be particularly useful in cases of sexual homicide. These crimes instil fear and panic in the public, because they often appear to be motiveless and random. This places great pressure on law enforcement agencies to apprehend a suspect in as short a time as possible (Douglas et al., 1986). Criminal profiling is designed to examine the *what (*evidence from the crime scene), combined with the *why (*the offender's underlying motivations), to determine *who* may be responsible for the crime (Rossmo, 2000). According to Turvey (1998) criminal profiling can be conducted using an inductive or deductive approach. While a deductive approach is ideal, the inductive method is more commonly used by the FBI and other forensic investigators. Deductive profiling ideally involves the comprehensive examination of the crime scene, victim, police reports, and autopsy. The reality is that most profilers are not adequately trained to analyze forensic evidence, and instead result to inductive profiling (that can be biased and subjective), using statistical databases to gather data and infer commonalities to a broad group of offenders (Turvey, 1997).

The accuracy and legitimacy of profiling and classification methods have been questioned. As Canter (2000) points out, this is because it was FBI agents themselves (law enforcement officials) who were motivated to develop offender profiling, rather than trained behavioral psychologists. As a result, the classification methods developed by FBI profilers are most definitely influenced by personal experience and expertise.

Nonetheless, these models have continued to play an important role in the classification and profiling of sexual murderers. Based on interviews and cases studies with 36 male sexual murderers, FBI investigators determined that sexual homicide could be classified into two distinct categories: organized and disorganized (Ressler & Burgess, 1985; Ressler et al., 1986a; Ressler, Burgess, Douglas, Hartman, & D'Agostino, 1986b). This distinction was created using the crime scene and background characteristics of the offender. In brief, the organized offender is methodical and well-prepared in their criminal behavior, as well as in other areas of their lives. These murderers are more likely to plan the offence and exercise a reasonable level of control. Disorganized sexual murders exhibit none of the same characteristics. Instead, they are impulsive and their crimes are often committed haphazardly. Little attention is paid to preparation or avoiding detection. Other areas of the disorganized offender's life will reflect a similar lack of control and an overall sense of disorder (Ressler, Burgess, & Douglas, 1988).

The FBI's model is one of the most widely cited typologies of sexual homicide. Despite many criticisms surrounding its methodology and validity (Canter, Alison, Alison, & Wentink, 2004; Godwin, 2002; Kocsis, Cooksey, & Irwin, 2002), it has played a pivotal role in the development of criminal profiling, as well as influenced subsequent classification systems of sexual homicide. To date, there are 12 other scholarly classification systems that have been developed to typify the sexual murderer (Chan, 2015). Blackburn (1993) explains that typologies can be grouped according to their method. Clinical typologies are developed by practitioners and focus on offender psychopathology to create diagnostic criteria and treatment options. Theory-led approaches are, of course, informed by a specific theoretical perspective. Pragmatic approaches utilize the offender's characteristics in order to identify unique groups. The FBI has created their organized/disorganized model using this method. Finally, statistical, or empirical, classification methods attempt to generate offender profiles using quantitative studies and measures. Previous empirical investigations of the organized/disorganized model have suggested that it is invalid, and should not be utilized in criminal profiling to such a degree (Canter et al., 2004; Sewall, Krupp, & Lalumiere., 2013). However, the attempts to quantitatively test the FBI model are limited. Therefore, the current study will also employ a statistical approach in an attempt to validate the widely influential organized/disorganized dichotomy. It is first important to

understand the development of the organized/disorganized classification system, the details of the suggested offender profiles, and the criticisms surrounding the approach.

Chapter 2.

Literature Review

2.1. The Development of the Organized/Disorganized Model

The organized/disorganized classification system is currently used to distinguish between categories of sexual homicide. The *Crime Classification Manual* (Douglas, Burgess, & Burgess, 2013) defines sexual homicide as a murder that involves a "sexual element (activity) as the basis in the sequence of acts leading to death" (p. 205). The sexual activity involved may vary greatly depending on the offender, ranging from pre- or post-mortem rape of the victim to the insertion of foreign objects into the victim. The crime scene may not overtly display evidence of sexual contact between the victim and offender (Douglas et al., 2013). The *Crime Classification Manual* (Douglas et al., 2013) was developed using information gathered from criminal investigations that have taken place in the United States, but is a tool utilized by criminal profilers around the world.

The organized/disorganized profiling typology was originally developed by the U.S. Federal Bureau of investigation (FBI) as a tool to classify violent, serial offenders. The classification dichotomy was born from an initial investigation, the criminal profiling project, that focused on serial sexual murder (Godwin, 2002; Ressler, Burgess, & Douglas, 1988). The initial purpose of this particular project, developed in 1978, was to determine how a group of serial offenders were able to successfully avoid detection. FBI agents conducted face-to-face interviews with sexual murderers to gain insight into their crime patterns in hopes of using this information to create a classification system that would assist law enforcement in future investigations (Godwin, 2002). It would be the first endeavour of its kind to examine the overall crime, placing special focus on the physical crime scene (Ressler et al., 1988). In the early 1980s the homicide rate in the United States had more than doubled in comparison to rates in 1962. Levels of violent

crime (including homicide, aggravated assault, rape and robbery) were increasing at a rapid pace, causing the public to put pressure on the government and law enforcement agencies to develop solutions to increase safety for American citizens (Ressler et al., 1988). As a result of the public's insistence for a reduction in violent crime, the required funding for the FBI's criminal profiling project was granted, along with the establishment of the Behavioral Science Unit (BSU) in Quantico, Virginia (Godwin, 2002).

During the 1970s, FBI Special Agents had been using profiling techniques informally, but as these techniques proved useful in detecting and locating perpetrators, the FBI's profiling services became more widely utilized. The agents involved in profiling at this time distinguished murders based on whether the crime scene appeared organized or disorganized; an organized scene involved planning and control of the victim, while a disorganized scene involved less premeditation and a lack of overall control (Ressler et al., 1988). In 1980, FBI Special Agents Hazelwood and Douglas were the first to publish the concept of the organized/disorganized dichotomy in order to describe the "lust murderer". The lust murder itself is unique and is distinguished from other sadistic homicides by the mutilation of the victim's breasts, rectum, or genitals. Hazelwood and Douglas (1980) argued that there were generally two types of individuals who would commit such a crime: the organized non-social offender and the disorganized asocial offender. Physical evidence taken from the crime scene, personality traits, and characteristics of the offender could be used to create an offender profile, assisting investigators in narrowing down a suspect. Hazelwood and Douglas (1980) suggested that the lust murderer is likely to have grown up in an abusive or adverse environment, and experienced poor psychological development as well as external stressors leading to isolation and frustration. Depending on whether the lust murderer is non-social or asocial, he will either act aggressively outwards (organized), or feel isolated and withdraw (disorganized). Hazelwood and Douglas (1980) suggested that the lust murder is premeditated by the offender's obsessive fantasies, that may eventually be acted out in reality. Crime scene features including the location of the body, the involvement of mutilation, smearing of blood, and traces of physical evidence are all useful in building a psychological profile of the lust murderer (Hazelwood & Douglas, 1980).

The organized/disorganized dichotomy was further developed over the early 1980s. FBI Special Agents conducted a series of interviews between 1979 and 1983 with 36 incarcerated sexual murderers to investigate sexual homicides and attempt to identify the criminal behaviors related to these crime scenes (Ressler & Burgess, 1985). To be considered a suitable sexual homicide for the study, the murder needed to include a sexual component. This could include a lack of victim attire, the exposure of the victim's reproductive areas, evidence of sexual intercourse or insertion of objects, or sexual positioning of the victim's body (Ressler et al., 1986a). The sample consisted of mostly white, and all male individuals (Ressler et al., 1988). 25 of these offenders were considered serial sexual murderers (defined as having killed at least three individuals), while the remaining 11 offenders were classified as nonserial (Godwin, 2002). Using photographs taken at the crime scene, forensic reports, and examination of the victim, interviewers used a series of questionnaires to determine whether an offender should be categorized as either organized or disorganized (Godwin, 2002). At the completion of the series of interviews, FBI agents sorted the sample of murderers into organized and disorganized categories based on answers provided and behaviors displayed by the offenders during the questioning process. The result was 24 organized sexual murderers (with a total of 97 victims) and 12 disorganized sexual murderers (with a total of 21 victims) (Ressler & Burgess, 1985; Ressler et al., 1986b). Ressler et al. (1986b, p.291) maintain that the initial objective of this project was to use "statistical inferential procedures" to test the differences between the crimes scenes of organized and disorganized sexual murderers. A two independent sample t-test was used to investigate differences between the two types of offenders based on victim characteristics, vehicle use, the offender's actions during the crime, and evidence left at the scene (Ressler & Burgess, 1985). Significant differences were found between organized and disorganized offenders on factors relating to both offender profile characteristics as well as crime scene characteristics. However, it is important to note that the assignment of the offenders to either the organized or disorganized category, was completed by Ressler and colleagues based on their own observations, and prior to any statistical analysis. Ressler et al.'s (1988) significant findings are displayed in Table 2-1 and Table 2-2.

2.1.1. The Organized Offender

According to Ressler et al. (1988) the organized offender is more apt to live a methodical life that is ordered and well-planned; this will be reflected in the planning and commission of the offense. The organized offender will carefully plan the crime and seek to avoid detection possibly by removing forensic evidence, taking and removing a weapon to and from the crime scene, and transporting and hiding the victim's body. The organized offender is more likely to use restraints and select a victim that can be subdued or controlled, and who will be submissive to the offender's commands. The organized murderer will be intelligent, socially and sexually competent with the ability to manipulate and lure a victim using charm and proficient conversational skills; the offender may even impersonate a role of law enforcement personnel to gain the trust of the potential victim (Ressler et al., 1988; Douglas et al., 2013). Douglas et al. (2013) add that the organized offender is more likely to take souvenirs or trophies from the crime scene (including victim's personal items), as well as stage the crime scene in an attempt to create the appearance of a disorganized attack in order to deceive investigators.

Table 2-1. Profile Characteristics of Organized and Disorganized Murderers

Organized	Disorganized
Good intelligence	Average intelligence
Socially competent	Socially immature
Skilled work preferred	Poor work history
Sexually competent	Sexually incompetent
High birth order status	Minimal birth order status
Father's work stable	Father's work unstable
Inconsistent childhood discipline	Harsh discipline in childhood
Controlled mood during crime	Anxious mood during crime
Use of alcohol with crime	Minimal use of alcohol
Precipitating situational stress	Minimal situational stress
Living with partner	Living alone
Mobility, with car in good condition	Lives/works near crime scene
Follows crime in news media	Minimal interest in news media
May change jobs or leave town	Minimal change in lifestyle

Note: From *Sexual Homicide: Patterns and Motives,* p. 122, by R.K. Ressler, A.W. Burgess, and J.E. Douglas, 1988, New York: Lexington Books

2.1.2. The Disorganized Offender

Conversely, the disorganized offender is likely to be below average intelligence, socially inadequate, and sexually incompetent. The crime scene left by the disorganized offender reflects little planning, appears random and sloppy, displaying an overall sense of disorder (Ressler et al., 1988). The offender in this case may select a victim at random and use a blitz style of attack, surprising and overpowering the victim. The disorganized crime scene is likely to contain more physical evidence, including blood or fingerprints, and the weapon may be one of opportunity and left at the scene. The victim's body may display signs of mutilation or overkill, and restraints are unlikely to be used as the murder is committed quickly with extreme brutality. While post-mortem mutilation is a common trait of the disorganized sexual murderer, post-mortem dismemberment may be classified as organized or disorganized depending on the offender's intention. Dismemberment of the victim committed in order to dispose of the body and hide evidence is representative of the organized offender (Meloy, 2000), while dismemberment resulting from violence and overkill is more typically linked to the disorganized offender. The crime and death scene are usually the same in the case of the disorganized offender, and little attempt is made to conceal the body or remove forensic evidence (Ressler et al., 1988, Douglas et al., 2013).

Table 2-2. Crime Scene Differences Between Organized and Disorganized Murderers

Organized	Disorganized
Offense planned	Spontaneous offense
Victim a targeted stranger	Victim or location known
Personalizes victim	Depersonalizes victim
Controlled conversation	Minimal conversation
Crime scene reflects overall control	Crime scene random and sloppy
Demands submissive victim	Sudden violence to victim
Restraints used	Minimal use of restraints
Aggressive acts prior to death	Sexual acts after death
Body hidden	Body left in view
Weapon/evidence absent	Evidence/weapon often present
Transports victim or body	Body left at death scene

Note: From *Sexual Homicide: Patterns and Motives,* p. 123, by R.K. Ressler, A.W. Burgess, and J.E. Douglas, 1988, New York: Lexington Books

Ressler and Burgess (1985) suggest that investigators use different interview techniques based on whether the sexual murderer is classified as organized or disorganized. The organized offender will best respond to a direct strategy and approach from the interviewer. The investigator should be certain of all details pertaining to the case, as well as be aware that the organized offender will only admit to a minimum amount of information. Conversely, recommended interview techniques aimed at the disorganized offender include showing the offender empathy and using a counsellor style approach, rather than an interrogation, to indirectly allude to information about the case. The disorganized offender is considered somewhat nocturnal, and Ressler and Burgess (1985) suggest conducting these interviews in the evening for added success.

2.1.3. The Addition of the Mixed and Sadistic Offenders

In 1992, the mixed offender was introduced by Douglas and colleagues in the publication of the *Crime Classification Manual;* the mixed offender offered an explanation for a crime scene reflecting both organized and disorganized characteristics (Canter et al., 2004). According to Douglas et al. (2013) there are number of different reasons why a crime scene may be classified as both organized and disorganized: unanticipated circumstances may lead to a well-planned, organized assault becoming chaotic, the attack may involve multiple offenders who may display different characteristics, and the attack may escalate from a deliberately planned rape, to a blitz attack and homicide. Furthermore, drugs, alcohol, external stressors, as well as the age of the offender may all contribute to inconsistencies at the crime scene, leaving behind a homicide that to investigators displays both organized and disorganized behaviors (Douglas et al., 2013). The addition of the mixed offender suggests that the organized/disorganized model is not a dichotomous categorization, but rather that the offender's level of organization operates as a continuum; some cases of sexual murder may be suited for the far ends of the spectrum, while other cases may include both organized and disorganized patterns, and are more appropriately classified as mixed. Douglas et al.'s (1992) *Crime Classification Manual* also included the addition of the sadistic sexual murderer. This offender achieves gratification through the prolonged torture and humiliation of the

victim. Sexual fantasies are common to this group of offenders, that then play out in the form of violent and degrading sexual acts.

2.2. Criticisms of the Organized/Disorganized Typology

The FBI's organized/disorganized classification approach, while ground-breaking and valuable to the field of criminal profiling, did not go without criticism. Devery (2008) notes that there is no evidence to suggest that Ressler or Burgess included a formal research design in their study, or had any training in the area. These fundamental methodological issues have been criticized by Salfati and Taylor (2006) and Salfati and Canter (1999) who point out that the model itself may not be valid, and that this must be considered before utilizing it as a tool in future research of sexual murderers. Godwin (2002) and Canter et al. (2004) point out the unstructured framework used by the FBI in both the questionnaire and interview process. As Canter et al. (2004) note, the 36 person sample used by the FBI was small and not randomly selected, and was representative of an opportunistic sample; it neglected to include any offenders who were unwilling or unable to participate in the interview process. It was a sample of convenience (Devery, 2008). Ressler et al. (1988) have suggested that while the sample was not random, the study can still provide the basic characteristics associated with sexual murderers due to the fact that the 36 men came from different geographic locations from across the country. Furthermore, Ressler et al. (1986b) do assert that their study was exploratory and not discriminatory, and admit that the organized/disorganized dichotomy itself was not empirically validated (as cited in Canter et al., 2004). Kocsis and Hayes (1998) agree that much of the report includes data that are interesting and relevant to the investigation of sexual murderers, but that by sorting the offenders into the organized and disorganized categories based on the traits of interest, Ressler et al. (1986b) were creating a "self-fulfilling prophecy", rather than scientifically testing the classification system (p. 120). While practical in its definitions, the organized/disorganized distinction is, according to Ressler et al. (1988), subject to failure due to its heavy reliance on the investigator's own intuition and knowledge.

Gerard, Mormont, and Kocsis (2007) point out the subjectivity of Ressler et al.'s (1986b) sexual homicide definition, suggesting that both "victim attire" and "sexual

positioning" could be interpreted differently depending on the individual investigator. This adds to the difficulty in quantifying data and developing objective, scientific procedures for analysis. Schlesinger (2007) notes that while other crimes (e.g. homicide) have clear-cut definitions, sexual homicide is more difficult to define, and there are clear differences between types of sexual homicides; for example, a murder may occur as result of attempting to cover up a sexual assault, or the murder itself may be sexually arousing and intended by the offender. Ressler et al. (1988) do point out that there are limitations to their study in that not every sexual homicide case can be successfully profiled and solved, but it is suggested that the variables established by the FBI study are useful tools in distinguishing between organized and disorganized offenders. Godwin (2002) criticizes the lack of explanation provided by the FBI for the supposed differences between the organized and disorganized offender. He suggests that the organized/disorganized dichotomy separates the murderers based on the level of aggression involved in the homicide: therefore, a more aggressive offender is likely to leave a more disorganized crime scene (Godwin, 2002).

Snook, Cullen, Bennell, Taylor, and Gendreau (2008) criticize criminal profiling in general, and point out the discrepancy between the widespread use of profiling techniques, and the limited amount of empirical support to validate these strategies. Specifically, the FBI's organized/disorganized model makes the assumption that the offender is likely to behave in a well-controlled manner (or the opposite) in all areas of their lives, not just in regard to the crime scene. Snook et al. (2008) argue that these assumptions are incorrect and that situational factors are just as important as personality traits in determining an explanation for a given crime. There is not enough evidence to support the notion that background characteristics can be used to determine if an offender is organized and will, therefore, commit an organized crime. Devery (2010) concurs that criminal profiling has never been a rigorous and scientific process, especially in America. He suggests that the literature published by the FBI's Ressler and Douglas presents a far more accurate and optimistic portrayal of criminal profiling than demonstrated by available evidence, and its usefulness in solving investigations continues to lack empirical support.

Further critiques of the dichotomy have focused on the addition of the "mixed" offender, originally introduced by Douglas and colleagues in the 1992 edition of the *Crime Classification Manual*. Canter et al. (2004) question whether empirical evidence can be found to support a two-fold organized/disorganized model, if at the same time, a mixed category exists in which offenders represent a combination of each end of the spectrum, and display both organized and disorganized traits. Because the existence of a group of offenders who represent a middle ground suggests that the classification of sexual murderers should be treated as a continuum, the basic dichotomy is more likely a theoretical explanation and will, therefore, be difficult to empirically validate (Canter et al., 2004). Kocsis, Cooksey, and Irwin (2002) agree, stating that the addition of the mixed offender to the *Crime Classification Manual* is simply an acknowledgement of the limitations of the organized/disorganized model itself. Homant and Kennedy (1998) point out that the literature is unclear in providing an explanation as to how many overlapping characteristics are necessary before a crime scene can be classified as mixed. As well, the classification system neglects to account for offenders who may evolve over time moving from the organized, disorganized or mixed category in which they began their criminal career, into an alternate classification. It is argued that the *Crime Classification Manual* is not based on research findings at all, but rather on the experiences, opinions, and intuitions of FBI Special Agents (Kocsis et al., 1998).

2.3. Classification Systems with Themes of Organization/ Disorganization

The formal publication of the organized/disorganized typology legitimized the classification system, despite concerns from other behavioral scientists regarding the lack of empirical support (Kocsis et al., 1998). The initial organized/disorganized model developed by Ressler et al. (1986b) has since been widely cited in the literature, and has been used as the thematic building blocks for the development of many other typologies and classification systems related to violent crimes, including arson, rape, and serial and sexual murder. Two major classification systems emerged that were influenced by the FBI's model: the Holmes and DeBurger (1988) model of serial murder, and the Keppel and Walter (1999) rape-murder typology.

Holmes and De Burger (1988) developed a four-fold model in an attempt to classify serial murderers; offenders could be categorized as *visionary, mission, hedonistic,* or *power/control* killers. Holmes and Holmes (2002) would later expand on the classification system, adding two additional categories of serial murderer, separating the *hedonistic* murderer into categories of *lust* and *thrill*. As Canter et al. (2004) point out, the six-fold typology draws influence from the organized/disorganized model, operating as a continuum, with each offender category sharing similarities with the FBI's organized or disorganized offender. Holmes and De Burger's (1988) *visionary* killer is disorganized, acting spontaneously and quickly, possibly as a reaction to voices or visions they may hear or see. The murders committed by *lust* or *thrill* killers both involve sexual elements and share some characteristics with Ressler et al.'s (1988) organized sexual murderer in that these crimes involve planning and organization, as well as attempts to avoid detection through the removal of the weapon from the crime scene, and the concealment of the victim's body. However, the *lust* serial murderer engages in sadistic acts, while *thrill* murders are more likely to involve the prolonged torture and suffering of the victim (Holmes & Holmes, 2002). The *power-control* serial killer also engages in planning and process-focused behaviors, deriving pleasure from complete domination and power over the victim (Holmes & Holmes, 2002).

Canter and Wentnik (2004) attempted to validate Holmes and Holmes' (2002) classification system of serial murder. The model, as mentioned above, operates as an organized/disorganized continuum, with the disorganized *visionary* killer on one end, and the organized *power* or *control* killer on the other end. Canter and Wentnik (2004) point out that Holmes and Holmes claim that various information (including offender background characteristics, crime scene evidence, and psychological motivations) was used to establish the most appropriate classification for each murderer, despite the fact that many offenders displayed traits from multiple categories (p. 491). Absent from the work by Holmes and Holmes is any systematic criteria used in determining which category is most suitable when an offender's characteristics are a mix of two of more types of serial murderer. Using multidimensional scaling procedures, Canter and Wentnik (2004) investigated the co-occurrence of variables related to each of the serial murderer categories in order to determine if there are in fact distinct types of each offender. Results did not suggest that distinct categories of serial killers exist, but that

some behaviors (in this case, those associated with power and control), are typical of serial killings in general and, therefore, are more likely to co-occur.

Keppel and Walter (1999) expanded on the rape-offender typology originally proposed by Groth, Burgess, and Holmstrom in 1977. This was further revised by Hazelwood and Burgess (1987), to create a classification system designed to apply to crimes of rape-murder, with the underlying assumption that offenders are motivated by either power or anger. Four categories of rapists were initially proposed: *power-assertive (PA), power-reassurance (PR), anger-retaliatory (AR), and anger-excitation (AE)*. These four groups were then expanded upon by Keppel and Walter (1999) and applied to the crime of sexual murder. According to Keppel and Walter (1999) the *power-assertive (PA)* sexual murderer shares some similarities with the FBI's organized offender: the rape is planned (although the murder is a result of increased aggression and escalation) and the crime scene appears organized. The *anger-excitation (AE)* offender plans both the rape and murder, similar to the organized offender, but is driven by anger, engaging in lengthy torture and exploitation of the victim. The *power-reassurance (PR)* rape-murderer will likely plan the rape, but leave a disorganized crime scene, and have experienced inadequacies in education and sexual relationships, similar to the FBI's disorganized offender. The *anger-retaliatory (AR)* offender acts out of an angered state and is likely to leave a disorganized scene. Keppel and Walter (1999) suggest that by using details available pre and post-crime, sexual murderers can be sorted into the appropriate categories, and classified along a continuum.

Bennell et al. (2013) conducted an analysis on Keppel and Walter's (1999) work to determine if there was, in fact, any empirical support for their rape-murderer classification model. Using multidimensional scaling techniques, Bennell et al. (2013) determined that there were no statistically significant levels of co-occurring behaviors to support the 4-fold typology proposed by Keppel and Walter (1999). While conceptually the *power-assertive, power-reassurance, anger-retaliation*, and *anger-excitation* classification may hold merit, there is no empirical evidence demonstrating support. Bennell et al. (2013) point out that while the themes of Keppel and Walter's (1999) rape-murderer continuum may be valid, it is a subjective and difficult task to select variables to appropriately represent motivational behaviors for an analysis.

Many additional sexual murderer typologies have been developed in an attempt to identify the different types of sexual homicide. While none of these alternate classification systems use the organized and disorganized labels as applied by Ressler et al. (1988), these sexual murderer typologies do identify two or more distinct groups of offenders, and many of these categorizations share some similarities with the FBI's model. In 1981, Revitch and Schlesinger used the term 'catathymia' (originally coined by Hans Maier) to separate sexual murderers into compulsive and catathymic types based on the offender's motivations. As Chan (2015) points out, this approach is based on a clinical assessment, rather than empirical analyses. A catathymic homicide involves the sudden breakthrough of underlying feelings of sexual inadequacy, while compulsive sexual murderers possess an internal drive to kill (Schlesinger, 2004). Schlesinger (2004) further typified these offenders, separating catathymic homicides into acute or chronic, and compulsive into planned or unplanned offenders. According to Schlesinger (2007), the planned, compulsive sexual homicide is the most closely related to the FBI's organized offender; these crimes involve exceptional detail in planning, little evidence left at the crime scene, and elements of fantasy and sadistic behavior. The acute, catathymic sexual murder, however, is more closely related to themes of disorganization, typically involving an unplanned, sudden, violent attack, overkill of the victim, and a haphazard crime scene. The acute, catathymic sexual homicide is the offender's way of releasing enormous tension and inner psychological conflict, and most closely parallels the FBI's 'blitz' attack (Schlesinger, 2007). Meloy (2000) also put forth a clinicial typology of sexual homicide that encompasses both the compulsive/catathymic and organized/disorganized themes. According to Meloy (2000) compulsive homicides are organized in nature and often contain elements of sexual sadism. Compulsive sexual murderers are likely to be diagnosed with antisocial personality disorder and display high levels of psychopathy. Catathymic homicides, however, are disorganized in nature and committed by offenders who are likely to have mood and personality disorders (Meloy, 2000). Chan (2015) has critiqued this clinical typology noting that Meloy's sample consisted of offenders with unusually high rates of psychopathy and personality disorders, making it unrepresentative of the general population of sexual murderers.

Clarke and Carter's (2000) typological approach was also clinical. They identified four types of sexual murderers in a London treatment centre, and were the first to offer specialized treatment suggestions based on the offender's classification. According to Clarke and Carter (2000) the sexually motivated offender is sadistic; he will develop detailed fantasies deriving stimulation from the kill itself. Similar to Ressler et al.'s (1988) organized offender, the sexually motivated murderer may target a victim that is unknown. The aggressive control offender also intends to kill the victim, usually as a way to eliminate the witness. Akin to the organized offender, the aggressive control murderer may remove the victim from the crime scene in an attempt to avoid detection. The aggressive dyscontrol murderer shares some similarities with the disorganized offender. These crimes are not intended to be homicides, or even sexual assaults, but the offender is triggered by the victim or the environment, resulting in murders that involve extreme mutilation and humiliation of the victim, and a crime scene that displays an overall loss of control. Clarke and Carter's (2000) final offender type is the neuropsychological dysfunction sexual murderer. The motivations behind these crimes are less clear. These offenders may have had past experiences that combine sexual activity and aggression, possibly as a result of neuropsychological deficits. As Fisher and Beech (2007) point out, this fourth offender group was developed around a single offender in the sample, and does not likely represent a distinct group of sexual murderers.

Fisher and Beech (2007) developed a three-fold model of sexual murder, adapted from their earlier investigations of the implicit theories behind the motivations of rapists (Beech, Fisher, & Ward, 2005). Interviews were conducted with 28 sexual murderers in the UK prison system revealing that the same implicit theories existed for sexual murderers, and three distinct groups emerged: sadistic, violently motivated, and sexually motivated. The sadistic group of offenders are categorized by the presence of violent and sadistic fantasies and a motivation to carry them out. Similar to the organized offender, the victims of these crimes are usually targeted strangers and the method of killing often involves strangulation. This method is selected so that the offender can inflict control over the victim. The violently motivated group is likely to experience anger or resentment towards women. Victims are more likely to be known to the offender, and similar to the disorganized offender, the attack may involve multiple

attacks with a variety of weapons, often resulting in overkill. Lastly, the sexually motivated offender is primarily motivated to kill in order to avoid detection. In this group, the “male sex drive is uncontrollable” and the offender will murder the victim in order to commit the intended sexual offence (Fisher & Beech, 2007, p. 188).

Beauregard and Proulx (2002) have proposed that sexual murderers can be distinguished by their motivations: sadism or anger. They note that the FBI's classification system is well-detailed and does provide a reasonable explanation of the behaviors related to the crime phase and the crime scene of the sexual murder, but it fails to provide any information regarding pre-crime variables, aside from a likert scale evaluation of the sexual murderer's pre-crime emotional state (Beauregard, Proulx, & St-Yves, 2007). Ressler et al. (1986b) found that organized sexual murderers reported feeling more depressed, yet calm, prior to the crime, while disorganized offenders reported feeling more frightened, confused, and nervous. Beauregard and Proulx (2002) did not find the same patterns of emotional states in their group of sexual offenders, but noted that this may be due to methodological issues, or differences between the pathologies of nonserial and serial offenders (Beauregard et al., 2007).

Beauregard and Proulx (2002) ran a K-means cluster analysis on data collected from 36 sexual murderers out of Quebec to investigate sexual homicide committed by non-serial offenders. Results demonstrated 2 distinct offending patterns: *sadistic* and *anger.* The *sadistic* offender profile demonstrated similarities with the FBI's organized sexual murderer, and is supported by similar findings by Gerard et al. (2007). A sexual murder committed by the sadistic offender is likely to involve some premeditation and planning, the use of restraints, and a stranger relationship between the victim and offender. The *anger* profile is more closely related to the disorganized offender, in that this offender is unlikely to move or conceal the body, use restraints, or plan the attack. Major discrepancies between Beauregard and Proulx's (2002) findings and the FBI's typology surround the mutilation of the victim. While Ressler et al. (1988) assert that mutilation is a highly disorganized trait, Beauregard and Proulx (2002) found it to be a characteristic more representative of their *sadistic* offender. Similar to dismembering the body for disposal purposes (Meloy, 2000), mutilation may be carried out by the

organized offender in an attempt to destroy evidence that may be left on the victim's body.

Malmquist (2006) has proposed a three-fold taxonomy to apply to sexual murderers. He stresses the importance of focusing on the offender's past traumatic experiences and background characteristics to appropriately classify a sexual murderer, arguing that crime scene characteristics do not encompass enough information to develop a comprehensive typology. Malmquist (2006) suggests that rape homicides are committed by offenders who are not primarily motivated by murder. He theorizes that homicide is a result of an escalation in aggression during a sexual assault, often due to the victim's resistance or attempt to flee. Conversely, lust homicides are those that involve ritualized and sadistic behaviors; the offender is driven by sexual fantasies, and will act out both the sexual assault and murder in order to fulfil these cognitive scripts. Malmquist (2006) notes that there may be many other individuals who experience sadistic fantasies who do not ever act them out; however, for those who do, a constellation of factors combine to result in a loss of overall control, leading to the subsequent sexual assault and murder of the victim. The third proposed type of sexual murder serves the purpose of destroying evidence. Offenders in this group are motivated to murder the victim after the sexual assault has occurred, eliminating the witness and lessening the likelihood of apprehension (Malmquist, 2006).

Balemba, Beauregard, and Martineau (2014) explored crime scene factors in 350 Canadian cases of sexual homicide to determine if distinct types of sexual murderers exist. Latent class analyses revealed three groups of offenders: *Sloppy/Reckless*, *Violent/Sadistic*, and *Forensically Aware*. The *Sloppy/Reckless* offenders are most closely related to the FBI's disorganized offender. These crimes involve little planning and preparation and forensic evidence is likely to be left behind, increasing the likelihood that these offenders will be apprehended by law enforcement. The *Forensically Aware* class is similar to the organized offender in their attempts to avoid detection by minimizing the amount of evidence left behind, and mutilation and dismemberment for the purpose of destroying evidence, or harming the victim so that identification is difficult. The *Violent/Sadistic* crimes include both organized and disorganized elements. These crimes are not necessarily spontaneous, as the offender feels a great need to torture

and harm the victim, indicating some level of pre-meditation and forethought. However, some disorganization is present; these cases are almost as likely to be solved as the *Sloppy/Reckless* offenders, due to the amount of evidence left behind at the crime scene – a result of the mutilation and overkill that is typical of this group (Balemba et al., 2014).

2.4. Empirical Support for the FBI's Model

While the themes of organization and disorganization are present in many sexual homicide typologies, Kocsis et al.'s (1998) investigation of arson behavior was the first academically reviewed, empirical support for the FBI's organized/disorganized dichotomy. Kocsis and colleagues (1998) noted the frequent use of the FBI's dichotomy in profiling practices, but felt that empirical verification was lacking to support the typology. By examining characteristics of profit-motivated arsons (considered organized due to the involvement of planning and premeditation) and those characteristics related to vandalism-motivated arsons (classified as disorganized), results from Kocsis et al.'s (1998) investigation do offer some support for the FBI's classification system. The sample of arson cases yielded two distinct clusters representing organized and disorganized crime scene behaviors. However, Kocsis et al. (1998) point out that because the most extremely organized (profit) and disorganized (vandalism) arson cases were selected for analysis, it is likely that including a range of randomly selected arson offences (that likely include both organized and disorganized traits) would actually lend more support to the idea of a continuum, rather than a dichotomy.

In 2002, Kocsis et al. investigated the organized/disorganized typology once again, this time focusing on 85 cases of sexual murder in Australia. Using multidimensional scaling techniques and cluster analysis, their results reveal that the organized/disorganized typology may be too simple an approach. Kocsis et al. (2002) discovered that one central cluster consisted of characteristics present in all patterns of sexual murder, while four distinct clusters (*predator, fury, perversion*, and *rape*) diverge from the central group. Cluster one includes characteristics related to sexual violence, planning, and precaution, which the authors argue are behaviors present in all sexual murders. Rather than a sophisticated (organized) or unsophisticated (disorganized) distinction, as proposed by the FBI, Kocsis et al. (2002) suggest that all sexual murders

involve a basic level of planning and then branch off into a continuum, based on the level of sophistication involved. While the *predator* cluster shares similarities with Ressler et al.'s (1988) organized offender (e.g., mobile, well-groomed), and the *fury* cluster is most closely related to the disorganized offender, the classification strategy is more complex than a two-fold approach; sexual murderers share many of the same characteristics, and vary in their level of complexity (Kocsis et al., 2002).

While the literature lends some support to the concepts of the organized and disorganized offender, much of the research suggests a continuum explanation for the behaviors related to sexual murder, rather than a stark dichotomy. And while many of the sexual offending typologies developed since the initial pioneering work by Ressler et al. (1986) display some semblance of organized and disorganized themes, few have explicitly set out to test the FBI model. In 2004, Canter and colleagues attempted to systematically substantiate the organized/disorganized model using crime scene characteristics related to cases of serial sexual homicide. Canter et al. (2004) wanted to investigate the assumptions of the FBI's dichotomous classification system that certain characteristics are likely to co-occur with certain other characteristics, and that distinct patterns of organization and disorganization are likely to emerge, if an offender is either organized *or* disorganized, as Ressler et al. (1988) suggest.

The study attempted to select variables that most closely matched the organized and disorganized characteristics adopted by Douglas and his colleagues in the 1992 edition of the *Crime Classification Manual*. As Canter et al. (2004) point out, the variation in frequency of the organized and disorganized variables are cause for concern surrounding the reliability of the classification system. For example, in Canter et al.'s (2004) sample, 91% percent of the victims were alive during sex acts (an organized variable), versus 3% of victims who were dismembered (a disorganized trait); there may be many cases where low-frequency (rare) variables are unlikely to occur, yet all cases are treated equally in the analysis. Using multidimensional scaling techniques, Canter et al. (2004) investigated the co-occurrence of each variable pair with every other co-occurrence of all of the 39 variables, to determine if there were distinct spatial patterns between organized and disorganized traits. No specific regions were identified, and not even weak support was found for the FBI model. Instead, results suggested that most

cases of serial sexual homicide included a core set of organized variables, that occur in higher frequencies, and are characteristic of serial murder in general. Disorganized traits occur less frequently overall, and may be what separate one killing from another. According to Canter et al. (2004) the behavior surrounding serial sexual homicide is far more complex than the organized/disorganized dichotomy suggests, and a two-fold approach is far too simple to encompass the complexity of any human behavior.

More recently, Sewall and colleagues (2013) systematically analyzed their own three-path model of sexual homicide (represented by the *competitively disadvantaged, psychopathic*, and *sadistic* offender), and also investigated the organized/disorganized model proposed by the FBI. They propose that the *competitively disadvantaged* offender lacks the capacity to plan and will leave a crime scene in disarray, akin to the FBI's disorganized sexual murderer. The *psychopathic* offender is more reflective of the mixed offender. These individuals may have the adequate cognitive abilities to plan and organize the offense, including some elements of sadism and torture, but are also very impulsive, leading to the possibility of a disorganized and spontaneous attack (Sewall et al., 2013). The *sadistic* offender may spend hours fantasizing over the torture of future victims, while appearing relatively normal to others. A high level of planning and forensic awareness aligns the *sadistic* offender most closely to the organized sexual murderer.

Using principal components analysis (PCA) and clustering techniques, Sewall et al. (2013) only found mixed support for either model. A five component PCA was selected, and then entered into two cluster analyses. A four-cluster solution was selected as the best fit. Results suggested that offense behaviors including ritualism (an organized behavior, according to Ressler et al., 1988), mutilation, and disembowelment (disorganized behaviors, according to Ressler et al., 1988), frequently co-occurred, suggesting that a 'mixed' type of offender is a commonality. While there does seem to be some limited support for the sexual murderer categories of *sadistic, antisocial,* and *slasher* (Sewall et al., 2013), a fourth group of heterogeneous offenders, who do not share any unique characteristics, weakens any evidence supporting a true typology of sexual homicide. Sewall and colleagues (2013) note that while four distinct clusters did emerge from the study, neither model is strongly supported by the results, suggesting

that sexual murderers may be too diverse and unspecialized in their criminal patterns to accurately classify.

Despite the fact that a number of sexual murder typologies exist, the empirical investigation in this area has room to develop. Existing typologies do suggest that not all sexual murderers are alike, and that this heterogeneous group may be categorized into distinct subtypes using offender background information, crime scene characteristics, and pre and post-crime behaviors. Only Ressler et al. (1988) have used the organized and disorganized terminology to typify groups of sexual offenders, however, concepts similar to these are represented in many of the subsequent sexual murder classification systems. More empirical studies are necessary in this area to further understand the complexities and behaviors of sexual murderers.

2.5. Aim of Study

The FBI's organized/disorganized model has led to the development of many other violent crime typologies, and continues to be drawn on as an explanation for sexual homicide. The model is widely used as the basis for the portrayal of criminal profiling in movies, television, and media (Devery, 2008) and, more importantly, in criminal investigations and a court of law (Canter et al., 2004). However, empirical support for the dichotomy is scarce, and there is a lack of literature investigating the crime scene variables related to organization and disorganization, as specified by the FBI. The few studies that have specifically set out to test the FBI's organized/disorganized model of sexual murder have demonstrated extremely minimal support for the classification system (Canter et al. 2004; Sewall et al. 2013). The current aim of this study is to build upon the limited, existing research and test the validity of the FBI's dichotomy. This study will use K-means clustering techniques and latent class analyses to investigate the relationships between crime scene characteristics to determine if there are significant and distinct patterns of organization and disorganization in cases of sexual homicide.

Chapter 3.

Methods

3.1. Sample and Procedure

The current study uses data collected from a national database operated by the Royal Canadian Mounted Police (RCMP). Investigators assigned to each case collected data from case files using multiple choice and close-ended questions approximately 45 days into the investigation relating to the victim(s), the potential or suspected offender, the behavior of the offender during and after the crime, and any available forensic information. All of the homicide cases included in this sample are categorized as completed real incidents (no attempts), and involve a sexual element (i.e. the crime was sexually motivated, or there was evidence of sexual activity). Each case had to meet the definition of sexual homicide provided by the FBI, and must include one of the following: (a) victim's attire or lack of attire; (b) exposure of the sexual parts of the victim's body; (c) sexual positioning of the victim's body; (d) insertion of foreign objects into the victim's body cavities; (e) evidence of sexual intercourse; or (f) evidence of substitute sexual activity, interest, or sadistic fantasy (Ressler et al., 1988). A total of 350 cases of sexual homicide, committed between 1948 and 2010 in Canada (except for the provinces of Quebec and Ontario), were available for analysis. This sample may be divided into cases that were solved (N = 250) and unsolved (N = 100) at the time of entry into the database. Solved cases include those where the offender has been identified, although may not have been charged with the offence. Unsolved cases include those in which any offender involved in the crime remains unidentified.

3.2. Measures

All of the variables that are included in the current study, aside from the victim's age, are dichotomous in nature. A total of 33 variables are selected for the cluster analyses; these variables can be categorized into seven separate groups based on their theoretical relationships. The seven groups include: a) victimology; b) detection avoidance; c) control; d) offender approach; e) sexual activities; f) type of violence; and g) post-mortem activities. Not all variables mentioned in the *Crime Classification Manual* depicting either organized or disorganized crime-related behaviors are selected for the analysis. Theoretically significant variables providing information relating to the offender's weapon and vehicle are omitted due to a high number of missing values, or a poor distribution of categories within the variables. Variables in the sample with less than 3% of cases in a single category are also excluded in order to avoid distorting the analysis. Four variables included in the study (the sex of the victim, the presence of semen, post-mortem sexual activity, and dismemberment) are each missing data for one case; these cases were dropped from the analysis, resulting in a total sample size of N = 348 sexual murderers. Table 3-1 displays the descriptive statistics for all of the variables included in the analysis, grouped by category.

3.2.1. Victimology Variables

Five variables related to victimology are included in the analysis. The variable, victim's age, includes 24 missing cases. The series mean is used to calculate the victim's age for all of the missing data. The age of the victim ranges from 2.0 to 95.0 years (M = 27.2, SD = 14.97) for the full sample. The remaining victimology variables are dichotomous and include: sex of the victim (1 = *male,* 2 = *female)*; victim is a stranger (0 = *no,* 1 = *yes)*; victim is an acquaintance (0 = *no,* 1 = *yes)*; and victim is a sex-trade worker (0 = *no,* 1 = *yes)*.

3.2.2. Detection Avoidance Variables

Four variables in the sample are related to the offender's detection avoidance strategies. All are dichotomous (0 = *no,* 1 = *yes)* and include: offender

destroyed/removed forensic evidence; offender cleaned self and/or scene; offender disposed of victim's body; and the victim's body was moved by the offender.

3.2.3. Control Variables

Three variables are selected from the sample that relate to the offender's attempt to control the victim during the attack. These variables are dichotomous (0 = *no,* 1 = *yes) and* include: the offender administered a drug to the victim; the offender used gags or blindfolds; and the offender used restraints or ties.

3.2.4. Offender Approach Variables

Four dichotomous (0 = *no,* 1 = *yes)* variables from the sample can be grouped together in relation to the offender's strategy in approaching the victim. Offender approach variables include: victim was targeted; offender approached victim using a con*;* offender surprised the victim; and offender blitzed the victim.

3.2.5. Sexual Acts Variables

Sexual activity variables are dichotomous (0 = *no,* 1 = *yes) and* include sexual acts that occurred before or during the attack. These six variables include: vaginal intercourse; anal intercourse; fellatio; fondling; foreign or inanimate object insertion; and semen present. Vaginal intercourse, anal intercourse, and inanimate object penetration include acts that occurred, as well as attempts made by the offender. It is possible that semen detected at the crime scene may be a result of post-mortem activity; however, because it is difficult for investigators to determine exactly when this act may have occurred, the presence of semen is categorized as evidence of sexual activity for the purposes of this study.

3.2.6. Type of Violence Variables

Six dichotomous (0 = *no,* 1 = *yes)* variables can be drawn from the sample and used to create a category representing the type of violence inflicted upon the victim.

Variables related to violent behavior consist of: beating of the victim; stabbing or cutting of the victim; strangulation of the victim; asphyxiation of the victim; gunshot; and biting of victim.

3.2.7. Post-mortem Activities Variables

The last of the seven categories is comprised of five dichotomous (0 = *no,* 1 = *yes)* variables relating to the offender's post-mortem activities. These include: mutilation of the victim's genitals; overkill; items taken from the victim or offence; evidence of post-mortem sexual activity; and dismemberment of the victim.

Table 3-1. Descriptive Statistics of Variables used in K-means Cluster and Latent Class Analyses

Variables	*N* (%)	Variables	*N* (%)
VICTIMOLOGY		**SEXUAL ACTS**	
Victim's age (*M*)	27.2	Vaginal intercourse	162 (46.3%)
Victim is a female	313 (89.7%)	Anal intercourse	57 (16.3%)
Victim is a stranger	90 (25.7%)	Fellatio	30 (8.6%)
Victim is an acquaintance	116 (33.1%)	Fondling	32 (9.1%)
Victim is a sex-trade worker	62 (17.7%)	Inanimate object insertion	41 (11.7%)
DETECTION AVOIDANCE		**OFFENDER APPROACH**	
Cleaned self and/or scene	15 (4.3%)	Victim targeted	66 (18.9%)
Disposed of body	39 (11.1%)	Offender used con	142 (40.6%)
Body moved	119 (34.0%)	Victim surprised	25 (7.1%)
Destroyed/removed forensic evidence	95 (27.1%)	Victim blitzed	43 (12.3%)
TYPE OF VIOLENCE		**POST-MORTEM ACTIVITIES**	
Beating	165 (47.1%)	Mutilate genitalia	19 (5.4%)
Stabbing	92 (26.3%)	Overkill	151 (43.1%)
Strangulation	146 (41.75)	Post-mortem sexual activity	37 (10.6%)
Asphyxiation	45 (12.9%)	Dismemberment	22 (6.3%)
Gunshot	16 (4.6%)	Items taken from victim/offence	132 (37.7%)
Biting	26 (7.4%)		
CONTROL			
Administered drug to victim	12 (3.4%)		
Use of gags/blindfolds	28 (8.0%)		
Use of restraints/ties	38 (10.9%)		

3.3. Statistical Analyses

K-means cluster analysis and latent class analysis are each used to identify groups of sexual murderers based on their crime scene behaviors. K-means cluster analyses are first conducted using SPSS Statistics Version 22 for Windows on each of the seven categories, resulting in seven separate cluster solutions (N = 348). Subsequently, K-means cluster analyses are then conducted using the seven solutions

as input variables. This type of analysis attempts to minimize within-group variation, while maximizing between-group variation in order to identify similar subgroups within a population (Garson, 2012). K-means clustering is appropriate for use on large datasets, because unlike hierarchical clustering, K-means does not require prior computation of a proximity matrix of the distance/similarity of every case with every other case. K-means clustering techniques use Euclidean distances and the number of clusters is specified in advance (Garson, 2012). K-means cluster analysis invokes many of the same assumptions as the general linear hypothesis methods. However, violations of such assumptions are less of a concern in clustering methods. This is because significance testing performed in K-means and other clustering techniques serves an exploratory and descriptive purpose (Garson, 2012). Significance levels displayed in the K-means ANOVA table in SPSS are not intended to be true tests of the hypothesis that the cluster means are equal.

Latent class analyses (LCA) are conducted using Latent GOLD 4.5[1]. LCA is a statistical technique that is used to group individuals into distinct subgroups or categories, based on latent constructs than cannot be directly observed. These latent constructs can be inferred by using the responses from individuals to a series of observable categorical variables; these measured responses are used as indicator variables in the latent class model (Collins & Lanza, 2010). LCA is similar to factor analysis in that both models attempt to identify an underlying latent variable; however, in factor analysis, the latent variable is continuous with a normal distribution, while in LCA the latent variable is categorical and has a multinomial distribution (Collins & Lanza, 2010; Magidson & Vermunt, 2004). Similar to K-means clustering, LCA techniques seek to minimize within-group variation, while maximizing any differences between classes; latent classes should be qualitatively distinct and mutually exclusive (Collins & Lanza, 2010; Magidson & Vermunt, 2004). LCA identifies latent subgroups, and then assigns like cases (based on shared common model parameters) to the same latent class; cases that are dissimilar are assigned to a separate class. LCA uses maximum likelihood (ML) methods to determine posterior probability rates for every case in relation to each of the latent classes, as well as produces estimates for misclassification rates. A case is assigned to the modal class for which its posterior probability is the greatest (Magidson & Vermunt, 2004). Variables in LCA models do not need to be standardized. Variables

included in the models may be of mixed scale types, however, according to Magidson and Vermunt (2002) a traditional LC model is obtained when all variables are categorical.

LCA has a number of suggested advantages over traditional clustering techniques, including K-means clustering. LCA is a more rigorous technique; determining the number of classes is less arbitrary due to a number of statistical measures. While there is no single correct way to determine the number of classes in a LCA model, there are a number of statistical criteria that can be used to determine the fit of the latent class model. The most widely used approach in Latent GOLD 4.5 is that of the likelihood ratio *chi*-square statistic, L^2. This value indicates the amount of unexplained association among the variables used in the model; when L^2 is equal to zero, the measure indicates perfect model fit (Vermunt & Magidson, 2005). L^2 measures are accompanied by p-values; models with p-values greater than 0.05 suggest an adequate fit. Another commonly used measure to assess model fit and parsimony is the Bayesian information criterion (BIC). Generally, models with lower BIC values are preferred. Classification errors can also be used to determine the most appropriate LCA model, indicating the discrepancy between the predicted cluster sizes and the actual modal assignment of the cases; models with lower classification errors will be more accurate in predicting group membership (Vermunt & Magidson, 2005). As Magidson and Vermunt (2004) point out, there is subjectivity in determining the correct number of classes; a model must not only be selected based on the statistical criteria, but also on the interpretability and meaningfulness of the classes. Parsimony, statistical measures, and theoretical significance must all be considered when selecting the final LCA solution.

In the current LCA models for this study, the age variable is transformed using the RANK function in SPSS, creating a four-category age variable. This categorical variable is included as an indicator in the victimology two-class solution. Because all indicator variables in the LCA models are categorical, *chi*-square statistics, including L^2 and *p* values are available for all of the class solutions. LCA is first performed on each of the seven categories (victimology, detection avoidance, control, offender approach, sexual activity, type of violence, and post-mortem activity) using the 33 observed crime scene variables as categorical indicators in the LCA models. Then, to test the

organized/disorganized typology as put forth by the FBI, the seven resultant two-class solutions are each used as indicator variables in the final analysis.

Finally, supplementary analyses are conducted using *chi*-square techniques to determine any similarities or differences between the final K-means two-cluster solution, and latent two-class model. Crime scene variables that are not included in the K-means clusters or latent class solutions are used to perform these analyses. Due to high rates of missing data, and poor distribution across variable categories, few external variables were suitable for the supplementary techniques.

Chapter 4.

Results

4.1. K-Means Results

4.1.1. K-Means Cluster Analyses - Victimology

K-mean cluster analysis was first conducted on the five variables related to victimology. The results of this analysis are displayed in Table 4-1. The series mean was used to calculate the victim's age for 24 missing cases. The age of the victim ranges from 2.0 to 95.0 years (*M* = 27.2, *SD* = 14.97) for the full sample. Two clusters emerged using the victimology variables. The first cluster within the sample is the *Low-Vulnerability* group (*N* = 64, 18.3% of the sample). This cluster contains a higher frequency of male victims (23.4%), as well as older victims (*M* = 52.6). Victims in this cluster are also more likely to be an acquaintance to the offender (43.8%). Victims in this first cluster do seem to be less vulnerable than compared to the second group. The second cluster that emerged from the sample is the *High-Vulnerability* group (*N* =285, 81.7% of the sample). Victims in this group are younger, overall, with a mean age of 21.5. Victims in this cluster are more likely to be a stranger to the offender (28.4%), and a higher number of victims in this second cluster were identified as sex-trade workers (19.6%).

Table 4-1. K-Means Two Cluster Solution Using Variables Related to Victimology

Victimology (%/*N*)	Cluster 1 (Low-Vulnerability) *N* = 64 (18.3%)	Cluster 2 (High-Vulnerability) *N* = 285 (81.7%)
Victim is male	23.4% (15)	7.4% (21)
Victim's age (mean)	52.6	21.5
Victim is a stranger	14.1% (9)	28.4% (81)
Victim is an acquaintance	43.8% (28)	30.9% (88)
Victim is a sex-trade worker	9.4% (6)	19.6% (56)

4.1.2. K-Means Cluster Analyses – Detection Avoidance

A subsequent K-means cluster analysis on four variables related to detection avoidance resulted in the emergence of two distinct groups, displayed in Table 4-2. The first cluster, *No Detection Avoidance (N* = 255, 72.9% of the sample), is most strongly distinguished by the fact that no offenders in this group made any attempt to destroy or remove evidence of the homicide (0.0%). Only a small number of offenders in this category cleaned up themselves, or the crime scene (2.4%). The *No Detection Avoidance* murders are less likely to involve both the disposal of the victim's body (9.4%), and movement of the victim's body (29.4%). Conversely, the *Detection Avoidance* cluster (*N* = 95, 27.1% of the sample) is distinguished by all of the sexual murderers in this group attempting to destroy and remove evidence of the crime (100.0%). Similarly, this group consists of more offenders who are concerned with cleaning up the crime (9.5%). The *Detection Avoidance* cluster is also more likely to both move (46.3%) and dispose of (15.8%) the victim's body.

Table 4-2. K-Means Two Cluster Solution Using Variables Related to Detection Avoidance

Detection Avoidance (%/*N*)	Cluster 1 (No Detection Avoidance) *N* = 255 (72.9%)	Cluster 2 (Detection Avoidance) *N* = 95 (27.1%)
Destroyed/removed evidence	0.0% (0)	100.0% (95)
Cleaned self and/or scene	2.4% (6)	9.5% (9)
Disposed of body	9.4% (24)	15.8% (15)
Victim's body moved	29.4% (75)	46.3% (44)

4.1.3. K-Means Cluster Analyses – Control

Three variables related to the offender's control of the victim revealed a two-cluster solution which is provided in Table 4-3. The *No Control* cluster makes up the majority of the offenders (*N* =322, 92.0%), indicating that very few cases of sexual murder in the sample involve an attempt to subdue or restrain the victim. None of the murders in the *No Control* cluster involved the use of gags or blindfolds (0.0%), and only a small number of offenders in this group used restraints or ties to control their victim (8.1%). Even fewer cases involved the offender administering a drug to the victim (3.4%), and no significant differences were found between the two clusters in regards to this behavior. A small group of sexual murderers formed the *Control* cluster (*N* = 28, 8.0%). This group is distinguished by the use of gags or blindfolds in every case (100.0%), as well as an increased likelihood in the use of restraints and ties against the victim (42.9%).

Table 4-3. K-Means Two Cluster Solution Using Variables Related to Control

Control (%/*N*)	Cluster 1 (No Control) *N* = 322 (92.0%)	Cluster 2 (Control) *N* = 28 (8.0%)
Administered drug to victim	3.4% (11)	3.6% (1)
Use of gags/blindfolds	0.0% (0)	100.0% (28)
Use of restraints/ties	8.1% (26)	42.9% (12)

4.1.4. K-Means Cluster Analyses – Offender Approach

Table 4-4 displays the results for the K-means two cluster solution using variables related to the offender's approach. The first cluster in this solution, *Target/Blitz,* contains fewer offenders, making up around one fifth of the sample (*N* = 67, 19.1%). The majority of the offenders in this group target their victim (55.2%), and a small but significant number of these cases involve the offender surprising the victim (13.4%). Almost two-thirds of the *Target/Blitz* group will use a blitz style of attack to carry out these crimes (64.2%). Conversely, the *Con* group (*N* = 283, 80.9% of the sample) contains no instances in which the offender approaches the victim with a blitz attack (0.0%). In this case, just over half of the homicides are initiated by the offender's use of a con or ruse to approach the victim (50.2%). This second cluster is less likely to

target the victim (10.2%), and unlikely to approach using a strategy that involves surprising the victim (5.7%).

Table 4-4. K-Means Two Cluster Solution Using Variables Related to Offender Approach

Offender Approach (%/*N*)	Cluster 1 (Target/Blitz) *N* = 67 (19.1%)	Cluster 2 (Con) *N* = 283 (80.9%)
Victim targeted	55.2% (37)	10.2% (29)
Offender used con	0.0% (0)	50.2% (142)
Offender surprised victim	13.4% (9)	5.7% (16)
Offender blitzed victim	64.2% (43)	0.0% (0)

4.1.5. K-Means Cluster Analyses – Sexual Acts

A two cluster solution emerged using variables related to the sexual acts that may have taken place before, during, or after the murder (displayed in Table 4-5). The first cluster was distinguished by the offender's use of an inanimate object when engaging in sexual acts with the victim. The *Inanimate Object* cluster (*N* = 232, 66.5%) contains the majority of the cases in this sample, and while only a small number of offenders inserted an inanimate object into the victim at all (14.2%), this behavior was significantly more likely to occur in this group, than in the *Intercourse* cluster (*N* =117, 33.5% of the sample). Only a small number of *Intercourse* cases involve the insertion of a foreign object into the victim (6.8%). Instead, the *Intercourse* cluster is far more likely to engage in physical intercourse with the victim, with a large majority of these cases involving vaginal intercourse (82.9%), and not surprisingly, evidence of semen at the crime scene (80.3%). This group was also more likely to engage in anal intercourse with the victim (41.0%), as well as fellatio (17.9%). Lastly, although not a significant difference between the two clusters, the *Intercourse* group consists of slightly more cases involving the fondling of the victim (11.1%).

Table 4-5. K-Means Two Cluster Solution Using Variables Related to Sexual Acts

Sexual Acts (%/*N*)	Cluster 1 (Inanimate Object) *N* = 232 (66.5%)	Cluster 2 (Intercourse) *N* = 117 (33.5%)
Vaginal intercourse	28.0% (65)	82.9% (97)
Anal intercourse	3.9% (9)	41.0% (48)
Fellatio	3.9% (9)	17.9% (21)
Fondling	8.2% (19)	11.1% (13)
Inanimate object insertion	14.2% (33)	6.8% (8)
Semen located	1.3% (3)	80.3% (94)

4.1.6. K-Means Cluster Analyses – Type of Violence

K-means cluster analysis was also conducted using variables on the type of violence involved in the crime; a two cluster solution was identified and is displayed in Table 4-6. The *Beat/Strangle* cluster is a smaller group (*N* = 91, 26.0% of the sample), but distinguished by a majority of these homicides involving the beating of the victim (85.7%). Almost every *Beat/Strangle* case consisted of the offender strangling the victim at some point during the crime (97.8%); it follows that this group is also more likely to asphyxiate the victim (37.4%). Also, there is a higher likelihood that sexual murderers found in the *Beat/Strangle* cluster will bite their victims (18.7%). Murders involving the use of a firearm are quite rare, especially in the *Beat/Strangle* cluster (only 2.2% of these cases involve a gunshot).

More offenders make up the second cluster: *Stab* (*N* = 259, 74.0% of the sample). Gunshots are slightly more likely in this group (5.4%), but do not suggest a significant difference between the two clusters in regards to this type of violence. This second cluster of offenders is less likely to beat (33.6%), strangle (22.0%), asphyxiate (4.2%), or bite (3.5%) their victim. However, nearly a third of these cases involve the stabbing or cutting of the victim (30.1%), a significant increase when compared to the *Beat/Strangle* offenders.

Table 4-6. K-Means Two Cluster Solution Using Variables Related to Type of Violence

Type of Violence (%/*N*)	Cluster 1 (Beat/Strangle) *N* = 91 (26.0%)	Cluster 2 (Stab) *N* = 259 (74.0%)
Beating	85.7% (78)	33.6% (87)
Stabbing/cutting	15.4% (14)	30.1% (78)
Strangulation	97.8% (89)	22.0% (57)
Asphyxiation	37.4% (34)	4.2% (11)
Gunshot	2.2% (2)	5.4% (14)
Biting	18.7% (17)	3.5% (9)

4.1.7. K-Means Cluster Analyses – Post-Mortem Activities

The results for the K-means cluster analysis pertaining to the offender's post-mortem activities are portrayed in Table 4-7. A two cluster solution emerged: a large number of offenders are represented in the *Item-Taking* cluster (*N* = 302, 86.5% of the sample), while a smaller group, *Post-Mortem Harm,* represents those cases that involve the physical or sexual abuse of the victim following the murder (*N* = 47, 13.5% of the sample). *Item-Taking* is distinguished by a number of cases involving removing objects as possible trophies or souvenirs from the crime scene (38.7%). This cluster also displays the total absence of any post-mortem sexual activity with the victim (0.0%), as well as very few cases involving the genital mutilation of the victim (1.0%). Only a small number of cases in this group involve post-mortem dismemberment (4.0%). There were a number of sexual murders in the *Item-Taking* group that did involve overkill (41.4%), however, this was significantly less than the likelihood of overkill in the *Post-Mortem Harm* cluster.

Over half of the *Post-Mortem Harm* cases include overkill of the victim (55.3% of cases). The *Post-Mortem Harm* cluster is most strongly distinguished by the likelihood of the offender engaging in post-mortem sexual activity with the victim (78.7%). Cases involving genital mutilation (34.0%) and dismemberment (21.3%) were also much more likely in this cluster. These post-mortem events are reported in cases of sexual murders, but generally occur infrequently and are considered rare and somewhat bizarre events; in this *Post-Mortem Activity* cluster, these events are involved in a significant number of

cases. Around one third of this group did take items from the crime scene (31.9%), as but this was less likely than in the *Item-Taking* group.

Table 4-7. K-Means Two Cluster Solution Using Variables Related to Post-Mortem Activities

Post-Mortem Activities (%/*N*)	Cluster 1 (Item-Taking) *N* = 302 (86.5%)	Cluster 2 (Post-Mortem Harm) *N* = 47 (13.5%)
Mutilate genitalia	1.0% (3)	34.0% (16)
Overkill	41.4% (125)	55.3% (26)
Items taken	38.7% (117)	31.9% (15)
Post-mortem sexual activity	0.0% (0)	78.7% (37)
Dismemberment	4.0% (12)	21.3% (10)

4.1.8. K-Means Cluster Analyses – Final Two-Cluster Solution

A final K-means cluster analysis was conducted using the previous two-cluster solutions as input variables. The results of this analysis are displayed in Table 4-8. Cluster 1, the *Cautious* group of sexual murderers (*N* = 137, 39.54% of the sample) shares more characteristics with the FBI's organized offender, than does Cluster 2, the *Careless* group (*N* = 211, 60.6% of the sample). Overall, the majority of the *Cautious* offenders are more likely to select a victim of high-vulnerability versus low-vulnerability, but not to the extent that the *Careless* offender will seek out a high-risk victim. More cases in the *Cautious* cluster involved victims who are less vulnerable (40.1%) and more likely to be a male, older, and known to the offender. Almost all of the *Careless* cases (95.7%) involve victims who are considered high-risk – younger females, who are more likely to be sex-trade workers and strangers to the offender. The two clusters can also be distinguished by differences in detection avoidance behaviors. Over half of the *Cautious* cases involve the offender attempting to clean up or destroy evidence from the crime scene (54.7%). Conversely, only a small number of *Careless* cases can be distinguished by the offender's effort to conceal forensic evidence (9.5%); the large majority of these offenders are not concerned with avoiding detection. A small, but significantly higher number of *Cautious* cases involve the offender attempting to control the victim, by using restraints or gags to keep the victim confined and quiet (11.7%). Very few *Careless* offenders made such attempts (5.7%).

The majority of offenders in both clusters use a con to approach and gain access to the victim. However, the *Careless* cluster is significantly more likely to use this manipulative strategy (84.4% of the time) than the *Cautious* offenders *(*75.9%); the *Cautious* cases involve more cases that include targeting and blitzing the victim. *Cautious* cases are more likely to involve penetration of the victim with an inanimate or foreign object (87.6%) versus intercourse with the victim. This behavior may also be tied to the *Cautious* offender's detection avoidance strategies and awareness of forensic evidence. Not engaging in vaginal or anal intercourse with the victim likely ensures that the offender's semen will not be left at the crime scene. Just over half of the *Careless* cases involve sexual activity with a foreign object (52.6%). Nearly as many cases in this cluster did involve sexual intercourse with the victim (vaginally or anally), and are identified by the presence of semen at the crime scene.

Careless crimes are distinguished by the type of violence used against the victim; a large majority of these offenders are likely to stab and cut the victim (89.6%). *Cautious* sexual murders, on the other hand, involve the stabbing and cutting of the victim in under half of the cases (49.6%). This cluster is more likely to beat and strangle the victims. Very similar rates of post-mortem activities were displayed by both clusters. There seems to be no significant differences between the *Cautious* offenders who engage in post-mortem activities (13.9%) and the *Careless* cases involving these same behaviors (13.3%).

Table 4-8. K-Means Two-Cluster Model Using K-Means Cluster Solutions as Input Variables (*N* = 348)

	Cluster 1 (Cautious) *N* = 137 (39.4%)	Cluster 2 (Careless) *N* = 211 (60.6%)
Victimology		
Low-Vulnerability (%/N)	40.1% (55)	4.3% (9)
High-Vulnerability	59.9% (82)	95.7% (202)
Detection Avoidance		
Yes (%/N)	54.7% (75)	9.5% (20)
No	45.3% (62)	90.5% (191)
Control		
Yes (%/N)	11.7% (16)	5.7% (12)
No	88.3% (121)	94.3% (199)
Offender Approach		
Target/Blitz (%/N)	24.1% (33)	15.6% (33)
Con	75.9% (104)	84.4% (178)
Sexual Acts		
Intercourse (%/N)	12.4% (17)	47.4% (100)
Inanimate object	87.6% (120)	52.6% (111)
Type of Violence		
Beat/strangle (%/N)	50.4% (69)	10.4% (22)
Stab	49.6% (68)	89.6 % (189)
Post-Mortem Activities		
Post-mortem harm (%/N)	13.9% (19)	13.3% (28)
Item-Taking	86.1% (118)	86.7% (183)

4.2. Latent Class Results

4.2.1. Latent Class Model – Victimology

Latent class analysis was conducted using variables related to victimology. A two-class solution emerged. This solution, while not exceptionally strong based on statistical significance (L^2 = 72.96, p = 0.01)[2] (see Table 4-9), does exhibit qualitative strength with the emergence of two distinct groups based on the victim's level of vulnerability. The first class in this solution, *High-Vulnerability* consists of 66.8% of the sample (*N* = 233). Victims in this class are younger (*M* = 26.9 years), and are more likely to be strangers (38.2%). None of the victims in this group are acquaintances to the offenders (0.0%). Furthermore, *High-Vulnerability* victims are more likely to be sex trade

workers (21.0%). Victims in the second class, *Low-Vulnerability (N* = 116, 33.2% of the sample), are slightly older (*M* = 29.2 years). This second class is distinguished by an increase in the frequency of male victims (19.8%) as well as the increased likelihood that the victim will be an acquaintance to the offender (100.0%). Only a small number of the *Low-Vulnerability* victims are sex trade workers (11.2%) and even fewer are strangers (0.9%).

Table 4-9. Latent Class Two-Cluster Model Using Variables Related to Victimology

Victimology (%/*N*)	Class 1 (High-Vulnerability) *N* = 233 (66.8%)	Class 2 (Low-Vulnerability) *N* = 116 (33.2%)
Victim is male	5.6 % (13)	19.8% (23)
Victim's age (mean)	26.9	29.2
Victim is a stranger	38.2 % (89)	0.9 % (1)
Victim is an acquaintance	0.0 % (0)	100.0 % (116)
Victim is a sex trade worker	21.0 % (49)	11.2 % (13)

4.2.2. Latent Class Model – Detection Avoidance

Using the variables related to detection avoidance, latent class analysis revealed a two-class solution that is both statistically significant, as well as theoretically sound (L^2 = 9.91, p = 0.13)[3]. These results are displayed in Table 4-10. The majority of the sample makes up the first class, *No Detection Avoidance* (*N* = 254, 72.6%). No offenders in this class display any behaviors related to destroying or removing evidence from the crime scene (0.0%) and very few offenders make an effort to clean up (either themselves or the crime scene) (2.0%). Offenders in this first class are also less likely to dispose of the victim's body (9.4%). A number of sexual murderers in the *No Detection Avoidance* group do, in fact, move the victim's body (29.1%), but this is far less likely to occur in this group, than compared to the other class. The *Detection Avoidance* class (*N* = 96, 27.4% of the sample) is distinguished by behaviors related to forensic awareness and a desire to elude investigators. Almost all of the offenders in the *Detection Avoidance* class are likely to destroy or remove evidence from the crime scene (99.0%), and nearly half of these sexual murderers will move the victim's body to a subsequent location (46.9%). Fewer offenders in this group will dispose of the victim's body (15.6%),

or attempt to clean up post-offense (10.4%); however, these behaviors do occur in greater frequency in the *Detection Avoidance* class than compared to *No Detection Avoidance.*

Table 4-10. Latent Class Two-Cluster Model Using Variables Related to Detection Avoidance

Detection Avoidance (%/*N*)	Class 1 (No Detection Avoidance) *N* = 254 (72.6 %)	Class 2 (Detection Avoidance) *N* = 96 (27.4 %)
Destroyed/removed evidence	0.0% (0)	99.0% (95)
Cleaned self and/or scene	2.0% (5)	10.4% (10)
Disposed of body	9.4% (24)	15.6% (15)
Victim's body moved	29.1% (74)	46.9% (45)

4.2.3. Latent Class Model – Control

Latent class analysis was then conducted using three variables related to the offender's attempts to control of the victim. Results presented in Table 4-11 suggest two classes of offenders: those who do attempt to control the victim, and those who do not (L^2 = 3.20, bootstrap p = 0.10)[4]. This two cluster solution suggests a moderate fit for the data. The majority of offenders are classified as using *No Control* (*N* = 296, 84.6% of the sample) when engaging with the victim. None of these sexual murderers use gags or blindfolds on their victims (0.0%), nor do any *No Control* offenders attempt to restrain the victim using ties (0.0%). Sexual murderers in this first group are actually more likely to administer a drug to the victim (3.7%), but this behavior occurs very infrequently, overall. The *Control* class accounts for a much smaller group of offenders (*N* = 54, 15.4% of the sample). All of the offenders in the full sample who do attempt to gag or blindfold the victim are found in this class (51.9% of the group). The *Control* class also includes all of the offenders who use restraints or ties (70.4% of the class). Only one sexual murderer in the *Control* class provided a drug to the victim (1.9%). This is lower than compared to the *No Control* group, but the difference between frequencies, in this case, is minimal.

Table 4-11. Latent Class Two-Cluster Model Using Variables Related to Control

Control (%/*N*)	Class 1 (No Control) *N* = 296 (84.6%)	Class 2 (Control) *N* = 54 (15.4%)
Administered drug to victim	3.7% (11)	1.9% (1)
Use of gags/blindfolds	0.0% (0)	51.9% (28)
Use of restraints/ties	0.0% (0)	70.4% (38)

4.2.4. Latent Class Model – Offender Approach

Variables related to the offender's strategy in approaching the victim were used to conduct latent class analysis, resulting in two distinct groups. These results are displayed in Table 4-12. While the model fit data for this solution does not suggest a significantly strong finding (L^2 = 27.64, p = 0.00)[5], the results do have strong meaning from a qualitative standpoint. Just over half of the sample of offenders is found in the *Blitz* cluster (*N* = 208, 59.4%). This group can be distinguished by their increased likelihood to surprise the victim (12.0%), or approach the victim with a blitz attack (20.7%). No sexual murderers in this first class attempt to lure the victim using a con (0.0%). The *Blitz* offenders are also less likely to target the victim (17.9%). Conversely, the second class, *Con (N* = 142, 40.6% of the sample) is made up entirely of those sexual murderers who do use a con or ruse to approach the victim (100.0%). None of the offenders in the *Con* class utilized a strategy that involves surprising the victim (0.0%) or blitzing the victim (0.0%). Victims of the *Con* group were slightly more likely to be targeted by the offender (20.4%); however, this is only slightly higher than compared to the *Blitz* offenders.

Table 4-12. Latent Class Two Cluster Model Using Variables Related to Offender Approach

Offender Approach (%/*N*)	Class 1 (Blitz) *N* = 208 (59.4%)	Class 2 (Con) *N* = 142 (40.6%)
Victim targeted	17.9% (37)	20.4% (29)
Offender used con	0.0% (0)	100.0% (142)
Offender surprised victim	12.0% (25)	0.0% (0)
Offender blitzed victim	20.7% (43)	0.0% (0)

4.2.5. Latent Class Model – Sexual Acts

Latent class analysis was then conducted using variables related to sexual acts. These results are displayed in Table 4-13, and are similar to the model fit results for Table 4-12. In the case of sexual activity, a two class solution was selected (L^2 = 94.4871, p = 0.00)[6]. While not the most statistically significant solution, a two-class model is the most parsimonious, and is the most suitable, theoretically, and can be interpreted as two distinct groups. The two groups differ by the offender's likelihood to engage in physical sexual contact with the victim (i.e. intercourse), versus using an inanimate object to perform sexual acts on the victim. Class one, *Intercourse,* contains just over half of the offenders (*N* = 190, 54.4%). A strong majority of *Intercourse* sexual murderers engaged in vaginal intercourse with the victim (81.1%). Nearly a third of the cases in this group included anal intercourse with the victim (30.0%). Over half of these offenders left semen behind, either on the victim or at the crime scene (51.1%). *Intercourse* sexual murderers are more likely to force their victim to perform fellatio (15.8%), and are also more likely to fondle the victim (12.6%). This group of offenders is less likely to use an inanimate object to perform sexual acts on the victim (7.4%).

Just under half of the sample make up cluster two, *Inanimate Object* (*N* = 159, 45.6%). No offenders in the class engaged in anal intercourse with the victim (0.0%), and only a small percentage of these cases involve vaginal intercourse (5.0%). No semen was detected on the victim or at the crime scene in any of the *Inanimate Object* cases (0.0%). There were no instances involving fellatio between the offender and victim (0.0%), and fondling was also less likely in this second cluster (5.0%). Offenders in the *Inanimate Object* class are more likely than the *Intercourse* offenders to use an inanimate object to perform sexual acts on the victim; 17.0% of the cases in this second group involve the use of a foreign object to sexually penetrate the victim.

Table 4-13. Latent Class Two-Cluster Model Using Variables Related to Sexual Acts

Sexual Acts (%/*N*)	Class 1 (Intercourse) *N* = 190 (54.4%)	Class 2 (Inanimate object) *N* = 159 (45.6%)
Vaginal intercourse	81.1% (154)	5.0% (8)
Anal intercourse	30.0% (57)	0.0% (0)
Fellatio	15.8% (30)	0.0% (0)
Fondling	12.6% (24)	5.0% (8)
Inanimate object insertion	7.4% (14)	17.0% (27)
Semen located	51.1% (97)	0.0% (0)

4.2.6. Latent Class Model – Type of Violence

Latent class analysis was conducted using variables related to the type of violence carried out by the offender. This analysis determined that a three-class solution was the most statistically significant (L^2 = 48.81, p = 0.25)[7]. However, a two-class solution also suggested adequate model fit (L^2 = 63.97, p = 0.09), was qualitatively superior, and more parsimonious; the two-cluster solution was therefore selected. The results, displayed in Table 4-14, suggest that the sexual murderers in this sample can be classified into two distinct groups determined by the type of violence used to carry out the offense. The first class in this analysis is identified as the *Strangle/Beat* group of offenders (*N* = 163, 46.6% of the sample). These sexual murderers are distinguished by their likelihood to strangle the victim during the attack (88.3%); it follows that this group of offenders are also the most likely to asphyxiate the victim (27.6%). Just over half of the cases in this class involve the beating of the victim (50.3%), and this group also demonstrates the highest number of instances of biting the victim (14.7%). No *Strangle/Beat* cases involve the use of a firearm (0.0%), and a small number of cases do involve the stabbing or cutting of the victim (13.5%), but this is not a distinguishing factor for the group.

The second class in this solution, *Stab*, consists of just over half of the cases in the full sample (*N* = 187, 53.4%). This group is distinguished by the much greater likelihood that the offender will stab or cut the victim during the attack (37.4%). This class also includes every sexual murder in the full sample that involves a gunshot (8.6%

of the cluster). A large number of *Stab* cases do involve the beating of the victim (44.4%), but this is slightly less than compared to the *Strangle/Beat* offenders. *Stab* cases seldom involve strangulation (1.1%), and no instances of asphyxiation are found in this cluster (0.0%). Offenders in this second cluster are also very unlikely to bite the victim (1.1%).

Table 4-14. Latent Class Two-Cluster Model Using Variables Related to Type of Violence

Type of Violence (%/*N*)	Class 1 (Strangle/Beat) *N* = 163 (46.6%)	Class 2 (Stab) *N* = 187 (53.4%)
Beating	50.3% (82)	44.4% (83)
Stabbing/cutting	13.5% (22)	37.4% (70)
Strangulation	88.3% (144)	1.1% (2)
Asphyxiation	27.6% (45)	0.0% (0)
Gunshot	0.0% (0)	8.6% (16)
Biting	14.7% (24)	1.1% (2)

4.2.7. Latent Class Model – Post-Mortem Activities

Finally, latent class analysis was conducted on variables related to post-mortem activities. These results are displayed in Table 4-15. The strongest solution, statistically speaking, is a two-class solution (L^2 = 21.95, p = 0.34)[8]. The first class contains an overwhelming majority of offenders in the sample, and is referred to as *Item-Taking (N* = 321, 92.0% of the sample). No cases in this class involve the mutilation of the victim's genitals post-mortem (0.0%), and there are very few instances of post-mortem dismemberment in this cluster (1.6%). Offenders in the *Item-Taking* class were also less likely to engage in post-mortem sexual activity with the victim (9.0%). While overkill is the most prevalent post-mortem behavior in this group (40.8%), it is still less likely to occur in this class. *Item-Taking* cases can be distinguished by the absence of harm inflicted on their victim post-mortem, but also by the increased likelihood that they may take a souvenir or trophy from the victim themselves, or from the crime scene (38.0%).

Conversely, *Post-Mortem Harm* is made up of a comparatively small number of offenders (*N* = 28, 8.0% of the sample) who are more likely to physically and sexually

abuse the victim post-mortem. The majority of these sexual murderers will mutilate the victim's genitals post-mortem (67.9%), as well as dismember the victim (60.7%). Sexual murders in this class are more likely to involve post-mortem sexual activity (28.6%). Overkill is also more likely for victims in the *Post-Mortem Harm* class *(*71.4%). While some offenders in this group will take items from the victims or from the crime scene, this event is less likely to be committed by murderers in this second group (35.7%).

Table 4-15. Latent Class Two-Cluster Model Using Variables Related to Post-Mortem Activities

Post-Mortem Activities (%/*N)*	Class 1 (Item-Taking) *N* = 321 (92.0%)	Class 2 (Post-Mortem Harm) *N* = 28 (8.0%)
Mutilate genitalia	0.0% (0)	67.9% (19)
Overkill	40.8% (131)	71.4% (20)
Items taken	38.0% (122)	35.7% (10)
Post-mortem sexual activity	9.0% (29)	28.6% (8)
Dismemberment	1.6% (5)	60.7% (17)

4.2.8. Latent Class Model – Final Cluster Solutions

Similar to the methods used earlier involving K-means cluster analyses, a final set of latent class solutions were generated using the previously created latent clusters as input variables. Table 4-16 provides the model fit information for the baseline latent class models. According to the likelihood ratio, L^2, and p value, the two-class, three-class, and four-class solutions were an appropriate fit to the data. A series of conditional bootstrap tests (Bootstrap -2LL Diff) were conducted to determine which model is statistically superior (Vermunt & Magidson, 2005). Results comparing the three-class solution with the four-class solution were not significant (p = 0.16). Based on the results of the non-significant conditional bootstrap, the classification error for the four-class solution (0.20), and in the interest of parsimony, the four-class solution was rejected as a suitable model. Results comparing the two-class solution to the three-class solution do suggest that the three-class solution is statistically superior (p = 0.02). However, because the two-class solution also suggests adequate model fit, is parsimonious, and qualitatively advantageous, the two-class model was further explored.

Table 4-16. Fit Indices of Baseline Latent Class Models

No. of classes	Likelihood ratio, L^2	df	BIC_{LL}	Npar	P value	Classification error
1	187.43	120	2816.41	7	0.00	0.00
2	**124.76**	**112**	**2800.55**	**15**	**0.19**	**0.15**
3	102.57	104	2825.18	23	0.52	0.23
4	87.20	96	2856.64	31	0.73	0.20

Note. Boldface type indicates the selected model. BIC = Bayesian information criterion; df = degrees of freedom

The final latent class two-class solution (L^2 = 124.76, p = 0.19) is displayed in Table 4-17. Class 1, the *Controlled* offenders, contains the majority of the sample (N = 243, 69.8%), and has more similarities to the FBI's organized offender, than does the second class of *Impetuous* sexual murderers. The majority of *Controlled* victims are more likely, overall, to be high-risk victims; however, in comparison to the second group, there are more *Controlled* cases involving low-vulnerability victims – those who are more likely to be older, male, and an acquaintance to the offender (44.0%). *Controlled* sexual murderers are also distinguished by an increased likelihood of engaging in detection avoidance strategies (37.4%), as well as increase in the use of restraints and ties, or gags and blindfolds, to attempt to control the victim (21.4%). While many *Controlled* offenders will attack the victim using a blitz attack, the majority of these cases involve the offender's use of a con to engage with and possibly lure the victim (58.0%). Offenders in this first class are also much more likely to have sexual intercourse with the victim (69.5%), versus using an inanimate object to penetrate the victim (30.5%). Although some *Controlled* offenders may stab or cut the victim (41.2%), the majority of *Controlled* cases involve violence consistent with the offender strangling, asphyxiating, and beating the victim (58.8%). Interestingly, despite this group's tendency to plan, plot, and attempt to avoid detection, *Controlled* offenders are, in fact, more likely to further harm the victim post-mortem, either physically or sexually (9.5%). And while a strong majority of these cases do involve the taking of items from the crime scene (90.5%), this behavior is actually less frequent than compared to the second class of offenders.

The second class that emerged from the sample is the *Impetuous* class (N = 105, 30.2% of the sample). This class shares some similarities with the FBI's disorganized

offender. This second group can be distinguished by the fact that nearly all of the cases in this class involve victims who are considered to be highly vulnerable: younger, females, work as sex trade workers, and strangers (91.4%). Very few *Impetuous* offenders are concerned with removing evidence from themselves or from the crime scene (4.8%), and even less are utilizing binds or ties to restrain and control the victim (1.0%). All of the offenders in this class are likely to approach the victim with a surprise attack (100.0%), rather than using a con to manipulate. Offenders who commit these types of crimes are more likely to use an inanimate object in their sexual acts against the victim (81.0%), and are less likely to engage in intercourse (19.0%). Some *Impetuous* offenders will beat and strangle their victims (19.0%); however, this is not the type of violence that distinguishes this group. Victims in these cases are most likely to experience violence that includes stabbing (81.0%). Lastly, *Impetuous* offenders are more likely to leave the crime scene with an item or souvenir (95.2%), but are less likely than the first group to inflict further abuse on the victim post-mortem (4.8%).

Table 4-17. Latent Class Two-Cluster Solution Using Latent Class Solutions as Input Variables (*N* = 348)

	Class 1 (Controlled) *N* = 243 (69.8%)	Class 2 (Impetuous) *N* =105 (30.2%)
Victimology		
High-vulnerability (%/N)	56.0% (136)	91.4% (96)
Low-vulnerability	44.0% (107)	8.6% (9)
Detection Avoidance		
Yes (%/N)	37.4% (91)	4.8% (5)
No	62.6% (152)	95.2% (100)
Control		
Yes (%/N)	21.4% (52)	1.0% (1)
No	78.6% (191)	99.0% (104)
Offender Approach		
Blitz (%/N)	42.0% (102)	100.0% (105)
Con	58.0% (141)	0.0% (0)
Sexual Acts		
Intercourse (%/N)	69.5% (169)	19.0% (20)
Inanimate object	30.5% (74)	81.0% (85)
Type of Violence		
Strangle/Beat (%/N)	58.8% (143)	19.0% (20)
Stab	41.2% (100)	81.0% (85)
Post-Mortem Activities		
Post-Mortem Harm (%/N)	9.5% (23)	4.8% (5)
Item-Taking	90.5% (220)	95.2% (100)

4.3. Supplementary Analyses

Supplementary analyses are conducted in order to examine the validity of the both the K-means cluster solution, as well as the latent class solution. Crime scene variables that were not included in the final models are examined to determine any similarities, or differences, between the solutions. *Chi*-square analyses are conducted to investigate and compare the strength and validity of the K-means and latent class solutions. Variables with more than 30 percent of missing cases are excluded from the supplementary analyses. Also excluded are variables that have a distribution exceeding 95% of cases in a single category. Table 4-18 presents the results for the single variable that is determined to be significantly related to the K-means cluster grouping: case status ($X^2 = 6.32$, $p < 0.05$). The majority of cases, overall, were solved by

investigators. Surprisingly, the *Cautious* cases are more likely to be solved than the *Careless* cases.

Table 4-18. Chi-Square Analyses Examining External Crime Scene Characteristics in Relationship to K-Means Solution

Variable	Cluster 1 (Cautious) *N* = 137 (39.4%)	Cluster 2 (Careless) *N* = 211 (60.6%)	X^2
Case status*			
Solved (%/N)	78.8% (108)	66.4% (140)	6.32
Unsolved	21.2% (29)	33.6% (71)	

*** p < 0.001, ** p < 0.01, *p < 0.05, † p < 0.10

More external variables are found to be significantly related to the latent two-class solution: these are displayed in Table 4-19. Case status is found to be significantly related to the two-class modal assignment ($X^2 = 37.81$, $p < 0.001$). Similar to the results comparing this variable to the K-means solution, solved cases are more likely to appear in the *Controlled* latent class. The body disposal method is also significant ($X^2 = 28.57$, $p < 0.001$): crimes categorized within the *Controlled* class are more likely to involve the offender wrapping and covering the body in preparation for disposal, as well as dismembering the victim. The victim's cause of death is also significantly related to the latent class solution ($X^2 = 13.11$, $p < 0.01$). While many cases in both classes were likely to involve a cause of death other than stabbing or strangulation, distinctions can be made between the two classes. Victims who died as a result of stabbing are more likely to be found in the *Impetuous* class; conversely, cases involving fatal strangulation and asphyxiation are more likely to take place in the *Controlled* group.

Table 4-19. Chi-Square Analyses Examining External Crime Scene Characteristics in Relationship to Latent Class Solution

Variable	Class 1 Controlled *N* = 243 (69.8%%)	Class 2 Impetuous *N* = 105 (30.2%)	X^2
Case status* **			
Solved (%/N)	81.1% (197)	48.6% (51)	37.81
Unsolved	18.9% (46)	51.4% (54)	
Body disposal method* **			
Wrapped/covered (%/N)	73.0% (173)	65.0% (65)	
Dismembered	18.6% (44)	6.0% (6)	28.57
Other	8.4% (20)	29.0% (29)	
Victim cause of death **			
Stabbing (%/N)	17.8% (37)	35.9% (23)	
Asphyxiation/strangulation	40.9% (85)	20.3% (13)	13.11
Other	41.3% (86)	43.8% (28)	

*** p < 0.001, ** p < 0.01, *p < 0.05, † p < 0.10

Chapter 5.

Discussion

The organized/disorganized dichotomy, as applied to sexual homicide, has only been empirically tested by Canter et al. (2004) and Sewall et al. (2013). Previously, there has been very little empirical validation for the model originally proposed by Hazelwood and Douglas (1980). Previous studies have suggested that the two-fold approach may be too simplistic, and that a continuum approach may be more suitable in classifying this group of offenders (Canter et al., 2004; Sewall et al., 2013). Empirical findings from other studies investigating sexual murder have proposed that offenders may be more appropriately classified as violent/angry or sadistic (Beauregard & Proulx, 2002; Beauregard et al., 2007; Proulx, Blais, & Beauregard, 2007). The current study used K-means cluster analyses and latent class analyses to attempt to determine if an organized/disorganized typology of sexual murderers can be supported by empirical evidence. The analyses do suggest that sexual murderers are a heterogeneous group that can be separated into two distinct types. The two methods revealed somewhat similar results suggesting that the organized/disorganized model does have some merit and that sexual murderers can be distinguished by their attempts to avoid detection, the level of control used against the victim, and the type of violence carried out during the crime. The latent class method offers even more support for the FBI's model; findings suggest that the organized/disorganized dichotomy may also apply to the offender's style of approach and sexual activities.

5.1. K-Means Findings: *Cautious* and *Careless*

The results of the K-means analyses did reveal two distinct clusters of sexual murderers: *Cautious* and *Careless.* The frequencies for each component are displayed in Figure 5-1 and Figure 5-2 representing the *Cautious* and *Careless* cluster,

respectively. The first sexual homicide grouping, the *Cautious* category, consists of offenders who are concerned with detection avoidance. In the current study, efforts to avoid detection are categorized by the offender attempting to destroy evidence, as well as disposing of or relocating the victim's body, so that it is not left at the original crime scene. These behaviors that demonstrate that the offender comprehends the importance of physical evidence to the investigation, have been categorized as forensic awareness strategies (Davies, 1992). These actions do support Ressler et al.'s (1988) notion that an organized group of sexual murderers exist who carefully and methodically plan their crimes, making efforts to minimize evidence and avoid apprehension. As Hazelwood and Douglas (1980) initially proposed, the organized (or nonsocial) offender is less likely to leave physical evidence behind at the crime scene. If there is enough time, even footprints and fingerprints will be wiped away by the organized sexual murderer, indicating a heightened level of awareness (Douglas et al., 2013). Conversely, *Careless* offenders show little concern for the removal of evidence or the disposal of the victim's body; this supports the notion that the *Careless* offenders are similar to disorganized offenders and lack the foresight and awareness to take the necessary steps to avoid detection. The *Cautious* sexual murderer is also similar to the FBI's organized sexual murderer in the level of control exercised over the victim. In the current study, more offenders in the *Cautious* category were found to use restraints and ties, as well as gags and blindfolds in order to subdue, or possibly torture the victim. Ressler et al. (1988) and Ressler et al. (1986b) suggest that the organized offender may use a variety of restraints against a victim; these may include ropes, chains, blindfolds, or clothing. The purpose here is to prolong the torture and killing of the victim – this gives the offender a sense of power and control. However, it should be noted that the results of the current study suggest that, overall, the majority of offenders in the full sample are not actually making any attempts to tie, restrain, or gag the victim – at least not to the extent that Ressler et al. (1988) suggest is typical of the organized sexual murderer. The *Careless* group is similar to the FBI's disorganized offender in terms of the lack of control involved in these crimes. As Ressler et al. (1988) suggest, restraints are unnecessary in disorganized sexual murderers because the killing takes place quickly; there is no need to subdue or tie up the victim for a lengthy period of time as the attack is brief and fatal.

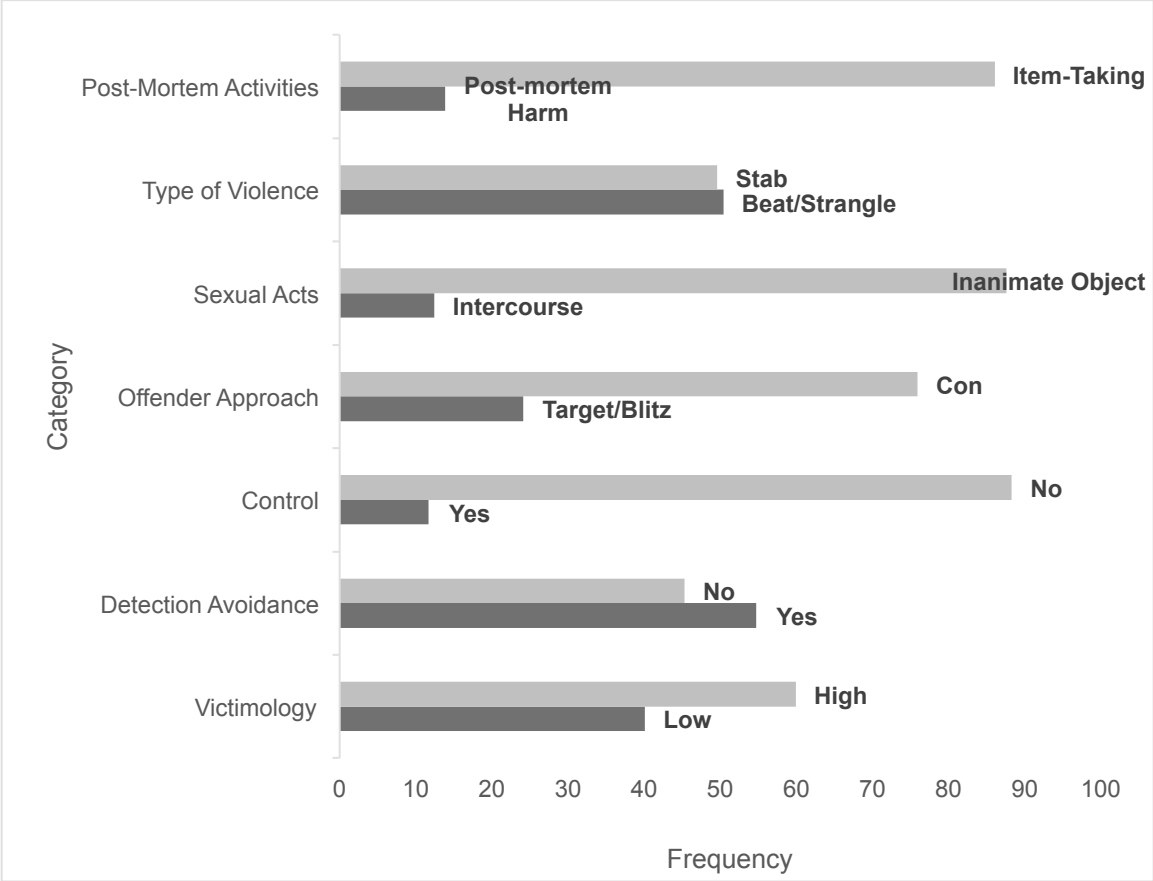

Figure 5-1. Results of K-Means Cluster Analysis for *Cautious* Cluster (*N*=137).
Note: Panels represent percentages for each component in categories of victimology, detection avoidance, control, offender approach, sexual acts, type of violence, and post-mortem activities.

Ressler et al. (1988) propose that the killing of the organized offender's victim is slow and deliberate; asphyxiation is commonly present in these murders. The results of the current study support this hypothesis. The *Cautious* offenders were much more likely than *Careless* offenders to beat and strangle their victims, than to stab. As reported by Carter and Hollin (2010), strangulation is the most common method of violence in all sexual homicide cases, and is also significantly higher than methods of killing in non-sexual homicides (Roberts & Grossman, 1993). Asphyxiation and biting, encompassed in the beat/strangle category, were both more likely to occur in offenses committed by *Cautious* offenders. These types of violence do support Ressler et al.'s (1988) claims that the organized offender chooses methods of violence that inflict pain and torture on the victim over a period of time, deriving pleasure from the lengthy, eroticized killing.

Douglas and colleagues (2013) specifically refer to organized sexual homicides involving the presence of bite marks, as well as an "asphyxial modality"; this refers to the loosening and tightening of a rope around the victim's neck and the resulting effects on the victim's level of consciousness (p. 207). It is worth noting that Douglas and colleagues' (2013) description of the sadistic sexual murderer is very similar to the organized offender in terms of the type of violence involved. The sadistic offender will also bite and asphyxiate the victim, with strangulation being the most common cause of death in these cases. Similar to the *Cautious* offenders in this study, beating and blunt force trauma are also commonalities in sadistic murder cases (Dietz, Hazelwood, & Warren, 1990). Sadistic sexual murderers are also more likely to involve careful planning and an awareness of forensic evidence and law enforcement (Dietz et al., 1990; Douglas et al., 2013). What does distinguish sadistic sexual murder from organized murders is the level of torture that is involved. Dietz et al. (1990) and Douglas et al. (2013) describe the sadistic sexual murderer's use of torture kits, with specific attention paid to the predominance of bondage in these crimes. In sadistic cases, the offender's satisfaction is derived from watching the victim respond to such extreme abuse. Because the crime scene variables used in this study did not explicitly attempt to test for sadism, it is more appropriate to suggest that the *Cautious* category shares more similarities with the organized sexual murderer than with the sadistic sexual murderer. Contrarily, *Careless* offenders are more likely to stab their victims, than to strangle and asphyxiate. While firearms were seldom detected in the entire sample, cases that included gunshots were more prevalent in the *Careless* group. This violence profile supports the existing portrait of the disorganized offender as an individual that commits a sexual murder in a swift and sudden way, with little pre-meditation or planning. Ressler et al. (1988) suggest that the disorganized offender's inadequacy in a variety of areas (e.g. social skills, intelligence and sexual experiences) contribute to the offender's need to hastily murder the victim and avoid losing control of the situation. However, Canter and colleagues have classified a firearm as an indicator of organization in their 2004 study. It could be argued that because a gun is not (usually) a weapon of opportunity, it is indicative of planning and preparation, consistent with the organized offender profile.

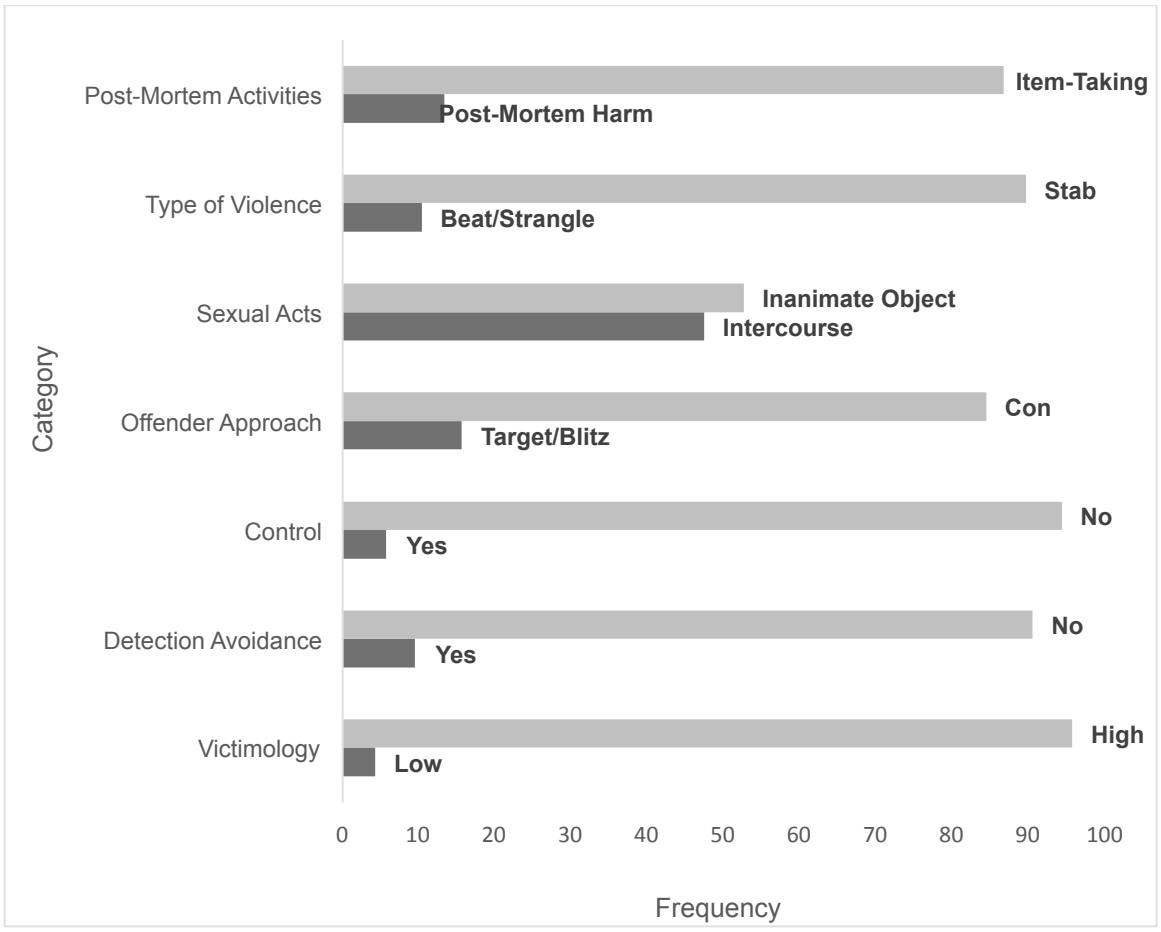

Figure 5-2. Results of K-means Cluster Analysis for *Careless* Cluster (N=211).
Note: Panels represent percentages for each component in categories of victimology, detection avoidance, control, offender approach, sexual acts, type of violence, and post-mortem activities

While the findings from the K-means analyses do support the organized/disorganized dichotomy in regard to detection avoidance, offender control, and the type of violence involved in the crime, other characteristics of the *Cautious* and *Careless* groups suggest findings that challenge the FBI's two-fold approach. Ressler et al. (1988) and Douglas et al. (2013) claim that the organized offender is likely to select a victim that is a targeted stranger. The current's study's findings suggest that the *Cautious* and *Careless* groups do differ in terms of victim selection and the type of approach; however, these distinctions do not support the FBI's hypothesis that victims of organized sexual murders are likely to be unknown. The current study suggests that the *Cautious* group is actually more likely to select victims that are acquaintances, rather

than strangers. This is also in contrast to findings by Beauregard and colleagues (2007) concluding that sadistic murderers are more similar to organized than disorganized offenders because of a variety of factors, including the selection of a previously unknown victim. *Cautious* cases are also more likely to involve victims who are less vulnerable. In the current study, victims are considered less vulnerable if they are male, older, and less likely to be sex-trade workers. This victim profile contrasts with the typical victim selection strategy discussed by Ressler et al. (1988) and Douglas et al. (2013). According to them, the typical organized offender may stake out a victim over a period of time, waiting for a scenario in which a vulnerable victim can be found (taking into account age, gender, physicality, and lifestyle routine); this lessens the risk taken by the offender. The organized offender may also seek out a low-risk crime scene (e.g. indoors, nighttime). These factors suggest that the victims of typical organized sexual murders are victims of opportunity in the sense that the offender may have planned the crime, but may have waited to act until a highly-vulnerable victim, and low-risk opportunity, presents itself. Instead, the current study finds that the *Careless* victims are actually more vulnerable: younger, female, and more likely to be involved in the sex trade. These victims are less likely to be acquaintances. This contrasts with the idea that the disorganized offender may impulsively select a known victim who is going about their typical, daily activities (Douglas et al., 2013).

The organized/disorganized model also posits that the distinctions can be made between sexual murderers based on the approach used by the offender; the organized offender is likely to target the victim and because of his proficient intelligence and social skills, is able to con and lure the victim elsewhere (Ressler et al., 1988; Douglas et al., 2013). The current study suggests that there are some minor differences between *Cautious* and *Careless* offenders in regards to the method used in approaching the victim. Despite the fact that the *Cautious* victims are more likely to be acquaintances, these victims are more often targeted, but also more likely to be surprised and blitzed by the offender. While this finding of *Cautious* offenders targeting victims is in line with the organized offender profile, the style of attack is not. While cases in both the *Cautious* and *Careless* groups are more likely to involve the use of a con or ruse than a spontaneous offense, more blitz attacks are actually carried out by *Cautious* offenders. It appears that this group does engage in a level of planning and pre-meditation

(indicated by the targeting of the victim), but is not more likely to use verbal means or impersonation methods to deceive the victim. It does make sense, however, that if more of the victims in the *Cautious* category are known acquaintances, then more ambush-style attacks may be necessary. If the victim and offender do have an existing relationship, on some level, then an elaborate ruse may be required in order to manipulate the victim and lure them to a vulnerable location. It may be more advantageous for the offender to ambush and attack an acquaintance, than to attempt to deceive. Perhaps if the victim were a child, and the offender an adult acquaintance, this deception would be easier to carry out. But because the *Cautious* victims are older than *Careless* victims, this victim-offender relationship may be part of the explanation for the greater likelihood of blitz attacks occurring in *Cautious* cases. It should be noted that, in this study, an offender approach involving a con was more prevalent for both groups, than was a surprise attack. Offenders in both categories are utilizing a manipulative strategy when it may benefit them. This suggests that if an organized/disorganized distinction does exist, disorganized offenders may not be as socially and intellectually inept as previously suggested.

The current method finds that the sexual acts committed by sexual murderers can be separated into two separate groups. However, these findings do not necessarily support the organized/disorganized hypothesis. The *Cautious* category of offenders are far less likely than *Careless* offenders to engage in intercourse or other sexual acts that involve physical body contact with the victim. Vaginal and anal intercourse are more common in *Cautious* cases, as are instances of fondling and fellatio. Semen is more likely to be found at *Careless* crime scenes, that is not surprising considering that these are the offenders engaging in intercourse with the victims. Conversely, the *Cautious* cases are more likely to involve no intercourse, as well as a greater probability of inanimate object insertion. These findings contrast with the ideas put forth by Hazelwood and Douglas (1980), Ressler et al. (1988), and Douglas et al. (2013). According to the FBI's model, it is the organized offender who is likely to engage in pre and peri-mortem sexual acts with the victim. Hazelwood and Douglas (1980) propose that is the nonsocial (organized) offender who will have intercourse with the victim, and that the disorganized (asocial) offender will use foreign objects to probe the victim's body. This is because the disorganized offender feels sexually incompetent, and any

sexual acts are likely to be performed post-mortem. Organized offenders, on the other hand, derive satisfaction from sexual acts that are inflicted on the victim while he or she is still alive. However, it is possible that because *Cautious* offenders may be concerned with avoiding detection, it is a protective and advantageous strategy to avoid intercourse, lessening the probability of leaving more physical evidence behind. *Careless* offenders may actually be exhibiting their recklessness and lack of control by engaging in sexual activity and leaving forensic evidence at the scene. However, the issue of whether or not the presence of semen is indicative or organization or disorganization seems to be contingent upon where at the crime scene the semen is found. In the *Crime Classification Manual* the presence of semen in or on the body, and alongside bite marks and saliva, may indicate an organized sexual homicide, as this forensic evidence may demonstrate the offender's ritualized sexual fantasies. Semen found on the victim's clothing, or in a victim's wound, is considered a disorganized behavior, and may take place post-mortem (Douglas et al., 2013). The exact location of semen found at *Cautious* and *Careless* crime scenes in unknown. What can be concluded is that *Careless* sexual murderers are more likely to engage in sexual activities with victims, and be less concerned with leaving forensic evidence behind.

According to the results of the K-means analyses, the *Cautious* and *Careless* offenders engage in similar post-mortem activities in cases of sexual homicide. These types of crime scene behaviors do not seem to suggest that two distinct groups of sexual murderers can be typified. Each group is almost equally as likely to harm the victim post-mortem as they are to take items from the crime scene. Overkill is relatively common in both categories. Genital mutilation, dismemberment, and post-mortem sexual activity occur in both *Cautious* and *Careless* cases, however, these events occur very rarely. Overall, the majority of these sexual homicide cases do not involve any instances of necrophilia or harm after the victim is deceased. According to the FBI's model, it is typically the disorganized offender who is likely to perform post-mortem mutilation and dismemberment on the victim. Overkill is associated with disorganized cases, as is the mutilation of the victim's genitals, breast, and face (Ressler et al., 1988; Douglas et al., 2013). The disorganized offender may even take body parts from the crime scene. According to the organized/disorganized model, this severe level of violence and harm to the victim's body is a result of the disorganized offender's attempt

to depersonalize and dehumanize the victim. However, Hazelwood and Douglas (1980) initially proposed that dismemberment is actually more likely to be performed by the organized sexual murderer, in an attempt to prevent the identification of the victim. Beauregard and colleagues (2007) support the notion that dismemberment and mutilation may be pre-meditated behaviors representative of sadism. The dissection and amputation of a victim may allow for easier body disposal methods, and mutilation may be indicative of ritualized, sexual fantasies. Whether dismemberment signifies an organized or disorganized behavior seems contingent upon the motivation behind it. If it is performed in order to minimize evidence and dispose of the victim, it can be seen as an organized characteristic. If the victim is amputated during in a case of violent overkill, this is more likely committed by the disorganized sexual murderer. Instances of dismemberment and mutilation in the current study may have been committed by offenders with different motivations; this may be part of the reason why there are no significant differences between the *Cautious* and *Careless* offenders in regards to these aspects. Item taking has been suggested as an organized trait; offenders may take something belonging to the victim (e.g. a lock of hair, a piece of clothing) as a reminder of the crime, or to use in reliving fantasies (Douglas et al., 2013; Hazelwood & Douglas, 1980). The *Cautious* offenders in the current study were not any more likely to remove articles from the crime scene. Despite the fact that these behaviors occur infrequently, they do garner a great deal of attention in the literature. Canter et al. (2004) concluded that most cases of sexual murder do have similar elements of organization, but it is these bizarre, disorganized acts that may distinguish types of offenders. They point out that violence directed towards a victim's body is not the same as violence directed towards a victim's belongings or property – these are different forms of disorganization and should be treated as such. The results of the K-means analyses in this study suggest moderate support for the organized/disorganized dichotomy. *Cautious* and *Careless* offenders do seem to differ in their detection avoidance strategies, offender control, and patterns of violence, each mirroring a profile similar to the organized/disorganized offender, respectively. However, *Cautious* offenders are not more likely to select unknown victims and approach using a con. Instead, victims who are acquaintances and attacked by surprise are more likely to be victimized by *Cautious* offenders. The organized/disorganized dichotomy is also not supported by findings related to offenders' sexual activities. It is the *Cautious* sexual murderers who are

selecting object penetration over intercourse, and the *Careless* offenders who are engaging in both vaginal and anal intercourse pre and peri-mortem. However, the increased likelihood of semen at *Careless* crime scenes does support the FBI model, suggesting a lack of forensic awareness. Finally, while the organized/disorganized dichotomy proposes that post-mortem violence and harm can determine the type of offender, no such differences were found between *Cautious* and *Careless* offenders using the K-means method.

5.2. Latent Class Findings: *Controlled* and *Impetuous*

The findings from the latent class analyses also revealed two distinct classes of offenders, *Controlled* and *Impetuous,* which are somewhat similar to the results from the K-means analyses. Figure 5-3 and Figure 5-4 portray the frequencies for each component within each category for the *Controlled* (Figure 5-3) and *Impetuous (*Figure 5-4) class. The latent class results offer more support for the organized/disorganized model than did the K-means method. *Controlled* offenders, like the *Cautious* category, are similar to Ressler et al.'s (1988) organized offender in areas relating to detection avoidance, control, and type of violence. *Controlled* offenders are concerned with avoiding detection and will make an effort to clean up the crime scene, as well as move and dispose of the body. Restraints and ties are also more likely to be used by *Controlled* sexual murderers. *Impetuous* offenders share similarities with the *Careless* sexual murderer, and the FBI's disorganized offender. These offenders do not devote time or effort to detection avoidance efforts, nor do they bind or tie the victim. *Controlled* cases are more likely to involve the beating and strangling of the victim. Again, there are consistencies with the organized offender as this type of violence suggests a more methodical and tortuous approach. *Impetuous* offenders, like the disorganized sexual murderer, are more likely to commit their crimes in haste and will more often stab the victim, than beat or strangle.

The latent class method revealed the same victimology profiles for *Controlled* and *Impetuous* offenders, as did the K-means approach for the *Cautious* and *Careless* categories. However, like the previous method, these findings do not support the organized/disorganized model. If *Controlled* offenders are similar to organized

offenders, then the victims they select should be highly vulnerable, posing less of a risk to the offender. This is not the case. *Controlled* victims are slightly older, and more likely to be males and acquaintances. Instead, *Impetuous* victims are much more vulnerable; these victims are strangers and sometimes sex-trade workers. This finding challenges the notion that disorganized offenders may lack the competence and confidence to seek out a high-risk victim, and instead settle for a known acquaintance in a familiar location (Ressler et al., 1988).

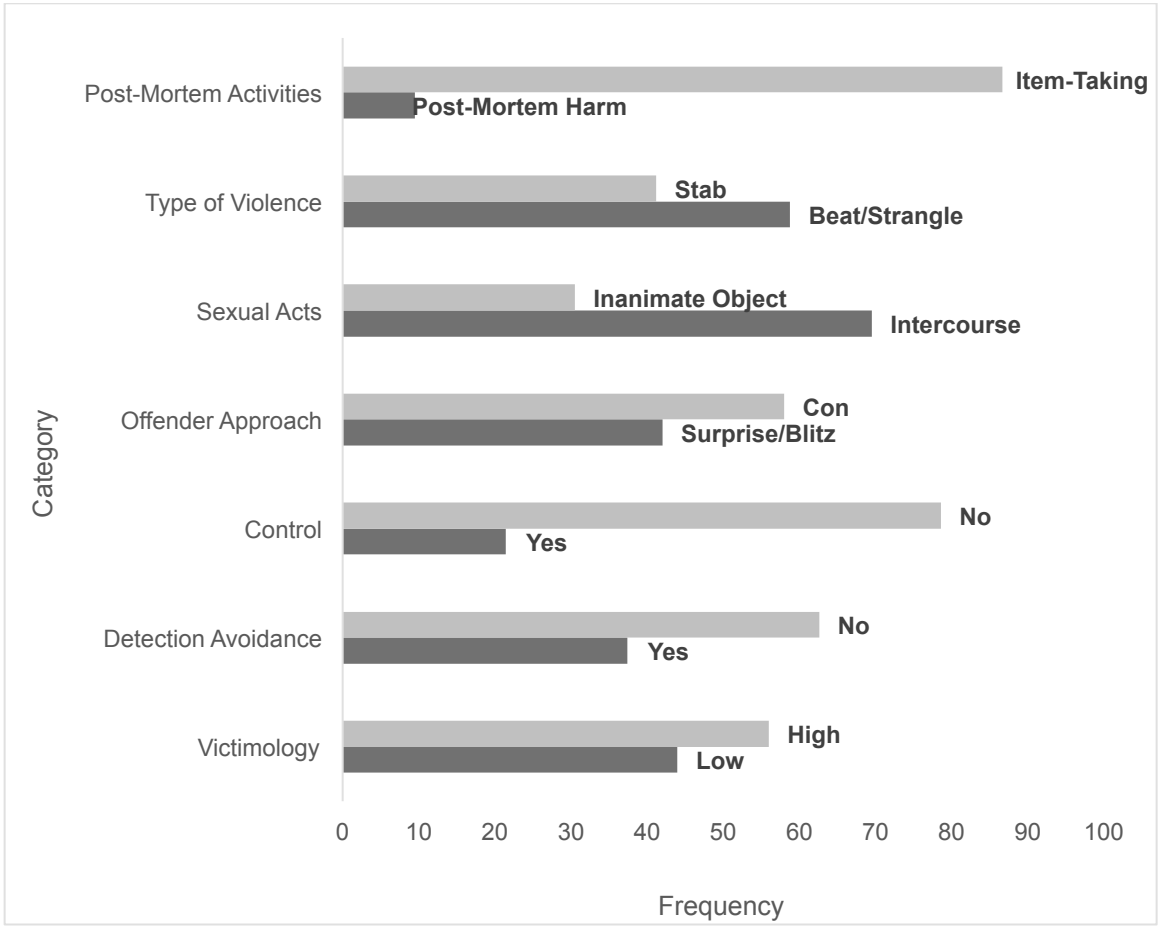

Figure 5-3. Results for Latent Class Analyses for *Controlled* Class (*N* = 243).
Note: Panels represent percentages for each component in categories of victimology, detection avoidance, control, offender approach, sexual acts, type of violence, and post-mortem activities.

The latent class method suggests that the style of approach utilized by *Controlled* and *Impetuous* offenders does support the organized/disorganized typology. These are contrary to the K-means findings. *Controlled* sexual murderers, like organized offenders,

are more likely to con or manipulate the victim, versus using a blitz-style approach. These victims are also more likely to be targeted. *Impetuous* offenders use an approach similar to the disorganized offender; victims in these cases have a much greater probability of being ambushed and attacked by surprise. While these findings that are related to the offender's approach do support Ressler et al.'s (1988) dichotomy, the latent class method presents a confounding issue: *Controlled* offenders are more likely than *Impetuous* offenders to target known victims, but also have a greater tendency to deceive the victim, rather than use a physical attack. Perhaps the acquaintance-relationship between the victim and *Controlled* offender is somewhat superficial, and the offender feels that there is just enough existing trust to take advantage of. It seems plausible that an offender who is methodical and cunning may find it advantageous to attempt to manipulate or lure an acquaintance to a low-risk crime scene, rather than attempt a blitz attack, risking that the victim escapes or attracts attention from witnesses.

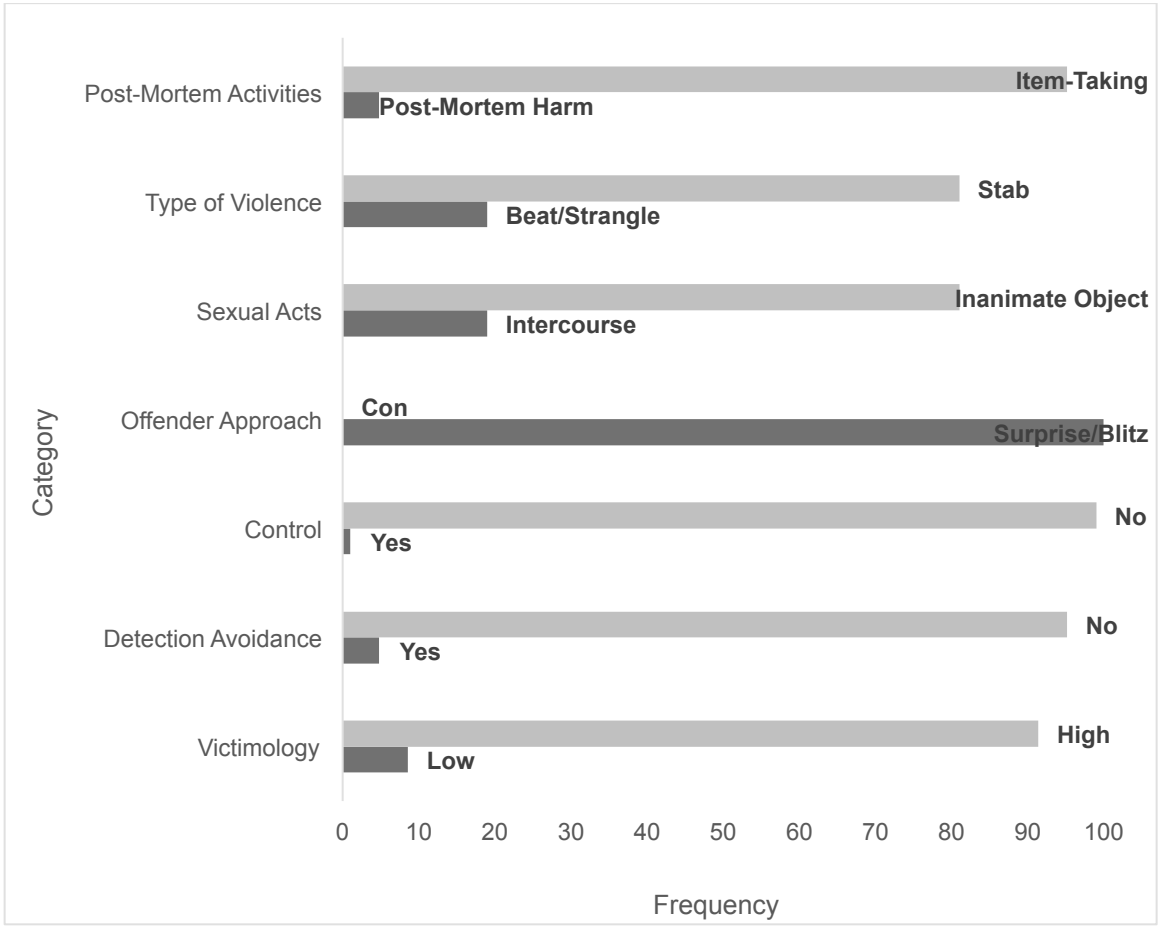

Figure 5-4. Results of Latent Class Analyses for *Impetuous* Class (*N* = 105).
Note: Panels represent percentages for each component in categories of victimology, detection avoidance, control, offender approach, sexual acts, type of violence, and post-mortem activities.

Controlled sexual murderers are also similar to organized offenders in regard to the sexual activities that occur during the crime. Contrary to the *Cautious* category, *Controlled* offenders are much more likely to engage in both vaginal and anal intercourse with the victim, as well as fellatio and fondling. It follows that there is a greater probability of detecting semen at these crime scenes. This finding contradicts the *Controlled* offenders' detection avoidance strategies, and Hazelwood and Douglas' (1980) claim that the organized offender will take due care to remove forensic evidence from the crime scene. However, just because more *Controlled* offenders are attempting to clean up and eliminate evidence, does not mean they are always successful in doing so. *Impetuous* sexual murderers are not nearly as likely to have intercourse with the

victim. This group is akin to the disorganized offenders who feel sexually and emotionally incompetent; cases will involve inanimate object insertion, rather than penile penetration of the victim.

The K-Means method revealed no substantial differences between *Cautious* and *Careless* offenders in regard to their post-mortem activities. However, the latent class method does reveal some differences between *Controlled* and *Impetuous* offenders in regards to their post-mortem behaviors. As previously discussed, instances of mutilation, dismemberment, and post-mortem sexual activity seldom occur in the full sample. However, these instances of post-mortem harm that are detected, including overkill, are almost twice as likely to occur in *Controlled* cases than in *Impetuous* cases. Post-mortem sexual activity, or necrophilia, is also more likely to occur in *Controlled* cases. Ressler and colleagues (1988) have suggested that necrophilia is a disorganized trait and indicates the offender's feelings of sexual inadequacy. However, as pointed out by Stein, Schlesinger and Pinizzotto (2010), necrophilia may not be as simple as a "desire to have an unresisting partner" (p. 445). This activity may actually be part of the offender's ritualistic or signature crime scene behavior, and an attempt to further degrade the victim. From this perspective, post-mortem sexual activity may be considered an organized trait; it may be connected to the offender's sadistic sexual fantasies and rituals. Item taking occurs in both categories, but is slightly more likely to be committed by *Impetuous* offenders. Because *Controlled* offenders are generally prepared and disciplined in the other facets of their sexual murders, it is possible that the post-mortem violence and dissection of the victim in these cases aids in the disposal of the victim's body. If that is the case, then these offenders are quite similar to the organized sexual murderer; the dismemberment of the victim occurs not because of an uncontrollable, violent rage, but is instead a strategy to evade detection. The item-taking behavior occurring in *Impetuous* cases is not typical of Ressler et al.'s (1988) disorganized offender. It is possible that the purpose of item taking by *Impetuous* offenders is not to secure a trophy or souvenir from a successful sexual murder. Perhaps item taking is a disorganized trait, if an extension of ransacking. *Impetuous* offenders display impulsivity in other areas of their crimes – it is plausible that articles are taken from the crime scene because they are seen as valuable, in the moment.

The latent class method shows relatively strong support for the organized/disorganized dichotomy. *Controlled* offenders are comparable to organized sexual murderers in their detection avoidance strategies, their overall control, and their likelihood to target the victim, and attempt to gain access to the victim by the use of a con. Furthermore, both *Controlled* and organized offenders are likely to strangle, asphyxiate and beat their victims, rather than using a swifter method of killing. *Controlled* cases involve intercourse, as do organized cases. *Controlled* sexual murderers do engage in some mutilation, overkill, and dismemberment of the victim. These can be considered organized traits if they are treated as body disposal strategies, rather than excessive violence. However, *Controlled* sexual murderers do not seem to be selecting a victim typical of the organized offender. Rather than targeting an unknown stranger, *Controlled* offenders are sometimes choosing victims who are less vulnerable, who may be known to them. *Impetuous* offenders align in similar ways with the disorganized offender. Both of these types of sexual murderers are unconcerned with planning and precautions. Victims are not targeted – they are surprised and blitzed. Little care and attention is paid to forensic evidence. Restraints and ties are unnecessary as the victims are killed suddenly and swiftly, usually by stabbing. Both *Impetuous* and disorganized offenders are more comfortable inserting foreign objects into their victims, rather than engaging in sexual intercourse. *Impetuous* sexual murderers may take items from the crime scene. If the purpose behind this is to obtain a souvenir as a reminder of the successful sexual murder, then this does not align with the disorganized offender's intentions. However, if an article is impulsively stolen because it is deemed valuable by the *Impetuous* offender, then this could be considered an indication of disorganization. Lastly, as previously mentioned, the victim selection by *Impetuous* offenders is not to be expected from disorganized offenders. Ressler et al. (1988) advise that the disorganized offender will spontaneously attack a known victim. *Impetuous* offenders attacked strangers whose attributes and lifestyle routines made them highly vulnerable.

5.3. Supplementary Analyses Findings

Both the K-means and latent class solutions were tested to determine if *Cautious/Careless* and *Controlled/Impetuous* cases were more or less likely to be solved or unsolved. If *Cautious* and *Controlled* cases are more similar to organized sexual murders, then it would make sense if more of these cases were unsolved, because of the efforts made by offenders to plan the crime and attempt to avoid detection. However, *Cautious* and *Controlled* cases were actually more likely to be solved than compared to *Careless* and *Impetuous* cases. This is a surprising finding. Despite the fact that these offenders are making an effort to remove forensic evidence and dispose of the victim's body, they are still more likely to be caught. There are a few possibilities that may explain this finding. The first explanation is related to the type of violence that is involved in the *Cautious* and *Controlled* sexual murders. Both of these groups are more likely to restrain the victim, as well as beat, strangle and asphyxiate. These methods of violence suggest that the murder is not a sudden and immediate occurrence. It is possible, that due to the increased length of time spent with the victim, more forensic evidence may be available at the crime scene for investigators. *Careless* and *Impetuous* murders that are committed swiftly by stabbings or gunshots may actually result in less physical evidence left at the scene, or on the victim. However, if forensic evidence is the explanation for the increased likelihood of solving *Cautious* and *Controlled* murders, then the presence of semen should also be related to this outcome. *Controlled* sexual murderers are more likely to have intercourse, and leave semen at the crime scene. *Cautious* offenders, however, are not. It is the *Careless* offenders who are more likely to engage in vaginal and anal intercourse with the victim. These are also the offenders who are less likely to be concerned with removing this potentially implicating physical evidence. Oddly, these cases are *less* likely to be solved.

Perhaps a more suitable explanation for the solved/unsolved issue is related to the offender's victim selection. *Cautious* and *Controlled* sexual murderers are both more likely to select victims who are known to them, and who are less vulnerable. *Careless* and *Impetuous* cases, on the other hand, involve younger victims, who are strangers, and may be sex trade workers. It is possible that more investigative resources are aimed at cases where the victim is considered low-risk. A victim living a high-risk

lifestyle who goes missing may not generate the same level of attention from law enforcement personnel. This notion has been explored by Salfati, James, and Ferguson (2008) who note that investigations into the murders of sex trade workers can be difficult for a number of reasons: sex trade workers often live a transient lifestyle – it may be difficult to even determine if they are missing; public interest may be low; and it may be a challenge to find witnesses. Beauregard and Martineau's (2014) study revealed that the bodies of sex trade workers did take longer than other victims to be discovered by investigators. They acknowledge that fewer resources may be aimed at these cases, but that an investigative failure may not be the full explanation. They propose that offenders may rationally choose to target highly vulnerable victims as a strategy to avoid detection. In the context of the current study, this would mean that *Careless* and *Impetuous* offenders are not randomly selecting highly vulnerable victims, but are doing so as a strategy to delay or evade apprehension. The latent class model revealed some additional interesting findings that further support the organized/disorganized dichotomy. *Controlled* cases were more likely to involve body disposal methods of wrapping and covering the victim, as well as dismemberment. This finding supports the previous hypothesis that *Controlled* sexual murderers are similar to organized offenders and that victim dismemberment is not committed out of explosive violence, but is a planned and calculated strategy to eliminate evidence. Beauregard and Field (2008) have made similar links between the organized psychological characteristics of sexual murderers and the awareness and efforts aimed at body disposal methods. Their findings, which support the organized/disorganized dichotomy, suggest that it is the controlled and prepared sexual murderer who will transport and dispose of the victim's body. The offender who presents disorganized psychological characteristics is likely to leave both evidence and the victim's body at the scene (Beauregard & Field, 2008). Lastly, not surprisingly, victims' deaths were more often a result of asphyxiation and strangulation in *Controlled* cases versus *Impetuous* cases, and the opposite result was found for cases where the victim died as a result of stabbing.

Chapter 6. Conclusion

The findings from the current study suggest that the organized/disorganized dichotomy does have some merit. Both methods used in the analyses support Hazelwood and Douglas' (1980) and Ressler et al.'s (1988) claims that two distinct types of sexual murderer exist. This two-fold approach is also supported by Beauregard and colleagues (2007). The latent class method used in the current study produces a dichotomous typology that is closely related to the organized/disorganized model. This method is arguably superior due to the fact that it is more rigorous, and selecting the appropriate number of classes is less arbitrary due to the statistical criteria available. The current study's findings are in contrast with the conclusions made by Sewall et al. (2013) and Canter et al. (2004) regarding the organized/disorganized typology. Sewall and colleagues (2013) suggest that a four-fold typology of sexual murderers may exist, but that the evidence to support organized/disorganized distinction is weak, at best. Canter and colleagues (2004) have claimed that there is no empirical evidence to support the FBI model. According to Canter et al. (2004), there is no separation to be made between organized and disorganize offenders. Both of these previous studies, however, have focused on serial, sexual murder. Perhaps it is possible that over time, sexual murderers who have not yet been caught do start to share more similarities, lessening the distinction between organized and disorganized offenders. However, in this study, that is focused on nonserial sexual homicide, the dichotomy is supported.

6.1. Practical Implications

The implications of the current findings are important with regard to crime scene investigation and the criminal profiling of sexual murderers. While the FBI's original organized/disorganized model has had a significant influence on the classification of sexual murderers, it is anecdotal in nature and may be subject to the investigators own biases and experiences. In contrast, the current study uses a statistical approach to

examine the dichotomy, providing empirical support for the two-fold model. Canter et al. (2004) point out the increasing demand for trained profilers in criminal cases throughout the world; this is a growing field that should be applying scientifically based classification systems, rather than utilizing typologies that have been developed from personal experience, or theoretical constructs. More importantly, the information in this study may also be useful to law enforcement personnel in their investigations of sexual homicide cases. Police and forensic investigators may be able to use crime scene variables and victimology information to determine if the crime scene is indicative of an organized or disorganized offender. Despite the fact that the identity of the sexual murderer may be unknown, an analysis of the crime scene can still prove to be fruitful in revealing the type of characteristics that may be associated with the offender. A typology that is based on observable crime factors can aid experts in the development and application of criminal investigative analysis (or criminal profiling) (Beauregard et al., 2007). As noted by Balemba et al. (2014), knowing whether a crime was likely committed by an organized or disorganized offender will not change the amount of effort and attention granted by investigators; however, it may contribute to a more effective investigation overall, as law enforcement may be able to prioritize the type of evidence to seek out. Based on the results of the current study, if investigators were to come across a crime scene that appeared to be committed by a *Controlled* (versus *Impetuous)* offender they may be able to then deduce the offender's profile characteristics. In such a case, law enforcement may focus their search on suspects who are socially and intellectually competent, and who display control and stability in other areas of their lives. Using criminal profiling strategies may narrow the suspect pool, resulting in a more efficient and effective use of investigative resources. This may help to improve the clearance rates of cases of sexual homicide. These findings suggest that law-enforcement personnel should not place too much weight on the post-mortem activities of sexual murderers. These events, including mutilation, dismemberment, and necrophilia, occur so rarely in these crimes, that they may not contribute much to the development of an offender profile. More focus should be placed on detection avoidance strategies, indications that the offender attempted to control or restrain the victim, as well as the type of violence the victim was exposed to.

6.2. Limitations

As is the case for many other empirical studies of sexual homicide, the current study was actually not limited by a small sample size of offenders. Ressler et al.'s (1988) original investigation consisted of only 36 sexual murderers. Subsequent classification systems of sexual homicide have also been built using fewer than 40 offenders (Meloy, 2000; Clarke & Carter, 2000; Fisher & Beech; Beauregard & Proulx, 2007; Gerard et al., 2007). The fact that the current study uses 350 case of sexual homicide suggests that the statistical power of the findings is not restricted in this regard. However, the current study was limited by the problem of missing data. This may have been due to issues with self-reporting. As Beauregard et al. (2007) point out, it is not surprising that persons convicted of sexual homicide may be uncooperative in revealing details related to the crime scene. Missing data may also be a result of information that was simply unavailable to investigators at the crime scene. Of particular importance to the current study are the number of cases that are missing information related to the weapon involved in the crime and offender mobility (i.e. use of a vehicle). These variables are critically important in the organized/disorganized model. Ressler et al. (1988) focus not only the type of weapon involved in the crime, but also its presence or absence at the crime scene, suggesting that a weapon left behind is a characteristic of the disorganized offender. The use of a vehicle (in reasonable condition) suggests that the offender is mobile (himself), and has the ability to transport the victim if necessary; these are traits of the organized offender. Unfortunately, this study was unable to explore these particular crime scene characteristics. Furthermore, the FBI's model has been criticized for neglecting the pre-crime phase and the offender developmental phase (Beauregard et al., 2007; Chan & Heide, 2009) and focusing mainly on crime scene variables. A similar critique could be applied to the current study. No offender characteristics were taken into account in the current study, nor was the pre or post-crime emotional state of the offender investigated. Offender profiling should be based on information that is usually available to law enforcement, so it does make sense, practically, to focus on available crime scene characteristics in order to develop an unknown offender profile. However, in the interest of testing the organized/disorganized typology, it would be beneficial for future studies to focus on offender characteristics as well.

6.3. Future Research

More empirical research of sexual homicide is needed overall. As mentioned above, because this study did not include pre-crime or post-crime offender characteristics, it would be worthwhile to further explore these variables, along with crime scene behaviors. Because this study contrasts with other empirical research that has investigated the organized/disorganized dichotomy (Canter et al., 2004; Sewall et al., 2013), it would be beneficial to further investigate this two-fold model, ideally including all of the variables specified by Ressler and colleagues (1988) – both the profile characteristics, as well as crime scene behaviors. Furthermore, future studies of the organized and disorganized model should be conducted on both serial and nonserial sexual murderers. Sewall et al. (2013) acknowledge that their own study may be biased due to the fact that it focuses specifically on serial sexual homicide – distinct differences exist between serial and nonserial offenders. Findings from James and Proulx's (2014) review suggest that serial and nonserial sexual murderers should be treated as distinct groups. According to James and Proulx (2014) serial sexual murderers are emotionally and socially isolated; their crimes are sadistic, and often involve paraphilia. Nonserial sexual homicides are more often committed out of anger and impulsivity. Comparisons can be drawn to Beauregard and Proulx's (2002) sadistic and angry dichotomy. Ressler and colleagues' (1986b) original study did use a combination of both serial and nonserial offenders, however, no real distinctions were made. The current study has focused on nonserial sexual murderers. Clearly, there may be difficulties in drawing conclusions based on comparisons of potentially unique groups. While victimology was considered in this study, as Chan and Heide (2009) point out, it may be worthwhile to differentiate between sexual murderers who target specific groups of victims. While this study did reveal some differences in the victim selection of offenders, looking specifically at offenders who target men, women, or children, may reveal unique distinctions. According to Chan and Heide (2009), no real conclusions can be made about sexual murderers if the study is mixing all types of victims together. Future research should continue to investigate typologies of sexual homicide, and specifically the organized/disorganized model, as it continues to influence investigative and legal practices. Sexual murderers are a heterogeneous group. Research from future studies

that consider sexual murderers from this viewpoint will likely contribute greatly to the existing, limited, knowledge of sexual homicide typologies.

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[2] BIC_{LL} = 2353.46; Npar = 15; df = 48, classification error = 0.0460.

[3] BIC_{LL} = 1260.98; Npar = 9; df = 6, classification error = 0.1527.

[4] BIC_{LL} = 559.19; Npar = 7; df = 0; classification error = 0.1016.

[5] BIC_{LL} = 1229.87; Npar = 9; df = 6; classification error = 0.0172.

[6] BIC_{LL} = 1851.67; Npar = 12; df = 50; classification error = 0.1172.

[7] BIC_{LL} = 1988.88; Npar = 20; df = 43; classification error = 0.1884.

[8] BIC_{LL} = 1518.47; Npar = 11; df = 20; classification error = 0.0529.