An examination of sadism in sexual homicide: are investigative awareness and the severity of sadistic behaviour distinctive features?

by

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Abstract

The current study investigates whether investigative awareness is a distinctive feature of sadism and examines if it is possible to identify different types of sadistic offenders based on the severity of an offender's sadistic behaviour. The study addressed these two research questions through a series of binary logistic regressions and two-step hierarchical cluster analysis utilizing a sample of 350 cases of sexual homicide from Canada. Results from the logistic regression indicate that sadistic offenders are more likely to use forensic awareness strategies at the crime scene, pre-select deserted locations to commit their offense and have an unsolved case in comparison to non-sadists. The cluster analysis show that three groups emerge: 1) a non-sadistic group, 2) a mixed group that show some evidence of sadistic behaviour, and 3) a sadistic group that have high levels of sadistic behaviour. Implications for both clinical and investigative purposes are discussed.

Keywords: Sadism; sexual homicide; investigative awareness; diagnostic; sex offender; classification

To my Mom, for her unwavering support and encouragement, and to my Dad, for teaching me that hard work and determination are the keys to success.

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Chapter 1.

Introduction

The sadistic sexual offender has interested researchers and clinicians since the seminal work of psychiatrist, Kraft-von Ebbing (1886/1998), who popularized the concept of sadism in his book *Psychopathia Sexualis* (1986/1998)*.* It was here that he first described a sadistic individual as one driven by the experience of pleasure, which could be only achieved through means of cruelty and corporal punishment on animals or people. Since this time, researchers have sought to validate the notion of sadism, but despite continued effort, an agreed upon definition has yet to emerge. Consequently, identifying and diagnosing sadism has been recognized as challenging and has led to various estimates on the actual prevalence, ranging anywhere from 5 to 50% of all sexual offenders depending on the study (Barbaree, Seto, Serin, Amos, and Preston ,1994; Groth and Birnbaum, 1979; Harenski, Thornton, Harenski, Decety, and Kheil ,2012; Proulx, St-Yves, Guay and Ouimet, 1999). Due to both the rarity of sexual homicide and varying definitions, this number has been even more difficult to establish when examining sadism in this context. However, more recent estimates suggest that sadism occurs within approximately 35% of sexual homicides (Hill, Habermann, Berner and Birken, 2006).

Sadistic offenders have been described in several studies (e.g., Beauregard & Proulx, 2002; Brittain, 1970; Groth & Birnbaum, 1979; Knight & Prentky, 1990; Marshall & Kennedy, 2003; Proulx, Blais & Beauregard, 2006; Warren, Hazelwood & Dietz, 1996) and have often received other labels, such as organized sexual murderer (Ressler, Burgess & Douglas, 1988) or murderer motivated to carry out fantasies (Beech et al., 2005). These studies highlight the fact that sadistic offenders carefully plan their offenses, pre-select the location of their crime, and prepare a rape-kit, which may include tape, handcuffs, rope, knife and a gun. Moreover, sadistic offenders target their

victims according to specific criteria related to their deviant sexual fantasies, most often vulnerable victims such as sex trade workers. If the victim is killed, the sadistic offender is more likely to transport and hide the body to prevent detection (Proulx & Beauregard, 2009).

Despite this emphasis on the careful planning of the offense and efforts to evade police detection, no study has specifically examined whether this behavior or trait was unique to sadistic offenders. In the current study, I test whether the presence of investigative awareness is a distinctive feature of sadism.

Additionally, as a result of consistent issues in the diagnosis and identification of sadism, a paradigm shift has begun to emerge in the literature that emphasizes the dimensional nature of sadism. This shift includes a focus on behavioral crime scene indicators as a method for identifying the most severe sadistic offenders as a way to overcome some of the present diagnostic concerns. However, to my knowledge, no studies have sought to use the crime scene behavior of sexual homicide offenders exclusively to determine if distinct groups will emerge that can be differentiated on the basis of varying degrees of sadistic offending. This has potential utility for clinical and research purposes and also as support for interpreting sadism as dimensional rather than a distinct clinical entity.

Accordingly, the current study will seek to add to the extant literature on sadism in the context of sexual homicide specifically. Moreover, efforts to differentiate sexual homicide offenders (SHOs) based on behavioral crime scene indicators of sadism will be made. Then, in order to test the external validity of the groups that emerged, an exploratory analysis will examine whether factors associated to sadism – namely investigative awareness – are more likely to be associated with severe sadism, in comparison to other potential groups of SHOs with varying degrees of sadistic behavior.

Chapter 2.

Literature Review

2.1. Issues with diagnostic reliability: moving towards the use of behavioural indicators

Researchers often note the challenge in identifying sadism due in large part to the varying definitions and diagnostic criteria found in key sources of reference. The *International Classification of Mental and Behavioral Disorder, 10th edition* (*ICD-10*; World Health Organization, 2004) and the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-IV-TR;* American Psychiatric Association, 2000) are often acknowledged as key contributors to the problem of diagnostic variability. Both the DSM-IV and its predecessor the DSM-IV-TR define sadism as "recurrent, intense sexually arousing fantasies, sexual urges, or behaviors involving acts (real, not simulated) in which psychological or physical suffering (including humiliation) of the victim is sexually exciting to the person" (American Psychiatric Association, 2013, para 1). Further, the DSM-V requires that these urges, fantasies and behaviors be acted onto a nonconsenting individual.

Conversely, the ICD-10 uses the same diagnostic category for both sadism and masochism (World Health Organization, 1992). It describes the disorder of sado-masochism as a sexual preference for activities involving the infliction of pain, humiliation and bondage. Sadism in this context is seen as the active role, whereas masochism is seen as the passive role. Another important difference between the DSM-5 and the ICD-10 is that sadomasochism is presumed to be present in some degree in normal sexual life. Thus it can only be diagnosed if it is the principal source of arousal or is necessary for sexual gratification. Additionally, the ICD-10 differentiates between sadism and pure cruelty or anger in a sexual context. In both the *ICD-10* and the *DSM-*

IV-TR, it is specified that the sexual fantasies, urges, or corresponding behavior must have been present for at least half a year and cause significant distress or social impairment in the individual. Thus, the lack of consistency in both criteria and the definition thereof is fairly evident in these two major resources for clinicians[1].

The variability across sources is problematic for a number of reasons. Firstly, the inconsistencies in definitions result in different diagnostic criterion, which makes identifying sadism in individuals unreliable. For instance, Marshall, Kennedy and Yates (2002) were the first to examine the reliability of the diagnosis of severe sadism within a forensic context. They used the prison files of 51 sexual offenders to separate the sample by sadists and non-sadists. Offenders that had previously been diagnosed by an experienced forensic psychiatrist as having sadism (32%) formed one group. The remaining non-sadistic offenders formed the comparison group. Analyses did not reveal any differences between the severe sadists and the non-sadists regarding self-reported sadistic fantasies or acts. Moreover, a greater proportion of the non-sadists were aroused by forceful nonconsenting sex according to their phallometric responses. Marshall and colleagues concluded that the current features deemed to be indicative of severe sadism could not distinguish those diagnosed as such from the non-sadistic sample. Moreover, Nitschke, Mokros, Osterheider, and Marshall, (2013) reported the results of seven studies that examined observer agreement for severe sexual sadism. They found that clinical agreement in diagnosing severe sadism varied widely depending on the sample and methodology of the study and that the variability in diagnostic criteria was a likely source of the problem.

With the *ICD-10*, the reliance on sadism as the main source of sexual arousal or necessary for sexual gratification is particularly challenging to establish within forensic settings. This is due to the fact that it typically relies on self-reporting from the patient when other objective information is not available (Richards & Jackson, 2011). This is also true of the *DSM-IV-TR*, which requires the identification of sexual fantasies and

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1 Sadism has more recently been interpreted by some researchers to better suit a dimensional interpretation in accordance with the degree of severity in order to emphasize its distinction from consensual sadomasochistic behavior (Nitschke et al. 2012, Mokros & Kennedy, 2003). Therefore, this paper will utilize the term sadism as reference to "severe sexual sadism", which is the forensically relevant form of sadism.

urges in order to receive a diagnosis. Sexual sadism is also unique in the *DSM-IV-TR* as it is the only disorder that includes behavioral motivations as a diagnostic criterion (Richard & Jackson, 2011). This can be problematic, however, as information is often times withheld or unavailable causing diagnosticians to make inferences in the sadistic motives from available evidence (Nitschke et al. 2012; Marshall & Kennedy, 2003). As a whole, sexual offenders are noted as not particularly forthcoming about their true sexual interests (Beauregard, Proulx, & St-Yves, 2007), which is usually even more salient in sexual sadists (Grubin, 1994). In situations where diagnosticians must infer a sadistic motive, this tends to result in an overreliance on aggressive or violent aspects (Myers et al., 1999; Mokros & Kennedy, 2003).

The lack of consistency also impacts prevalence rates and the ability to compare sadistic offending across studies. As such, researchers have started to move away from the use of diagnostic criteria for identifying sadism in offending populations and have instead turned to more reliable indicators such as the behaviors displayed during the crime-commission process (e.g. Marshall & Hucker, 2006; Healey, Lussier, & Beauregard, 2012; Nitschke et al., 2013). In particular, they allow for a more objective indication of the offender's underlying motivation (Healey, Lussier, & Beauregard, 2012). Behavioral indicators can then been used in conjunction with clinical assessments to provide further support for a more accurate diagnosis.

2.2. Reliability of scales in the identification of sadism

More recently researchers have taken a scale approach using crime scene behaviors to identify sadistic offending in order to help improve the reliability of the diagnosis of severe sadism. This was done with the aim of providing current diagnostic tools an additional aid as a way to possibly substantiate reports by investigators on the offenders' sexual gratification at the crime scene and their sexual fantasies through the use of crime scene behaviors (Palermo, 2013). Marshall and Hucker (2006) were among the first to empirically validate this method with crime scene data. They evaluated the response of 15 experts to extract items that the experts believed to be the most pertinent in the diagnosis of severe sadism. Marshall and Hucker (2006) then weighted these items according the degree of relevance indicated by the experts, which resulted in an

overall measure of 17 behavioral items that were predominately obtained through crime-scene or police data. The items with the strongest weight were (a) the offender is sexually aroused by the sadistic acts, (b) the offender exercises power/control/domination over the victim, (c) the offender humiliates and/or degrades the victim, (d) the offender tortures the victim or engages in acts of cruelty to the victim, and (e) the offender mutilates sexual parts of the victim's body.

However, this study was criticized for its lack of evidence for meeting empirical psychometric standards, such as internal consistency or reliability (Nitschke et al. 2013). In consequence, Nitschke, Osterheider, and Mokros (2009) evaluated the psychometric properties of the scale items identified by Marshall and Hucker (2006). They selected a sample of sexual offenders treated at a German high-security psychiatric hospital, including individuals who had committed any sexual offense or murder, manslaughter, or assault. A total of 535 patients were initially examined using case file information. Of the 535, 50 patients were diagnosed as sexual sadists, all of which admitted to having sadistic sexual fantasies. Then through random selection, 50 patients diagnosed as non-sadistic sexual offenders were assigned as the comparison group. Scaling analysis using nonmetric item response theory methods were conducted and the result revealed 10 of the 17 items from the original list created by Marshall and Hucker (2006) fulfilled the criteria of a reliable and homogenous Guttman scale (Guttman, 1944) with the additional item of object insertion into victim's genitals. This scale, referred to as the Severe Sexual Sadism Scale (SeSaS; Nitschke et al., 2014), yielded high coefficients in stability and reliability as well as a strong coefficient of reproducibility. Moreover, using the sum score of 4 out of 11 items as the cutoff, the scale was found to perfectly distinguish between the sample of sexual sadists and non-sadistic sexual offenders.

Due to the recent shift in focus, the utility of behavioral indicators has since been compared with clinical diagnoses to determine its reliability. For instance, McLawsen, Jackson, Vannoy, Gagliardi, & Scalora, (2008) were able to demonstrate that a group of 60 clinicians could reliably discriminate crime scene behaviors as sadistic or non-sadistic. In particular, (a) the use of threats to evoke fear, (b) cutting, stabbing, strangling, biting or beating the victim during the sexual assault and (c) infliction of pain in sexual areas by the use of physical objects proved to be the most clearly associated

with severe sadism by the clinicians. Additionally, Kingston, Seto, Firestone, and Bradford, (2010) conducted a 20-year follow-up study involving sexual offenders and found that indicators of severe sexual sadism enabled prediction of sexual and violent recidivism at above chance levels. Of particular importance was that the strength of these associations was greater for crime-scene behavior than for a clinical diagnosis of severe sadism.

Richards and Jackson (2011) were able to draw similar findings regarding the utility of identifying sadism through the examination of offense behavior. They studied the offense behavior of 39 sexual offenders who were diagnosed with severe sexual sadism and compared them against a group of 39 civilly committed offenders who were randomly selected from a pool of 81 offenders diagnosed with paraphilia-not otherwise specified (PNOS)- nonconsent. Findings indicated that sadistic acts are better characterized by the humiliation of the victim through the exercise of power and control compared with the PNOS- nonconsent group, which instead were found to have higher levels of violence

Some researchers have also sought to examine whether crime scene indicators could be used to differentiate sadists from other sexual offenders. For instance, Healey, Lussier, and Beauregard (2012) examined the convergent and predictive validity of behavioral crime scene indicators of sexual sadism in the context of rape and sexual homicide. They found that several crime scene behaviors (40%) overlapped with an official diagnosis of sexual sadism and that these behaviors were able to distinguish between rapists and sexual murderers. Specifically, premeditation, the use of physical restraints, mutilation, and humiliation were significantly related to an official diagnosis of sadism. However, it is important to note that non-sadists were just as likely to select a specific victim, kidnap and confine their victims, and search for specific victim characteristics as sadists were. Both non-sadists and sadists were found to use excessive amounts of force during the crime-commission process.

2.3. Evidence for dimensionality in sadism

The recent focus on behavioral indicators obtained through scales has lead researchers to question whether sadism should be seen as dimensional rather than categorical. A dimensional approach would suggest that sadism falls on a continuum of severity. In comparison, a categorical approach suggests that an offender is distinctly sadistic or non-sadistic. However, more recent research has found support for the dimensionality perspective. For instance, Knight (2012) presented the results from taxometric analyses using self-reported data from sexual offenders. His findings revealed that items reflecting sexually sadistic conduct and sexual coercion can be considered to belong to a single dimension of agonistic sexuality instead of having a taxonic (i.e. categorical) structure.

Additionally, Mokros, Schilling, Weiss, Nitschke, and Ether (2014) examined 1,020 adult male sexual offenders under federal evaluation for sexual and violent crimes at the Austrian Prison Service. Using case files as well as written reports of prior mental health assessments, offenders were analyzed on crime scene behavior as well as clinical data to determine the presence of latent dimensional structures in sadism. Results were indicative of sadism being more likely dimensional than categorical. Nitschke et al., (2012) suggest that it is unlikely that sadistic sexual offenders would represent a distinct type, but rather, sexually sadistic conduct during the crime commission process would appear to be an exaggerated form of sexual violence that can be found in the upper range of a continuum of sexual aggression.

2.4. Investigative Awareness

One particular aspect that has often been associated with a sadistic offender is his investigative awareness (Beauregard & Martineau, 2012). Some offenders take specific precautions before, during or after the crime to decrease their risk of detection. This adaptation of their modus operandi has been associated with an evolving criminal sophistication on the part of the offender. Offenders who adapt their modus operandi to thwart police investigative efforts may be said to be exhibiting investigative awareness (Beauregard & Martineau, 2014). These actions suggest that the offenders possess

knowledge or an understanding of police investigative practices and have developed strategies to avoid police detection. This should not be confused with forensic awareness (Davies, 1992), which is exhibited when an offender reveals knowledge or an understanding of the importance of forensic evidence (e.g., DNA, fingerprints, dental impressions) to police investigation through their behaviors or actions. Thus forensic awareness is defined as the process of taking additional steps and adapting the modus operandi used in a crime to hide evidence in order to ultimately avoid apprehension (Davies, 1992). Although useful, the concept of forensic awareness is often limited to the forensic evidence potentially present at the crime scene whereas investigative awareness encompasses all the strategies used by the offender – including forensic awareness strategies – to avoid police detection.

Prior research conducted by the FBI (e.g. Ressler, Burgess, and Douglas, 1988) has also suggested that the sadistic sexual homicide offender (SHO) is more likely to demonstrate investigative awareness and detection avoidance through the removal of crime scene evidence or by taking the weapon from the crime scene. Prior evidence suggests that sadistic offenders display a number of techniques indicative of planning, forensic awareness and a conscious effort to evade police detection (e.g. Beauregard and Martineau, 2012, Brittian, 1970; Dietz, Hazelwood and Warren, 1990; Marshall, et al., 2002).

Although still an unexplored area, Dietz, Hazelwood & Warren (1990) found that sadistic SHOs demonstrate considerable investigative awareness as a majority had studied law enforcement procedures, wore gloves to ensure that fingerprints were not left behind and had pre-selected isolated locations to take their victims to. This notion of investigative awareness is also reflected in the FBI's organized and disorganized typology for sexual homicide (Ressler, Burgess, Douglas, Hartman, and D'Agostino, 1986). They suggest in the organized crime scene, there are clear signs of order and planning. This is demonstrated in the selection of a stranger victim and through distinctive indications of premeditated behaviours aimed at avoiding detection, such as leaving behind minimal to no evidence. Further research has shown that some of the offense characteristics attributed to sadistic offending included careful planning of the offense and taking the victim to a preselected location that ensures that the offender will

not be seen or heard and provides little opportunity for the victim to escape (Beech, Craig, and Brown, 2009; Gratzer and Bradford, 1995; Groth and Birnbaum, 1979; Hazelwood, Dietz and Warren, 1992).

These studies suggest that a behavioral feature that may have been potentially overlooked in past literature as a distinctive feature of sadistic offending is investigative awareness. As there has been some disagreement on the core features of sadism, it would be informative to identify whether there is evidence to support this notion. This has particular utility as it does not require any self-reported offense behavior, but rather, can be determined using information available during the police investigation. This would prove to be a useful aid as well for diagnosticians when self-reported information is unreliable or unavailable.

Chapter 3.

Current Study

Despite the fact that sadistic offenders are often described as possessing investigative awareness and conscious of behaviors adopted to avoid detection, most of the studies mentioning this specific trait are either anecdotal or descriptive in nature. No studies to date have examined whether investigative awareness is a distinctive feature of sadism. Considering that investigative awareness includes behaviors easily observable at the crime scene, it becomes important for clinicians and law enforcement to test whether this trait is statistically associated with severe sadism. To my knowledge, there is also no research to date that has looked at dimensionality in sadism within SHOs exclusively. Due to the recent debate regarding issues with viewing sadism as a dichotomous clinical entity, this would be a worthwhile endeavor as a means to provide evidence of a continuum of severity in sadistic offending

The present study will seek to examine these two areas through two separate research aims. The first will examine whether strategies associated with investigative awareness constitute a feature that can distinguish sadistic SHOs from non-sadistic SHOs through a series of binary logistic regression analyses. Then the second aim will examine whether there is evidence to suggest that sadism varies in severity within sexual homicide offenders by comparing crime scene behaviours indicative of severe sadism. This will be analyzed through two-step hierarchal cluster analysis to form potential groups of sadistic offenders. Then, using binary logistic regression, crime scene behaviors will be examined to determine whether there is evidence to support the notion that investigative awareness is a distinctive feature of severe sadism through within group comparisons of sadistic behaviour across the entire sample of SHOs.

Chapter 4.

Method

4.1. Sample and Procedure

The sample includes 350 cases of sexual homicide in Canada dating from 1948 to 2010. At the time of entry within the database, 250 cases were solved and 100 were unsolved. Solved cases include those in which the offender has been identified but may not have been charged or convicted for the offense. If there is more than one offender and not all have been identified, than the case is considered unsolved. Data were collected from a national database that is operated by the Royal Canadian Mounted Police (RCMP) for serious and violent crimes. Investigators assigned to each individual case were responsible for collecting the data and submitting within approximately 45 days into the investigation. Data related to the victim(s), the potential or suspected offender, the behavior of the offender during and after the crime, as well as any forensic information available is utilized in this study. In order to be considered within the current sample, all offenses had to be identified as completed (real incidence, attempts are not included). The offense had to involve a sexual element, specifically, that there was evidence that the crime was sexually motivated or there was sexual activity. Using the FBI definition of sexual homicide, the case had to include at least 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). In the current sample, 25.1% (n = 88) of the cases presented evidence of sexual activities at the crime scene other than vaginal and anal intercourse, while it was established that in 10.6% of cases (n = 37) post-mortem sexual activities occurred. Biological evidence suggesting sexual

activities between the offender and the victim was also present in 24.0% of the cases (*n* = 84).

4.2. Measures

Dependent variable: The Revised Sexual Homicide Crime Scene Rating Scale for Sexual Sadism (SAD-SEX-SH-R) created by Myers, Beauregard & Menard (2013) is utilized to determine sadism within the current sample. This scale was chosen for its utility in determining severe sadism within SHOs exclusively. The behavioral indicators used with SAD-SEX-SH-R are similar to SeSaS, which has been tested for its reliability and reproducibility (Nitschke et al. 2012). All scale items represent behavioral crime scene indicators that involve sexual and violent elements. Scale items were coded dichotomously as 0 (=absent) or 2 (=present). Scale item 1= *sexual domination of the victim through the use of bondage, asphyxia, blindfolding, a knife*, etc.; item 2= *physical or psychological torture of the victim*; item 3; *victim forced to verbally or physically engage in sexually degrading or humiliating behaviour*; item 4= *gratuitous violence, excessive injury, biting, cutting, or other acts of physical cruelty inflicted on the victim*; item 5= *anal or oral sex forced upon the victim*; item 6= *the use of an inanimate object(s) to sexually penetrate the victim*; item 7= *sexual mutilation of the victim*; item 8= *souvenirs or trophies taken from the victim*. Offenders are scored across all 8-items, and those that score a 6 or more are deemed to be severe sadists (Myers et al., 2013). Utilizing this method, the current sample indicates that 36.6% (n=128) of SHOs are severe sadists and 63.4% (n=222) are non-sadists. The second study aim seeks to determine whether the present sample of SHOs can be classified into distinct groups based on the severity of sadistic behavior at the crime scene. More specifically, the aim is to identify severe sadists as well as potential subgroups of sadistic offenders. SAD-SEX-SH-R also uses a score of 1 (somewhat present), but due to the nature of the data, scale items could only be scored dichotomously. Thus, scale items were analyzed in a hierarchal two-step cluster model to reveal potential subgroups. Utilizing the cluster groupings as the dependent variable, predictor variables involving victimology, investigative awareness and detection avoidance are examined for bivariate and multivariate analysis.

Independent variables: victimology. In order to assess study aim 1 and 2, a total of 5 variables related to victimology are used, all coded dichotomously (0=no, 1=yes): (1) victim is female, (2) victim abuses alcohol, (3) victim abuses drugs, (4) victim is a sex trade worker, and (5) victim is a street person/homeless. These variables were selected as previous studies have shown that sadistic SHOs typically target vulnerable victims (e.g., sex trade workers, homeless persons; Beauregard & Proulx, 2002; Beauregard & Martineau, 2014; Beech et al., 2009; Salfati, James, & Ferguson, 2008).

Independent variables: locations involving risk of detection. When considering the risk of detection in sexual homicide, it is important to take into account the fact that some offenders choose the location where they commit the crime after having assessed the risk of detection associated to these locations. Previous studies have shown that sadistic offenders tend to select isolated locations to commit their crimes (e.g., Beech et al., 2009; Dietz, Hazelwood and Warren, 1990; Gratzer and Bradford 1995; Groth and Birnbaum, 1979; Hazelwood et al., 1992). In the current study, a total of three variables related to locations involving risk of detection are included. Location variables related to whether the scene was deserted were included: (1) contact scene was deserted, (2) offense scene was deserted, and (3) body recovery scene was deserted, all were coded dichotomously (0=no, 1=yes).

Independent variables: forensic awareness. The study examines a total of 9 dichotomous variables (0=no, 1=yes) related to forensic awareness as defined by Beauregard and Martineau (2012). Those that are used for both study aims include: (1) removing/destroying evidence (i.e., involves wearing gloves, using a condom, setting fire to or cleaning the scene), (2) disposing the victim's body (3) acting upon victim and/or the environment (i.e., consist of precautions taken by the offender such as disabling the lighting, telephones, security system and/or the victim's vehicle, administering a drug to the victim, tying the victim up, blocking access in and out of doors or windows, and killing the victim for the purpose of eliminating the witness), (4) other precautions taken (e.g., offender wearing a mask, attempting to disguise or alter their appearance, and changing residence after the crime, offender used a scanner to determine police activities, used a devise to alert them of anyone approaching, and/or using a lookout location where the offender could observe the scene without being noticed, covering the victim's eyes,

gagging the victim), (5) body moved. Those included in study aim 1 only: (6) any forensic awareness strategies used (7) semen located, (8) other biological samples available for analysis. Those included in study aim 2 only: (9) weapon removed from the crime scene. Studies have often suggested that sadistic SHOs are often forensically aware and take specific precautions before and/or at the crime scene so not to be detected by the police (Beauregard and Martineau, 2016; Beech et al., 2009; Dietz et al., 1990; Groth and Birnbaum, 1979; Ressler et al., 1988).

Independent variables: detection avoidance. The study includes two variables examining the ability of SHOs to avoid police detection used for both study aim 1 and 2. The first variable looks at whether the case is unsolved (0=no, 1=yes), suggesting that the SHO is still at large and was never apprehended for the crime. The second variable is continuous and is measuring the number of days it took to recover the victim's body after the sexual homicide. Research shows that the longer it takes to find a body following a homicide, the less chance to recover forensic evidence that could lead to the apprehension and conviction of the offender (Beauregard and Martineau, 2014).

4.3. Analytical Strategy

Firstly for study aim 1, bivariate analyses were conducted with the independent variables and the dependent variable. Predictor variables that indicated statistical significance with the dependent variable were kept for multivariate analysis. Then, binary logistic regression was conducted on SPSS 23. Each grouping of variables (victimology, location, FA strategies, and detection avoidance) was introduced sequentially in separate models. For the second study aim, hierarchal two-step cluster analysis was conducted with the scale items using SPSS 23. In order to obtain the most parsimonious model, item 3 (humiliation) was excluded from the analysis due to its low frequencies within the sample (1.1 %). Cluster analysis was conducted with and without item 3 and no qualitatively similar differences were observed. From the remaining 7 items, three distinct clusters emerged. They are differentiated based on the presence of absence of each scale item and the frequency in which the scale items occur within each cluster. Additionally, the differences between clusters were examined at the bivariate level using SAD-SEX-SH-R scores. This was done to provide insight into whether cluster groupings

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would also align with the initial scoring. All predictor variables involving victimology, location, forensic awareness and detection avoidance were analyzed at the bivariate level against the cluster groupings. Any variables that indicated statistical significance at the bivariate level with the cluster variable were kept for multivariate analysis. Then, binary logistic regression was conducted on SPSS 23. There were two models introduced separately. Model 1 includes the first grouping of variables involving victimology and is used as controls. Model 2 included the remaining variables related to investigative awareness (location, FA strategies, and detection avoidance). Multiple sequences were run in order to cross compare between all three of the cluster groupings.

Chapter 5.

Results

First, for study aim 1, bivariate relationships between sadism and each independent variable are examined. Table 1 indicates that 9 out of 21 variables are significantly (or approaching) related to the offender being a sadist. SHOs targeting male victims are more likely to be a sadist. Moreover, SHOs are more likely to be a sadist when they use any forensic awareness strategies, they attempt to remove/destroy evidence at the scene, they act upon the victim and/or the environment for forensic awareness purposes, and use other precautions not to be detected by the police. Also, SHOs choosing to get in contact with the victim and release the body at a deserted location are more likely to be a sadist. Finally, although only approaching significance, SHOs who see their case remained unsolved are less likely to be a sadist. Sexual homicide cases in which it takes longer to recover the victim's body after the crime are more likely to be committed by non-sadists.

Table 1.   Bivariate relationship between victimology, FA, locations, detection avoidance and sadism

	Non-sadistic (N=222)	Sadistic (N=128)	χ^2
Victimology	% (n)	% (n)	
Victim is female	92.3 (204)	85.2 (109)	-0.11*
Victim abuses alcohol	39.6 (88)	35.2 (45)	-0.04
Victim abuses drugs	26.6 (59)	24.2 (31)	-0.03
Victim is a sex trade worker	19.4 (43)	14.8 (19)	-0.06
Victim is a street person/homeless	12.6 (28)	8.6 (11)	-0.06
Locations involving risk of detection			
Risk of being detected – contact scene	45.0 (100)	51.6 (66)	0.06
Risk of being detected – contact scene deserted	11.3 (25)	19.5 (25)	0.11*
Risk of being detected – offense scene	27.5 (61)	28.9 (37)	0.02
Risk of being detected – offense scene was deserted	32.9 (73)	39.8 (51)	0.07
Risk of being detected – body recovery scene	27.5 (61)	30.5 (39)	0.03
Risk of being detected – body recovery scene was deserted	47.7 (106)	59.4 (76)	0.11*
Forensic awareness (FA)			
Any FA used	36.0 (80)	62.5 (80)	.26***
Removing/destroying evidence	19.8 (44)	49.2 (63)	.31***
Disposing of victim's body	11.7 (26)	10.2 (13)	-0.02
Acting upon victim and/or environment	2.6 (9)	24.2 (31)	.31***
Other precautions taken	7.2 (16)	21.1 (27)	.20***
Semen located	25.7 (57)	31.2 (40)	0.06
Other biological samples available for analysis	25.7 (57)	21.3 (27)	-0.05
Body moved	32.9 (73)	35.9 (46)	0.31
Detection avoidance			
Case unsolved	32.0 (71)	22.7 (29)	-0.09†
Days until body recovery[a]	94.2 (472.6)	30.0 (120.1)	5.24*

† $p < 0.1$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$ a= (Mean rank, SD). F coefficient

Table 2 presents the results of the sequential logistic regression analyses predicting sadism. In order to obtain the most parsimonious model, only the variables that were found to be significant at the bivariate level were included in the logistic regression analysis[1]. Both VIF and tolerance statistics were conducted and revealed no issues with multicollinearity. Model 1 includes only the victimology variable of victim gender. As observed at the bivariate level, SHOs targeting a male victim are more likely to be a sadist (*OR*= -.416, *p*<.05). Model 2 examines the locations involving risks of detection while taking into account the victimology variable. Similar to Model 1, SHOs targeting male victims are more likely to be a sadist (*OR*=*.401*, *p*<.05). Additionally, when the body is dumped at a deserted location, the offender is more likely to be a sadist (*OR* = 1.94, P<.05). Model 3 examines forensic awareness variables while taking into account the victimology and location variables. As observed in the previous models, SHOs targeting male victims are more likely to be sadists (*OR*= .387, *p*<.05). Both location variables also become significant. Thus, SHOs who get in contact (*OR* =2.62, *p*<.01) and dump the body (*OR* =1.79, p<.05) at a deserted location are twice as likely to be sadists. Moreover, SHOs who act upon the victim and/or the environment (*OR* =9.25, *p*<.001) are 9 times more likely to be sadists and those who remove/destroy evidence (*OR* =4, *p*<.001) at the scene to avoid police detection are four times more likely to be sadists. Finally, Model 4 examines the detection avoidance variables while including the victimology, location, and forensic awareness variables. Results show that, as in previous models, SHOs who target male victims (*OR* =-.334, *p*<.01) are more likely to be sadists. Moreover, SHOs who get in contact (*OR* =3.06, *p*<.01) are now three times more likely to be a sadist. Those SHOS that dump the body (*OR* =1.94, *p*<.05) of the victim at deserted locations are still twice as likely to be sadists. Also, SHOs who act upon the victim and/or the environment (*OR* =14.5, *p*<.001) are now fifteen times more likely to be sadists and those that remove/destroy evidence (*OR* =6.39, *p*<.001) at the scene to avoid detection are six times more likely to be sadists. Interestingly, using other

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[1] The variable of "any forensic awareness strategy used" was removed from the multivariate analysis as this variable includes all forensic awareness strategy used by SHOs and is thus redundant with the specific strategies we are looking at. Moreover, its inclusion would have caused multicollinearity with some other variables of the same category.

precautions to avoid detection becomes significant in the fourth model. Thus, SHOs using other precautions (OR =2.44, p<.05) are twice as likely to be sadists. Finally, SHOs who are able to avoid detection (OR =3.21, p<.001) are three times more likely to be sadists but these offenders see the victim's body being recovered faster (OR =-.989, p<.05) than with non-sadists. Although the overall correct classification percentage is modest, it significantly improves from model 1 (66.4%) to model 4 (75.9%). Similarly, the Nagelkerke pseudo R^2 indicates a significant improvement from model 1 (2.5%) to model 4, which indicated that 42.3% of the variance in the logged odds of the dependent variable could be attributed to the joint effects of the independent variables.

Table 2   Sequential logistic regression predicting sadism in SHOs

Variables	Model 1 β (SE)	Model 2 β (SE)	Model 3 β (SE)	Model 4 β (SE)
Victim is female	-0.88 (0.36)*	-0.91 (0.37)*	-0.95 (0.42)*	-1.10 (0.45)**
Risk of being detected – contact scene deserted		0.52 (0.34)	0.96 (0.38)**	1.20 (0.42)**
Risk of being detected – body recovery scene deserted		0.64 (0.26)*	0.59 (0.30)*	0.66 (0.32)*
Acting upon victim and/or environment			2.23 (0.49)***	2.67 (0.54)***
Removing/destroying evidence			1.41 (0.29)***	1.85 (0.33)***
Other precautions taken			0.84 (0.43)	0.89 (0.45)*
Case unsolved				1.12 (0.35)***
Days until body recovery				-0.01 (0.01)*
Constant	0.11 (0.33)	-0.31 (0.36)	-1.16 (0.43)**	-1.39 (0.46)**
% Correct Classification	66.6	66.3	75.0	75.9
Nagelkerke R^2	0.03	0.08	0.34	0.42

† $p < 0.1$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

Cluster analysis was performed on 7 of the 8 SAD-SEX-SH-R items. The findings revealed 3 groups that can be distinguished by sadists (36.6%, n=128), non-sadists (35.4%, n=121) and a mixed group of offenders (28.0%, n=101). All scale items are indicative of independence of observation suggesting that there are statistical differences between dimensions (sadists, non-sadist and mixed groups). Additionally, bivariate analysis indicate that there is a significant difference between cluster groupings based on SAD-SEX-SH-R scores (F=289.70, p<.001). Cluster 1 does not contain any offenders who have scored as sadists on the SAD-SEX-SH-R and, thus, represent the non-sadistic group of SHOs. With the exception of forced anal/oral sex and gratuitous violence, they do not exhibit any other sadistic behaviors at the crime scene. Cluster 2 similarly contains offenders who have not scored as sadists on the scale but who represent a less-severe group of potential sadists. This is demonstrated by the fact that although they do not have a score of 6 or more on the SAD-SEX-SH-R, they still as a group engage in sadistic crime scene behaviors that encompass all of the scale items. Lastly, cluster 3 contains only those offenders who have scored a 6 or more on the scale items and thus represent the severe sadists. They, as to be expected, have the highest frequency in sadistic behavior across all scale items which is indicative of more severe sadism. However, the mixed offender cluster is a particular point of interest as it has the potential to represent the group that may have emerged in SAD-SEX-SH-R scoring, had the data allowed for coding of items that had some indication of being present at the time of the offense. All scale items also appear within this cluster, but they can be distinguished from the sadist cluster by the lower frequencies within each of the scale items. This cluster contrasts from the non-sadist cluster, which does not have any offenders scoring on item 2 (physical/psychological torture), item 6 (use of inanimate objects on the victim), item 7 (sexual mutilation) or item 8 (trophies/souvenirs taken from the victim). Interestingly, the non-sadists also appear to sexually dominate their victims and at a higher rate than the mixed group. Item 4 (gratuitous violence used against the victim) appears to be the most common variable across all three clusters as indicated by the similar frequencies and lack of statistical difference in association. However, this was deemed not have had a significant impact on cluster findings, as it proves to be the least

useful in differentiating sadistic and non-sadistic offenders[1]. Item 8, item 7, and item 5 (forced anal/oral sex on victim) and item 2, prove to be most useful in differentiating sadistic offenders from the other two groups (non-sadists and mixed).

[1] Despite the lack of significant differentiation between cluster groups with item 4, this is consistent with empirical literature, which has found excessive violence to be the least reliable behavioral indicator at determining sadistic offenders in comparison to other sexual offenders (Healey, Lussier and Beauregard, 2012).

Table 3   Cluster for non-sadistic, mixed and sadistic SHO's with scale items

Scale Items	Non-sadists	Mixed	Sadists	X^2
	35.4 % (n=121)	28.0% (n=101)	36.6% (n=128)	
Item 1 –	28.7 (35)	6.6 (8)	64.8 (79)	.399 ***
Item 2 –	0.0 (0)	19.0 (11)	81.0 (47)	.668 ***
Item 4 -	40.9 (124)	17.2 (52)	41.9 (127)	.152
Item 5 -	20.3 (15)	6.8 (5)	73.0(54)	.772 ***
Item 6 -	0.0 (0)	31.7 (13)	68.3 (28)	.861 ***
Item 7-	0.0 (0)	18.2 (6)	81.8 (27)	.314 ***
Item 8 –	0.0 (0)	34.8 (46)	65.2 (86)	.390 ***
Sadist	0 (98)	0 (124)	100.00 (128)	

***=p<.001

Next, in order to test for the external validity of the cluster solution, bivariate relationships between the clusters and each independent variable are examined. Table 4 indicates that 9 out of 17 variables are significantly (or approaching) related to the offender being a sadist or a mixed offender. However, SHOs are more likely to be a sadist when they use any forensic awareness strategies, including when the offender attempts to remove/destroy evidence at the scene, they act upon the victim and/or the environment for forensic awareness purposes, and use other precautions not to be detected by the police. Also, SHOs who release the body at a deserted location are more likely to be sadist, and although only approaching significance, SHOs choosing to get in contact with the victim, commit the crime at a deserted location and have female victims are more likely to be a sadist or a mixed offender, while SHOs that are non-sadists are more likely to have a sex-trade worker. Finally, although only approaching significance, SHOs who see their case remained unsolved are less likely to be a sadist.

Table 4   **Bivariate relationships between clusters with victimology, location, FA and detection avoidance variables**

	Non-sadistic (N=121)	Mixed (N=101)	Sadistic (N=128)	χ^2
Victimology				
Victim is female	27.2 (95)	31.6 (109)	31.6 (109)	.130 †
Victim is white	11.3 (39)	13.0 (45)	13.9(46)	.032
Victim abuses alcohol	10.8 (38)	14.2 (50)	12.8 (45)	.054
Victim abuses drugs	8.9 (31)	8.0 (28)	8.9 (31)	.073
Victim is a sex trade worker	7.7 (27)	4.6 (16)	5.4 (19)	.152*
Locations involving risk of detection				
Risk of being detected – contact scene deserted	2.9 (10)	4.3 (15)	7.1 (25)	.117 †
Risk of being detected – offense scene was deserted	8.0 (28)	12.8 (45)	14.6 (51)	.105 †
Risk of being detected – body recovery scene was deserted	15.7 (55)	14.6 (51)	21. 7 (76)	.149 *
Forensic awareness (FA)				
Removing/destroying evidence	5.7 (20)	6.9 (24)	18.0 (63)	.307 ***
Disposing of victim's body	3.4 (12)	4.0 (14)	3.7 (13)	.024
Acting upon victim and/or environment	1.4 (5)	1.1 (4)	8.9 (31)	.306 ***
Other precautions taken	2.2 (8)	2.2 (8)	7.7 (27)	.001 ***
Weapon removed from the scene	6.3 (22)	7.7 (27)	14.6 (51)	.163 †
Body moved	8.6 (30)	12.3 (43)	13.1 (46)	0.58
Detection avoidance				
Case unsolved	10.9 (38)	9.4 (33)	8.3 (29)	.135 *
Days until body recovery[a]	171.02	198.99	161.20	8.435*

† $p < 0.15$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$ [a] = mean rank, F coefficient

Table 5 presents the results of the sequential binary logistic regression analyses predicting the different types of SHOs through cross-comparisons of each of the three clusters. In order to obtain the most parsimonious model, any variables below the p<.15 were included in order to ensure that all potentially relevant variables were included for multivariate analysis. The multivariate analysis demonstrates some significant differences between clusters. Although mixed offenders (cluster 2) and sadists (cluster 3) do not indicate any significant differences in terms of victimology, the odds of the offender being a sadist in comparison to a mixed offender increases by 7 times when the offender has removed or destroyed evidence (OR = 6.85 , p <.05). When comparing to the nonsadists (cluster 1), the odds of the offender being a sadist is 5 times more likely when the offender has destroyed or removed evidence (OR = 4.82 , p<.05). Although only approaching significance, the odds of the offender being a sadist in comparison to non-sadist is 5 times more likely when the offender has acted upon their victim and/or environment (OR = 4.82, p<.10) and 3 times as likely when the contact scene is deserted (OR = 3.29, p<.10). If the body recovery scene is deserted however, the odds of the offender being a sadist in comparison to a non-sadist is 7 times more likely (OR= 7.44 , p<.05). Interestingly, the opposite holds true when the offense scene is deserted, in which case the odds are significantly more likely for the offender to be a non-sadist (OR =.150 , p<.05). Mixed offenders in comparison to non-sadists are less likely to target a sex trade worker, although this is only approaching significance (OR = .092, p<.10). Lastly, when a weapon has been removed at the crime scene it is significantly less likely that to be mixed offenders in comparison to non-sadists (OR = .181, p<.05).

Table 5   Logistic regression models predicting sadistic and non-sadistic offenders from victimology and IA variables

	Mixed vs **Sadist** β (SE)	Non-sadist vs **Sadist** β (SE)	Mixed vs **Non-sadist** β (SE)
Victimology			
Victim is Female	-.297 (.857)	-1.086	.788
Victim is a sex trade worker	-.262 (.802)	.932	-1.194
Constant	1.252 (.802)	1.253 (.802)	.000 (1.000)
R^2	.006	.045	.047
Overall Classification	72.2	58.4	66.7
Victimology & Investigative Awareness (IA)			
Victim is Female	-.132 (.973)	-.978 (1.042)	.575 (1.266)
Victim is a sex trade worker	.069 (.941)	.6777 (1.137)	-2.385 (1.289)†
Forensic Awareness Strategies			
Removing/destroying evidence	1.925 (.874)*	1.573 (.629)*	-.809 (.970)
Acting upon victim and/or environment	.183 (.828)	1.573 (.920)†	-.557 (1.185)
Other precautions taken	.488 (1.004)	1.395 (.938)	-.117 (1.344)
Weapon removed at crime scene	-.932 (.660)	.405 (.582)	-1.710 (.733)*
Locations involving lower risk			
Risk of being detected – contact scene deserted	1.189 (.910)	1.191 (.717)†	-.135 (.933)
Risk of being detected – offense scene deserted	-1.297 (1.007)	-1.899 (.933)*	1.682 (1.103)
Risk of being detected – body recover scene deserted	.679 (.950)	2.007 (.938)*	-1.667 (1.063)
Detection Avoidance			
Days until body recovery 3	-.022 (.002)	.001 (.003)	-.004 (.003)
Case unsolved	.322 (.852)	-.073(726)	1.063 (1.330)
Constant	1.017 (.750)	-.180 (1.142)	1.480 (1.477)
Nagelkerke R^2	.274	.392	.353
Overclassification	80.6	74.2	75.4

† p < 0.1   * p < 0.05   ** p < 0.01   *** p < 0.001

Chapter 6.

Discussion

The first study aim was directed at testing whether investigative awareness is a distinctive feature of sadism in a sample of SHOs. As shown in our findings, SHOs are more likely to be identified as sadists when they use strategies to avoid detection. More specifically, sadistic SHOs are more likely to carefully pre-select deserted locations to encounter their victim and dump their bodies. Moreover, sadistic SHOs are more likely to exhibit forensic awareness by acting upon the victim and/or the environment (e.g., disabling the victims telephone or car, or using police scanners to track police movement), destroying and removing evidence (e.g., cleaning or setting fire to the crime scene), and using other precautions such as staging the crime scene or protecting their identity. Finally, sadistic SHOs, despite seeing the victims' bodies being recovered faster than non-sadists, they are more likely to avoid police detection.

These findings suggest that there may be underlying differences in motivation for SHOs and that sadism is not necessarily directly connected to sexual homicide. In particular, conclusions from prior research suggest that some SHOs are more likely to kill as the result of situational factors, rather than a desire to fulfill deviant sexual fantasies (Beauregard & Proulx, 2002; Beauregard, Proulx & St-Yves, 2007; Kerr, Beech & Murphy, 2012). Thus, it is possible that non-sadistic offenders had the intent to rape, not murder, but due to situational factors such as excessive resistance on behalf of the victim (Beauregard, Proulx, & St-Yves, 2007) they took any means necessary to achieve their goal of sexual gratification. This is supported by research conducted by Beauregard and Proulx (2002) that defines two types of SHOs: those who are sadistic and those who are angry. Wherein the sadistic SHOs have elaborate sadistic fantasies that are more important to them than actual reality, which lead them to be more likely to premeditate their crimes and act out the murder in a way that reflects their fantasies. The angry SHO

on the other hand, does not have prior sadistic sexual fantasies, lacks premeditation, and kills based on provocation on the victim's behalf. The findings indicate that investigate awareness may, in fact be, a distinctive feature of sadistic offending and provide evidence to suggest that they do differ from other SHOs.

It is also interesting to note that sadistic offenders were more likely to have male victims than non-sadistic offenders. Warren et al. (1996) found that in a study of 20 sexual sadistic serial murderers, over half reported homosexual experiences. Additionally, Beauregard and Proulx (2007) found that in a minority of SHOs specifically targeting males, a group of "sexual predators" was identified, very similar to the sadistic offender or the lust murderer described by Geberth (1996). However, the connection between the presence of sadism and targeting male victims will require further research.

Although several studies have suggested that sadistic offenders were more skilled at avoiding detection (e.g., Dietz et al., 1990), to my knowledge no studies actually tested specifically for this. The current study is a pioneer effort to uncover the relationship between sadism and forensic awareness. Two different measures were used to examine avoiding detection: whether or not the case remained unsolved and the number of days before body recovery. Although the case status is obvious, the use of the number of days before body recovery was used as it has been shown that the longer it takes to recover the victim's body, the less chance to recover forensic evidence to analyze, and subsequently identify the offender. Moreover, Beauregard and Martineau (2014) have shown that the two measures were positively correlated.

Interestingly, our findings showed a different pattern. Sadistic SHOs were more likely to remain undetected compared to non-sadists but at the same time, the police were more likely to recover the victim's body sooner. This is similar to what Beauregard and Martineau (2016) have found in their sample of SHOs. The authors examined behaviors of the organized SHO as defined by Ressler et al. (1988). What they found was that although selecting less risky locations was positively associated to both avoiding and delaying detection, they found that behaviors such as moving the victim's body had the opposite effect on avoiding and delaying detection. Moreover, I believe it is plausible that with a sadistic offender, part of his experience and enjoyment may be to

leave the victim where they may be found in a state that is shocking. While this cannot be tested in my paper, it is hypothesized that the finding of the victim's body discovered sooner may be in line with the offender's desire. Overall, this study supports the notion that sadistic offenders are more "rational" offenders who pose a greater risk for evading police detection based on conscious efforts to impede police investigations. This is especially concerning for police, as this population is generally believed to be at a considerable risk for recidivism (Berner et al. 2003; Stone, 2005) and, thus, creates a serious threat to public safety.

The second aim of the current study was to determine whether SHOs could be classified into distinct groups based on the severity of sadistic behavior at the crime scene. The severity of sadism was determined using scores on the SAD-SEX-SH-R, in that a score of 6+ on scale items indicates severe sadistic behavior. The SAD-SEX-SH-R is designed to allow for items to be scored based on *presence* (=2), *absence* (=0), or *some indication* (=1), but due to the nature of the data, items could only be scored as present or absent. By doing this, I believe only the most severe sadists have been selected from the sample. Although this in itself is not of issue, it is possible that if the ability to score for *some indication* was possible, that a larger proportion of sadists could have been identified, or that a separate group would have formed that were less severe sadists. This has particular utility considering the current debate regarding whether sadism should be viewed on a continuum or as a dichotomy. Thus, cluster analysis has the advantage of allowing for potential groups to emerge using the presence or absence of scale items, but without having to rely on the cut-off of 6+ to differentiate sadists from non-sadists. These findings suggest that the sample can be classified based on varying degrees of sadistic offending. More specifically, three distinct groups were revealed: (1) non-sadists, (2) mixed (i.e. less severe) sadists and (3) severe sadists.

As to be expected, the sadistic cluster includes the presence of all scale items and with the highest frequencies for each of the items (with the exception of gratuitous violence), when compared to the mixed and non-sadistic clusters. The sadistic cluster also best represents the severe sadists, in that all offenders within this cluster would score a 6+ on the SAD-SEX-SH-R. Items such as physical or psychological torture, sexual mutilation, and use of inanimate objects occurred with the highest frequencies for

this group. This suggests that there is utility in using behavioral items to identify sadism in sexual homicide, as torture and sexual mutilation are items that have also been identified in past literature as one of the strongest behavioral predictors of sadism (Marshall and Hucker, 2006). McLawsen et al., (2008) also found the use of physical objects to inflict pain as one of the behavioral indicators most clearly associated with severe sadism, determined by clinicians in their study. Interestingly, I found that the mixed (i.e. less severe) cluster also scored on all of the scale items, albeit in lower frequencies than the severe sadists. Specifically, the use of inanimate objects, torture and sexual mutilation were all found to occur with relatively high frequencies in the less severe sadistic cluster and these same behaviors were also found in the highest frequencies with the sadistic cluster.

The finding that the less severe and severe sadistic clusters have the highest frequencies within the same behavioral indicators has specific utility for the notion of sadism as a continuum. However, cluster analysis does not indicate to what extent each of these behaviors are present within an individual offender, just that these behaviors are the most prevalent in each cluster grouping. Thus, it is possible that the less severe cluster grouping is potential sadists, but due to the nature of the data, did not have enough evidence using behavioral indicators to be deemed as such. Alternatively, it is also possible that these offenders only display some sadistic behavior and would not be enough to be considered severe. This alternative explanation specifically lends support for the notion of sadism as a continuum of severity and against sadism as a distinct clinical entity (Knight, 2012; Marshall, Kennedy and Yates, 2002; Mokros et al., 2014; Nitschke et al., 2009; Longpré, et al., 2015).

In this case, it is plausible that sadism is better represented in varying degrees (e.g., low, medium and high). This interpretation corresponds with findings by Mokros et al., (2014) in that sexually sadistic conduct during the crime-commission process is more likely to be an exaggerated form of sexual violence that is located on the upper-end of a continuum of sexual aggression. Additionally, this supports the conclusions drawn by Knight (2012), which suggests that items from a self-report questionnaire on various kinds of sexually aggressive and sadistic conduct were also in line with a dimensional interpretation. This is well suited to explain our non-sadistic group as well, as this cluster

was found to be high in gratuitous violence, sexual domination, and forced oral/anal sex. However, there were no frequencies reported in any of the other scale items, unlike the less severe and sadistic clusters. This suggests that the non-sadistic cluster would be best represented on the lower-end of the continuum of sexual aggression when compared to the less severe and severe sadistic clusters.

It is also important to note that humiliation is one of the explicit requirements of a clinical diagnosis of sexual sadism and has been identified in past research as a successful behavioral indicator of sadism (e.g. Richard and Jackson, 2011; Marshall and Hucker, 2006). For instance, researchers such as Healey et al. (2012) found that humiliation in crime scene behavior was significantly related to an official diagnosis of sadism. For the current study, the presence of humiliation can be used as either a direct (i.e. if the offender admitted to being sexually aroused or humiliating their victim) or an indirect measure (i.e., if the offender excessively humiliated his victim in conjunction with other sexual sadism markers) of sadism. Despite this, and somewhat surprisingly, humiliation was found to occur in just over 1% of an offender's crime scene behavior and, therefore, could not be included in our cluster groupings. This suggests that humiliation is either a poor behavioral indicator of sadism, or that it is particularly challenging to infer from crime scene behavior alone in the context of sexual homicides specifically.

This is supported by findings in the Longpré, Guay, and Knight (2015) study, which sought to validate a new dimensional scale- the MCT Sadism Scale (MTCSS)- in efforts to emphasize the utility of a dimensional model of severe sexual sadism. They created the scale using eight components theoretically related to sadism, one of which was humiliation. However, upon examination through Item Response Theory (IRT), they found humiliation did not meet the inclusion criteria required, as the discrimination and difficulty parameters were too far from the recommended range. Taken together, these preliminary findings suggest that humiliation may not be as exclusively related to severe sadism as initially thought. However, the current study only examined this in the context of sexual homicide and, consequently, these findings cannot yet be generalized to other types of sadistic sexual crimes. As an alternative to humiliation, it is possible that other

behavioral indicators not previously identified in research could be more reliable to identify sadism.

Although when taking into account cluster groupings, findings do not suggest that all investigative awareness strategies were unique to sadistic offenders, the sadistic cluster was more likely to use forensic awareness (i.e. destroying and removing evidence) in comparison to the non-sadistic and mixed cluster. Additionally, they were more likely to select a deserted offense scene and body recovery scene compared to the non-sadistic cluster. These findings share similarities to the FBI's organized and disorganized typology (Ressler, et al., 1986). As with the organized offender, the sadistic cluster demonstrates investigative awareness and more premeditation as they destroy and remove evidence at a greater rate than non-sadistic SHOs. Whereas the non-sadistic cluster more closely resemble the disorganized offender, in that they show less evidence of premeditation as demonstrated by the lack of forensic awareness strategies used by this group of offenders. This finding is also directly in line with Dietz et al. (1990), which found sadistic offenders demonstrated investigative awareness by using gloves at the crime scene and pre-selected deserted locations. Thus, the use of forensic awareness strategies as well as preselecting deserted locations may be a potentially more useful indicator of severe sadism than humiliation, particularly when the offender is unknown to police and they must rely solely on the information available at the crime scene.

Despite the finding that detection avoidance (measured through days until body recovery and an unsolved case status) is not significantly different between clusters, it is still important to identify features of forensic awareness that are more likely to occur with severe sadists. If sadistic offenders have an increased risk of recidivism, then their ability to delay detection is a public safety concern, as the potential opportunity for re-offending is at the risk of another homicide.

It is also possible that the non-sadistic cluster shared the same likelihood as the sadistic cluster with regard to unsolved case status as a result of their victim choice. Healey et al. (2012), for instance, found that the non-sadistic homicidal offenders and the non-sadistic rapists in their sample were equally as likely as the sadists to select a

specific victim. As the current study found that non-sadists were more likely to have a victim that is a sex-trade worker in comparison to the less severe sadistic cluster, then this could have increased their odds of avoiding detection. The notion of increased issues in the solvability of a crime when the victim is a sex-trade worker has been identified in past research (e.g. Salfati, James, and Ferguson, 2008) and ,thus, a plausible potential explanation.

Chapter 7.

Conclusion

The current study provides insight into how investigative awareness in sexual homicide cases can be identified as a distinctive feature of severe sexual sadism when compared to sexual homicide offenders who do not indicate sadistic behavior. More specifically, it adds to extant literature that highlights the importance of behavioral differences between SHOs. The findings in the present study also support the notion that sadistic fantasies can underlie the motivation behind a sexual homicide and lead the offender to better evade police detection through better preparation, planning of the crime, and taking care of possible forensic evidence that could be left at the crime scene.

As suggested in previous studies, severely sadistic SHOs present a greater investigative awareness than non-sadists, which actually lead them to avoid police detection. Despite the differences that emerged when taking into account the possibility of a less severe sadistic group with the second study aim, the utility of the findings when contrasted with the non-sadists only is still important. It also highlights important differences in modus operandi between sadistic offenders and non-sadistic offenders. The current findings have key implications for the understanding of sadism as well as the identification of sadistic offenders by both clinicians and the police. The study shows that not all SHOs present investigative awareness and that not all of them are capable of avoiding police detection. However, the study also shows that for the SHOs who display behaviors related to investigative awareness, they are more likely to be sadists. This constitutes another objective feature easier to use than the diagnostic criteria of the DSM or the ICD-10 to identify severe sadistic offenders.

The current study also examined a second study aim with the objective of uncovering whether SHOs could be classified into distinct groups based on the severity of sadistic behavior. Findings revealed three groups of SHOs that could be differentiated through the occurrence of sadistic crime scene behaviors as determined by scale items in the SAD-SEX-SH-R. The sadistic cluster represents the severe sadists and includes all scale items and at the highest frequencies (with the exception of gratuitous violence).

Additionally, several items identified in the current sample that occurred with the highest frequency have also been identified in previous research as useful behavioral indicators. This helps to not only validate the use of the SAD-SEX-SH-R, but also the use of behavioral indicators to identify sadism in sexual homicide offenders exclusively. However, the mixed (i.e. less severe) cluster also includes the presence of all scale items, just in lower frequencies than those found in the sadistic cluster. This particular finding offers potential support for the current debate surrounding whether sadism should be viewed in categorical or dimensional terms. More specifically, it appears that a potentially less severe group of sadists have been identified, and a non-sadistic group that still demonstrates high levels of violence. The emergence of these three groups suggests that severe sadism is likely to be on the upper end of the continuum of sexual aggression, whereas the non-sadists would represent the lower end. Lastly, certain forensic awareness strategies were found to be more likely to occur specifically within the sadistic cluster, which suggest that these offenders may be more likely to thwart police investigations to delay detection.

The current study is not without limitations. The use of police data is limited to what is observed by police at the crime scene or revealed through the investigation (Beauregard & Martineau, 2014). Also, as some of the case statuses are unsolved it is not possible to examine offender characteristics. Thus, we can only hypothesize that offenders whose case status remained unsolved were the result of having the intention to avoid detection and made choices to obtain this particular outcome (Beauregard & Martineau, 2014). Clinical studies are ,therefore, needed to offer a more detailed picture than what is provided by solely using police data. Moreover, we cannot conclude what caused an offender to become more investigatively aware. There are a number of different circumstances that could lead to the development of investigative awareness,

including prior contact with the criminal justice system as well as learnt behaviours from previous successfully undetected offenses. Therefore, future research would benefit from determining differences in potential factors that lead to differences in investigative awareness. In addition, no legal definition of sexual homicide exists which means that identification is entirely up to police investigators, making it possible that some sexual homicides go unnoticed because the offender removed forensic evidence or the body was never found (Beauregard & Martineau, 2014). Future research would benefit from including offender characteristics and contextual aspects of the crime. In addition, it would be ideal to compare results with clinical studies that have access to sexual fantasies to confirm consistency in the results of the current study and increase generalizability. Further research on the utility of SADSEX-SH-R in accurately predicting sadism would be beneficial to determine reliability and reproducibility within sexual homicide. It would also be ideal to validate the SAD-SEX-SH-R using clinical diagnostic tools for sadism. This would determine whether both methods would demonstrate the same findings in their ability to identify sadistic offenders.

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