The Unusual Case of Sexual Homicide Against Males: Comparisons and Classification

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Introduction

On January 18th, 2018, the Toronto police apprehended Bruce McArthur, a 67-year-old self-employed landscaper, in his home in relation to several suspected homicides. He was originally linked to the death of two men but over the next three months he would be charged with first-degree murder in the deaths of six more men. The police had discovered the human remains of the eight victims buried inside planters at various homes where McArthur worked as a landscaper. It was later found that McArthur had sexual intercourse with the victims and that they were all spending time in Toronto's Gay Village.

Although unusual, this infamous Canadian serial killer has shed some light on a specific type of victim rarely researched or even discussed in the field of sexual violence: the male victim. As to sexual homicide specifically, it has been largely documented that the proportion of homicide that is sexual in nature is generally under 4 percent (e.g., James & Proulx, 2014). Needless to say, sexual homicide cases involving male victims are even rarer. In order to better estimate the number of sexual homicides, Ressler et al. (1988) have proposed an operationalized definition of this type of crime. Thus, to be considered as sexual, a homicide has to present at least one of the following criteria: victim's attire (e.g., torn clothing exposing the victim's genitals) or lack of attire, exposure of the sexual parts of the victim's body, sexual positioning of the victim's body, insertion of foreign objects into the victim's body cavities, evidence of sexual intercourse, and evidence of substitute sexual activity, interest, or sadistic fantasy. Previous studies highlight the strong heterogeneity of sexual homicides and sexual offenders (see e.g., Beauregard & Proulx, 2002; Beauregard & Proulx, 2007; Beauregard et al., 2007; Beech et al., 2005; Beech et al., 2001; Chopin & Beauregard, 2020a; Higgs et al., 2017). Specifically, some research focuses on victims' characteristics such as age and found strong differences in terms of offender profile and crime-commission process. For instance, studies showed that offenders involved in sexual

homicides of children (12 years old or younger) constituted a distinct (Beauregard et al., 2008; Proulx et al., 2018) and heterogeneous population of sexual murderers (Chopin & Beauregard, 2019c, 2020c). Similar conclusions were observed with sexual homicide of elderly (65 years old or older) victims (Chopin & Beauregard, 2020d; Safarik, 2002; Safarik et al., 2002). Surprisingly, the question of the victim gender and its impact on the crime-commission process has been largely overlooked as very few studies have examined sexual homicide of men. This study aims to fill that gap by comparing the crime commission-process in cases of sexual homicide of men with sexual homicides of women, and test the heterogeneity of this specific type of offenders in terms of motivations and crime-commission process.

Rational Choice and Routine Activities Theory: A Situational Framework to Explain the Crime-Commission Process of Sexual Homicide

The crime-commission process can be defined as the set of decisions and actions taken by an offender to successfully complete his crime (Douglas et al., 2006). These sets of decisions and actions in cases of sexual homicide may be understood by two different but complementary theoretical approaches: The rational choice and routine activities theories.

The rational choice theory (Cornish & Clarke, 1986, 1987) provides a theoretical framework to understand how criminals make decisions and proposes that rationality and self-interest are foundational principles of decision-making (Clarke & Cornish, 1985; Piquero & Tibbetts, 2002). This approach states that offenders make decisions to gain more than what it costs to commit the crime (Cornish & Clarke, 1986, 1987). Thus, in following a cost-benefit analysis, the expected benefits should be greater than the costs to commit crimes. RCT suggests two levels of decision; at the macro level, it consists of the decision to commit a crime or not, according to the various parameters known by the offender and the outcome of the cost-benefit analysis, whereas at the micro level, it concerns all the decisions made by the

offenders to achieve their goal (Cornish & Clarke, 1986, 1987). Research focusing on sexual homicides showed that sex homicide offenders follow a rational reasoning to commit and complete their crimes (see for example Beauregard et al., 2020; Chopin & Beauregard, 2020c; Chopin, Beauregard, & Bitzer, 2020). Rational choice is analyzed throughout the three main phases of crime commission: Pre-crime (crime preparation), crime (crime commission) and postcrime (crime exit). The analysis of the different phases indicates that the crime-commission process is balanced between, on the one hand, the rewards of the crime (e.g., intrusive sexual acts, presence of sexual sadism) and on the other hand, the risk of being identified by the police (e.g., leaving evidence at crime scene, presence of witnesses). For instance, Chopin, Beauregard and Bitzer (2020) highlighted that the higher the crime's benefits for sexual homicide offenders (e.g., number of sexual acts, intrusive sexual acts, sexual sadism), the higher the costs for them (i.e., risk of being identified by the police), and consequently the more they use avoidance detection strategies (i.e., protecting identity, hiding victim's body, destroying evidence).

The routine activities theory (Cohen & Felson, 1979) provides a theoretical framework to understand the crime context. This theoretical approach explains the aggressor-victim interaction with his environment and allows to understand why with a certain alchemy, crimes are more likely to be committed. Cohen and Felson (1979) suggested that predatory crimes are committed during everyday activities (e.g., work, school, leisure, sport activities, at home, etc.) in the presence of a motivated offender, a vulnerable victim, and a lack of a guardian. The presence of a motivated offender is supposed to be constant while the victim's vulnerability and the lack of guardianship is variable. The routine activities theory has been tested in cases of sexual homicide and findings indicate that sexual homicide offenders were more likely to target vulnerable victims (e.g., children, single intoxicated women) with a lack

of guardianship (e.g., partner, friend, parent, house alarm) (see for example Beauregard & Martineau, 2015; Chopin & Beauregard, 2019c, 2020c).

Sexual Homicide Against Male Victims: Specific Findings

Little is known concerning sexual homicide involving male victims. Most of the published work on this topic has been limited to a collection of case studies describing different homosexual homicides that occurred around the world (e.g., Bataille, 1992; Benecke, 2002; Kidd, 1993; Martens & Palermo, 2005; Murty, 2009). Empirical studies focusing on these cases are scarce and present several methodological limitations. The study by Beauregard and Proulx (2007) used a sample of 10 male offenders involved in sexual homicide targeting male victims, while studies by Geberth (Geberth, 2010; Geberth, 2014) analyzed 30 cases. In their study, Myers and Chan (2012) used a larger sample of 88 juvenile offenders involved in sexual homicide against male victims but they had access to a very limited number of variables, limiting their analyses. Findings from these studies are of two types: description of offender, victim, and crime characteristics, and an analysis of the specific motivations associated with sexual homicide against male victims.

Characteristics of Sexual Homicides Against Male Victims

Sexual homicide offenders were aged on average of 27.8 years old and were mainly single when committing the crime (Beauregard & Proulx, 2007). In their study focusing specifically on juvenile homicide offenders, Myers and Chan (2012) found that the majority of sexual homicide offenders were aged between 16 and 17 years old at the time of the offense. Beauregard and Proulx (2007) found that offenders did not typically experience occupational problems (i.e., loss of job; financial difficulties) or relational difficulties (i.e., ending of relationship with a partner, marital problems, interpersonal conflict with the victim). Most of offenders had consumed alcohol prior to the crime, while only half of them had consumed drugs. Sexual homicide offenders in their sample had prior convictions,

especially property crimes, while half of them were involved in nonsexual violent crimes and/or sexual crimes, showing important versatility in their offending behavior (Beauregard & Proulx, 2007). Male victims were on average more than 30 years old at the time of the assault (Beauregard & Proulx, 2007; Myers & Chan, 2012), were not under the influence of psychoactive substances (i.e., alcohol and/or drugs), and half of them lived alone when killed. Myers and Chan (2012) noted that in 55% and 36% of the cases, offenders and victims were acquaintances and strangers respectively.

As to the crime characteristics, Beauregard and Proulx (2007) found a high level of premeditation. Sexual homicide offenders mostly knew their victims prior to the assault and used a weapon during the crime (Beauregard & Proulx, 2007; Myers & Chan, 2012). Physical resistance of victims was present in most of the cases as well as the use of violence (Beauregard & Proulx, 2007). Anal sex occurred in less than half of the cases while humiliating and mutilating behaviors were uncommon. A majority of offenders moved or hid the victim's body after the murder (Beauregard & Proulx, 2007).

Theoretical Classifications of Men Who Committed Sexual Homicide Against Other Men

To date, there exists only theoretical classifications of sexual homicide against men. These classifications are based on clinical observations and constitute a first step in the identification of the heterogeneity among sexual homicide against male victims. The analysis of the different existing typology suggests that there are three different types of sexual homicide against men.

In the first type of sexual homicide against male victims, the sexual component is important and offenders target adult victims. Geberth (1996) was the first to propose a typology of homosexual homicides, generated on the basis of his investigative experience. He identified *the interpersonal violence-oriented* disputes and assault category which describes situations

where the homicide is the outcome of altercations between partners (or ex-partners). Geberth (1996) noted that these crimes could occur when rules of consenting sexual activities between two or more partners were not respected. Similarly to this category, Beauregard and Proulx (2007) identified *the avenger* cluster who described sexual homicide offenders involved in sex trade activities and characterized by alcohol and/or drugs consumption. Most of these offenders were sexually abused during their childhood. Beauregard and Proulx (2007) suggested that this category of offenders killed their victims after a consented sexual exchange that triggered memory of the abuse they experienced, leading them to unleash their rage.

Geberth (1996) also identified a category labeled *murders involving forced anal rape and/or sodomy* in which are included homicide where victims were raped. The death of victims is not part of the deviant script but is pragmatic (e.g., force used to overcome victim resistance; avoid police detection) (Geberth, 1996). Finally, Geberth (1996) identified *the lust murder* category including homicides where offenders perpetrated acts of sexual sadism as well as the mutilation of victim's genitals. Geberth (1996) suggested that offenders involved in these homicides premeditated their crimes in order to express their sexual fantasies.

The second type of sexual homicide involving male victims focused on child victims. Beauregard and Proulx (2007) identified the *sexual predator* category which included sexual homicide offenders mainly motivated by deviant sexual fantasies. This type was very similar to the male pedophile homosexual serial killer identified by Geberth (2010; 2014). These offenders are characterized by previous criminal convictions for child sexual abuse. They presented a high level of premeditation and targeted unknown young victims (i.e., adolescent, young male, and children) (Beauregard & Proulx, 2007). These crimes are characterized by sadistic acts and evidence of violence is found on the victim's body.

The third type of sexual homicide against male victims consists of murderers where the sexual component is not the primary motivation. Geberth (1996) found *the robbery and/or homicide of homosexuals* which included cases where offenders targeted vulnerable victims or victims engaged in risky behaviors. The main motivation is financial gain and sexual acts are committed concomitantly. This is similar to the *nonsexual predator* category identified by Beauregard and Proulx (2007). In this category sexual homicide offenders are motivated by financial gain while the death of the victim was merely instrumental, and sexual acts are committed to manipulate and trap the victim (Beauregard & Proulx, 2007).

Aim of Study

An examination of the published literature showed that research focusing on sexual homicide involving male victims is scarce. Most of the work on this topic has focused on case studies that were not representative of the phenomenon and whose primary purpose was to clinically describe these ‘unusual’ cases. When considering the few studies that have been conducted on this type of sexual homicide offenders, they all presented conceptual (i.e., overlapping categories) and methodological flaws (e.g., very small sample size, limited number of variables tested). In order to increase our understanding of this type of sexual homicide offender, this study focuses on two major aspects. First, this study aims to identify characteristics specific to sexual homicide involving male victims by comparing them to sexual homicide involving female victims and determine whether rational choice approach and routine activities theories are useful to explain the crime-commission process. Second, this study aims to provide the first empirical classification of sexual homicide involving male victims. More specifically, this study investigates the following two research questions:

Research question 1: Does the crime-commission process of sexual homicide involving male victims different from those of female victims?

Research question 2: Can we observe heterogeneity in sexual homicide cases involving male victims with an empirical classification of sexual homicide involving male victims, and if yes, how does it compare to existing theoretical typologies?

Methodology

Sample

The sample used in this study comes from the Sexual Homicide International Database (SHIELD). This database includes 762 solved (i.e., cases for which police investigators identified and charged a suspect) and unsolved (i.e., where an offender has not been identified by investigators) cases of sexual homicide which occurred between 1948 and 2018 in France and Canada. The data were collected in Canada and France with exactly the same tool created to reference information on victims, offenders, and the crime-commission process with a total of 126 variables. The data included in the database come from various sources of information and were compiled by crime analysts' experts in violent crimes and using the exact same standardized grid of data collection in both Canada and France. In each case, the information comes from investigative reports, offender interview reports, autopsy reports provided by pathologists, psychological reports provided by a team of forensic psychologists, and reports provided by forensic experts (for an exhaustive description of the database methodology see Chopin & Beauregard, 2019b). Sexual homicide cases included in the database used for this study match the definition from Ressler et al. (1988), stating that for a homicide to be considered as sexual, it has to present at least one¹ of the following characteristics at the crime scene: victim's attire (e.g., torn clothing exposing the victim's genitals) or lack of attire; exposure of the sexual parts of the victim's body; sexual positioning of the victim's body; insertion of foreign objects into the victim's body cavities; evidence of sexual intercourse; evidence of substitute sexual activity, interest, or sadistic fantasy. Information included in this

¹ Although such definition has been criticized to potentially present false positives, it is important to mention here that all cases included in SHIELD presented at least two of the criteria to be considered sexual.

database is compiled from criminal investigation files by crime analyst experts on violent crimes. Information compiled in criminal investigation files are completed by police officers but also by other experts who are involved in the investigative process (e.g., coroner, psychologist, etc.).

For this study we selected a sample of 662 solved cases of non-serial sexual homicide, including 562 cases involving female victims and 100 cases involving male victims². All cases were perpetrated by 662 male offenders. We decided to exclude unsolved cases of our study (n=100) in order to analyze offender characteristics.

Research Subjects

Offenders included in the sample were all men, aged on average of 30.49 years old ($SD = 10.24$). Most of them (67.67%) were white, living with someone (88.67%), and the majority of them (55.43%) were engaged in a relationship the time of the crime. The majority (55.89%) of offenders had consumed alcohol and/or drugs prior to the offenses.

Approximately one third of offenders had a previous criminal history³ (31.42%), while 23.87 of them were characterized by some paraphilic behaviors (i.e., type of behavior associated to any paraphilias but without having to meet the diagnostic criteria, see Chopin, Beauregard, Gatherias, et al., 2020).

Measure

Dependent variable. In this study we used one dichotomous dependent variable to make the distinction between cases involving female and male victims (0 = female victim – 1 = male victim).

² Specifically, 1.36% (n=9) of these cases occurred between 1948 and 1970, 4.23% (n=28) of these cases occurred between 1971 and 1980, 15.11% (n=100) of these cases occurred between 1981 and 1990, 34.44% (n=228) of these cases occurred between 1991 and 2000, 36.25% (n=240) of cases occurred between 2001 and 2010, and 8.61% (n=57) of cases occurred between 2011 and 2018.

³ Specific details on previous crime committed are not available

Independent variables. The choice of independent variables was based on both routine activities and rational choice theories (Cornish & Clarke, 1986, 1987), as well as on previous work on sexual homicide involving male victims (e.g., Beauregard & Proulx, 2007; Geberth, 1996). To investigate the crime-commission process of sexual homicide offenders, we analyzed: 1) the target selection process and 2) the crime process. It is important to mention here that with the exception of one variable (i.e., number of sexual acts committed), all the independent variables used in this study were originally coded by a team of crime analysts from criminal investigation files and forensic expertise reports and none of them were recoded for the purpose of the study.

Target selection. Routine activities theory assumes that predatory offenders select vulnerable victims during everyday activities. To test this assumption and determine specific patterns for male victims, we used a total of 13 dichotomous (0 = no; 1 = yes) variables: 1) victim was less than 16 y/o, 2) victim used alcohol/drugs prior to crime, 3) victim was frequently engaged in social activities (i.e., participates in social situations and attends events where other people, including acquaintances and strangers, gather), 4) victim was a loner (i.e., he/she avoids social contact with other people), 5) victim had no fix address, 6) victim was a sex trade worker (i.e., does not imply that the victim was involved in prostitution activity at the time of the offense), 7) victim was involved in domestic activities at the time of offense (e.g., watching TV, etc.), 8) victim was sleeping at the time of offense, 9) victim was playing at the time of offense, 10) victim was jogging, and 11) victim was socializing at a bar, 12) offender targeted the victim (i.e., offender is not only looking for a suitable situation but has targeted a specific victim), 13) victim and offender were strangers (i.e., did not know each other at the time of the offense).

Crime characteristics. Analysis of choices and acts perpetrated by sexual homicide offenders to successfully complete their crimes is influenced by the rational choice theory.

sexual homicide offenders try to find a balance between the benefits associated with the crime and reducing the costs of their actions (Cornish & Clarke, 1986, 1987). For the sexual homicide offenders, this results on one hand, in sexual outcomes and on the other hand, in the avoidance of police detection (see e.g., Chopin & Beauregard, 2020b; Chopin et al., 2019; Chopin et al., in press). To test this assumption and identify specific patterns for sexual homicide involving male victims we used a total 11 variables. All these variables are dichotomous (0 = no; 1 = yes) excepted one which is continuous (i.e., number of sexual acts committed) 1) use of a con to approach the victim (i.e., as opposed to a coercive approach strategy; e.g., befriended the victim, posed as an authority figure, offered assistance, etc.), 2) intrusive sexual acts with a penis (i.e., vaginal and/or anal penetration), 3) number of sexual acts committed [$M = 1.69$; $SD = 1.53$; $Range = 1-5$] (i.e., anal/vaginal penetration with a penis, digital penetration, foreign object insertion, fellatio, masturbation), 4) sexual sadism (SADSEX-SH scale was used to operationalize the concept of sexual sadism, for more details see Myers et al., 2019)⁴, 5) method of killing: stabbed, 6) method of killing: strangled, 7) use of restraints (i.e., used to restrain the victim and not for sexual purposes), 8) weapon intentionally used,, 9) offender took items from victim/offense, 10) body moved (i.e., victim's body was moved from the crime scene to another location), 11) offender used forensic awareness strategies (i.e., specific strategies to try to avoid police detection such as destruction of forensic evidence, protection of identity, see for example Beauregard & Martineau, 2014; Chopin, Beauregard, & Bitzer, 2020; Davies, 1992).

Analytical Strategy

The first step of this study was to assess at the bivariate level (χ^2 and Mann-Whitney U test⁵) the differences between sexual homicide involving female and male victims for the set of independent variables. The second stage involved analyzing these differences at the

⁴ The SADSEX-SH is a scale used to assist in the diagnostic of sexual sadism from crime scene actions

⁵ We used non-parametric Mann-Whitney U test because the distribution did not follow a normal distribution

multivariate level. Using only the significant variables ($p \leq 0.05$) from the bivariate analyses, a sequential binomial regression was computed. The goal was to both identify the specific characteristics associated with sexual homicide involving male victims in a multivariate model and to determine the weight of each block of variables (i.e., target selection and crime characteristics). Each block of variables was tested individually. Then, a nested binomial regression analysis was conducted using only the significant variables from all the previous models. This analysis represents the final and best model. Multicollinearity was checked for the variables included in the multivariate analyses and no VIFs were above 1.433 and tolerance not below 0.698. We also conducted a power analysis to determine whether the sample size was appropriate and no observed power values were below 0.809 while they were all significant at $p \leq 0.05$.

The last analytical step consisted of testing an empirical classification of sexual homicide involving male victims. Latent class analysis (LCA) was conducted using Latent Gold V5.1 software package to test the heterogeneity of the subsample of sexual homicide involving male victims. LCA statistical procedure is used to identify heterogeneity that is not directly observable or measurable in order to detect underlying patterns in a set of data or subgroups of individuals who share important behavioral characteristics (Collins & Lanza, 2010). Five models were computed (Appendix A) and the Bayesian Information Criterion (BIC) and Akaike Information Criterion (AIC) were used to evaluate the model fit and identify the number of classes to use in LCA. The model was computed using variables that were identified in previous clinical/theoretical studies and that allowed to differentiate sexual homicide involving male victims. Previous studies have found that some sexual homicide offenders of male victims targeted specifically their victims and followed a revenge process or began a consensual sexual activity that negatively escalated into violence (Beauregard & Proulx, 2007; Geberth, 1996). Studies also indicated that sexual homicide offenders

sometimes focused specifically on young male victims (Beauregard & Proulx, 2007; Chopin & Beauregard, 2020a; Geberth, 1996, 2010; Geberth, 2014). Finally, previous findings indicated that sometimes the main motivation for the crime was a financial gain and sexual acts were committed concomitantly (Geberth, 1996), while in other situations sexual homicide offenders were mainly motivated by the penetration of the victim as well as sexual sadism (Beauregard & Proulx, 2007; Chopin & Beauregard, 2020a; Geberth, 1996, 2010; Geberth, 2014). We used a total of five dichotomous (0 = no; 1 = yes) variables: 1) offender targeted his victim, 2) victim was less than 16 y/o, 3) intrusive sexual acts with a penis, 4) offender took items from victim/offense, 5) sexual sadism (SADSEX-SH scale).

Methodological Ethical Statement

We report how we determined our sample size, all data exclusions (i.e., how sample size was determined and what rule was used to stop data collection), all manipulations (i.e., the total number of any excluded cases or observations, and the reasons for making these exclusions), and all measures in the study (i.e., all dependent variables that were analyzed for the research questions, whether reaching statistically significant thresholds or not in the study). Ethical approval was obtained to undertake this research.

Results

Table 1 presents results on the comparison between female and male victims of sexual homicide on the selection of victim characteristics. Bivariate analyses suggested that compared to female victims, male victims were more often loners ($\chi^2 = 32.41$, $p = .004$), without fixed address ($\chi^2 = 5.55$, $p = .022$), and were more often assaulted while they were playing ($\chi^2 = 17.08$, $p = .000$). Male victims were also less often engaged in social activities ($\chi^2 = 7.04$, $p = .004$) or jogging when they were assaulted ($\chi^2 = 6.82$, $p = .005$). Finally, male victims were more often specifically targeted ($\chi^2 = 4.68$, $p = .030$), while they are less often assaulted by stranger offenders ($\chi^2 = 4.34$, $p = .037$).

[Insert Table 1 here]

Table 2 presents the comparison between male and female victims of sexual homicide on crime characteristics. In sexual homicide involving male victims, offenders more often used a con as a strategy to approach the victim ($\chi^2 = 13.97$, $p = .000$). When the victims were male, intrusive sexual acts with a penis occurred less often ($\chi^2 = 10.90$, $p = .001$) and offender's engaged in less diverse sexual acts ($U = 23574$, $p = .01$, $r = 0.10$). Sexual sadism ($\chi^2 = 3.53$, $p = .041$) is more often observed with male victims. Male victims were less often killed by strangulation ($\chi^2 = 21.97$, $p = .000$) but the offender was more likely to use restraints during the crime ($\chi^2 = 4.44$, $p = .027$). Sexual homicide offenders assaulting male victims were more likely to intentionally used a weapon ($\chi^2 = 4.02$, $p = .045$) but they were less likely to move the victim's body ($\chi^2 = 3.29$, $p = .043$).

[Insert Table 2 here]

Table 3 presents the results of sequential binomial regression examining the type of victims (i.e., female/male) of sexual homicide. Model 1 includes only the target selection characteristics and presents a Nagelkerke R^2 of 0.13. Findings indicate that victims avoiding social contact with others ($OR = 5.48$, $p = .000$) and those who were assaulted while they were playing ($OR = 4.97$, $p = .000$) are respectively 5.48 and 4.97 times more likely to be male victims. Conversely, victims who were jogging before being assaulted ($OR = 0.48$, $p = .021$) are 2.12 times less likely to be male victims. Model 2 includes crime characteristics with Nagelkerke R^2 of 0.18. Cases where sexual homicide offenders used a con strategy to approach the victim ($OR = 2.81$, $p = .000$) and exhibited acts of sexual sadism ($OR = 1.18$, $p = .003$) are respectively 2.81 and 1.18 times more likely to target male victims. Intrusive sexual acts with a penis ($OR = 0.54$, $p = .022$) and killing by strangulation ($OR = 0.27$, $p = .000$) are respectively 1.85 and 3.70 times less likely to occur in cases of sexual homicide of male victims. The best model includes only the significant variables of the two previous

models and presents a Nagelkerke R^2 of 0.23. Findings indicate that victims avoiding social contact with others ($OR = 4.91, p = .000$) and those who were assaulted while they were playing ($OR = 5.85, p = .000$) are respectively 4.91 and 5.85 times more likely to be male victims. Conversely, victims who were jogging before being assaulted ($OR = 0.53, p = .049$) are 1.89 times less likely to be male victims. Cases where sexual homicide offenders used a con strategy to approach the victim ($OR = 2.11, p = .005$) and exhibited acts of sexual sadism ($OR = 1.18, p = .001$) are respectively 2.11 and 1.18 times more likely to target male victims. Intrusive sexual acts with a penis ($OR = 0.49, p = .003$) and killing by strangulation ($OR = 0.28, p = .000$) are respectively 2.04 and 3.57 times less likely to occur in cases of sexual homicide of male victims.

[Insert Table 3 here]

A total of five indicators were used to classify cases of sexual homicide involving male victims with LCA. To assess the best solution, we computed five different models (one to five-class solutions). Appendix A describes the fit indices for the latent classes and results show that the best model is the three-class solution according BIC indices (517.9782). A smaller BIC suggests that the trade-off between fit and parsimony was achieved. Entropy for the three-class solutions is excellent (0.98) and suggest that predictors used to classify cases are efficient and that classes were sufficiently distinct.

Table 4 describes predictors used to generate the three-class solution as well as covariates used to increase the interpretation of the different classes. Class 1 represents 40% of the sample ($n = 40$) and is characterized by offenders that are unlikely to target their victims (0.40), assault victims that were less than 16 years old (0.00), perform anal penetration (0.37), or perform sadistic sexual homicide (0.15). However, these offenders are very likely to rob items from the victims (0.93). Class 2 represents 35% of the sample ($n=35$) and is characterized by offenders that were not likely to target their victims (0.34), assault

victims of less than 16 years old (*), or anally penetrated the victim (0.43). They did not rob items from the victims (0.00) but were likely to commit crimes characterized by sexual sadism (0.74). Finally, Class 3 represents 25% of cases (n = 25) and is characterized by offenders who were more likely to target their victims (0.52). Victims were systematically less than 16 years old (0.99), were likely to be anally penetrated (0.68) but offenders typically did not rob items (0.28) from the victims and are not likely to perpetrate acts of sexual sadism (0.24).

[Insert Table 4 here]

Discussion

The current study presented two main objectives: First, we aimed to identify the differences between sexual homicide involving male and female victims. The goal was to determine whether specific features were characteristic of sexual homicide involving male victims. Second, we aimed to determine whether sexual homicide of male victims constitutes a heterogeneous population – as suggested by theoretical/clinical typologies – by generating the first empirical classification. Using the routine activities and rational choice theories, we examined the crime-commission process of sexual homicide involving male victims and compared it with sexual homicide involving female victims. Findings of our study showed that sexual homicide involving males present several differences in terms of victim selection and crime process. Moreover, taxonomic analyses indicated that sexual homicide offenders assaulting male victims are driven by three distinct types of motivations.

Vulnerable Victims and Crime-Commission Process Adaptation

To determine the specific characteristics associated with sexual homicide involving male victims, we used a large international database (i.e., SHIELD) to compare various aspects of sexual homicide cases involving male and female victims. Multivariate findings highlighted important differences in the crime-commission process between the two groups of

victims. To examine the crime-commission process we used the routine activities and rational choice theories suggesting that predatory offenders are more likely to assault vulnerable victims during their routine activities and that they used a cost-benefit analysis during the crime to successfully complete their offense. Our findings indicated that in comparison with female victims, sexual homicide of male victims are characterized by specific patterns of aggression associated with the victim's gender.

Findings regarding victim selection are congruent with previous studies, which found that male victims are more often vulnerable individuals (Beauregard & Proulx, 2007; Geberth, 1996). Specifically, our findings showed that adult male victims are more likely to be loners. This feature of sexual homicide involving male victims was previously identified by Beauregard and Proulx (2007). According to routine activities and rational choice theories, loneliness constitutes an important risk factor as it limits the chances that a third party (e.g., friend, partner) interfere during the crime or that offenders lose control of the situation during the criminal event. The concept of 'capable guardian' includes all forms of control that may discourage a motivated offender from committing a crime (Cohen & Felson, 1979). Selection of suitable and vulnerable targets is part of the rational choice analysis made by offenders to limit the costs associated with the crime commission and increase its benefits (Cornish & Clarke, 1986, 1987). In case of sexual crimes, victim resistance as well as third-party intervention are considered as important costs that can lead offenders to be apprehended by the police. Physiological differences between males and females is an aspect that should not be overlooked as it may impact the decision-making process of sexual homicide offenders. Generally, males are physically stronger than females and due to the potential physical resistance during the crime, sexual homicide offenders need to adapt their modus operandi (see also the physical strength hypothesis by Chan et al., 2019). This adaptation of the modus operandi by sexual homicide offenders has been previously identified in cases involving

victims more difficult to access, such as children and the elderly (Beauregard & Martineau, 2015; Beauregard et al., 2008; Chopin & Beauregard, 2019c, 2020d; Chopin, Caneppele, et al., 2020) due to their increased level of supervision and limited exposition to criminal opportunities. Cases involving male victims were characterized by a greater use of a con approach as well as the use of physical restraints. The use of a con or a ruse to approach the victim constitutes a strategy aimed at avoiding suspicions from the victim. Not only does using a ruse decrease the risk of victim resistance, but it also allows the offender to bring the victim to an isolated location (e.g., victim's residence) where he will be able to commit the crime without being interrupted or observed. As mentioned previously, physical resistance from a male victim at the beginning of the attack may cause the offender to lose control over the situation and be injured, significantly increasing the risks associated with the crime-commission process. Interestingly, sexual homicide of male victims are more likely to exhibit acts of sadism while at the same time, less likely to include intrusive sexual acts. These two findings may appear as contradictory as sadism has been often characterized with intrusive sexual acts, such as anal sex. Considering that anal sex may be seen as a common practice in homosexual relationships, it is possible that this particular sexual act is not part of the sadistic repertoire of sexual homicide offender of male victims. As to the greater presence of sadism with male victims, we can hypothesize that due to the potentially greater strength of male victims (i.e., physical strength hypothesis, Heide, 1993), more force and violence is used by these sexual homicide offenders, which may result in some indicators of sadism (e.g., mutilations). However, this is something that will require additional research.

Toward an Empirical Typology of Sexual Homicides Against Male Victims

The second objective of this study was to propose an empirical typology of sexual homicide against male victims. We used LCA to classify a sample of 100 cases involving exclusively male victims. Fit indices suggested that a three-class model was the best solution

to classify the sexual homicide against male victims. Previous classification models were essentially based on clinical/investigative observations as well as theoretical assumptions (Beauregard & Proulx, 2007; Geberth, 1996, 2010; Geberth, 2014). The model generated from LCA is especially clear with an entropy indicator close to 1, suggesting a perfect distinction between the different classes. Using victim and crime characteristics to infer offenders' motivations (see Chopin & Beauregard, 2018), the following classes were identified: *Robber sexual murderer*, *sadistic sexual murderer*, and the *pedophile sexual murderer*.

Robber sexual murderer. These offenders do not target specific types of male victims and do not assault young victims either. All offenders included in this category are characterized by the robbery of items belonging to the victim. The robbery during the sexual crime may be interpreted in two ways. First, taking items belonging to the victim during the crime can be seen as souvenirs or trophies, allowing the offender to remember and relive the crime (Ressler et al., 1988). Such behavior has often been associated with a sadistic motivation (see Beauregard et al., 2007; Chopin & Beauregard, 2020d; Myers et al., 2019; Proulx et al., 2007). Second, the robbery may be committed to make a financial gain during the violent encounter. According to this last interpretation, sexual homicide offenders are mainly driven by a financial motivation, while the sexual components and the death of the victims are both instrumental (see Beauregard & Proulx, 2007; Chopin & Beauregard, 2020d; Geberth, 1996). This last interpretation is preferred to the first in our study as we have observed a weak probability of anal penetration and sexual sadism for this type of sexual homicide offenders. This category fits the *nonsexual predator* category suggested by Beauregard and Proulx (2007) as well as the *robbery and/or homicide of homosexual* suggested by Geberth (1996). For this category of sexual homicide offenders, the sexual acts committed are mainly fellatio and/or masturbation, which act as a ruse or a decoy to

manipulate the victim and facilitate the robbery (Beauregard & Proulx, 2007). The death of the victim is non-intentional (see Chopin & Beauregard, 2019a) in the sense that it is not part of the deviant process. The killing of the victim may be accidental (i.e., use of excessive force to overcome the victim's resistance) or instrumental (i.e., avoid police detection, eliminating a witness).

Sadistic sexual murderer. Offenders included in this category generally do not target a specific type of male victim and never assault child victims. Most cases included in this category exhibit sexual sadism, as indicated by the SADSEX-SH scale developed by Myers et al. (2019). This is particularly illustrated by the combination of sadistic acts committed in these cases. This category is congruent with the *lust murder* category identified by Geberth (1996) and the *sexual predator* described by Beauregard and Proulx (2007). Offenders of this category expressed violent deviant sexual fantasies (Geberth, 1996) and appear mainly motivated by the death and victim suffering, while sexual acts are secondary (Beauregard et al., 2007; Chopin & Beauregard, 2020d; Proulx et al., 2007). In this scenario, the death of the victim is clearly intentional and is an integral part of the crime script. Interestingly, we observed that in one third of the cases, offenders specifically targeted their victims. This could suggest an acquaintance relationship between both protagonists and that they may have initially engaged in a consensual sexual relationship. As suggested by Beauregard and Proulx (2007) with the *avenger* category, and the *interpersonal violence-oriented disputes and assault* category from Geberth (1996), the lethal outcome could be due to a triggering event (e.g., dispute, need for revenge) occurring during or after consensual sexual intercourse.

Pedophile sexual murderer. Offenders included in this category systematically targeted child victims and have sexually assaulted them. Offenders of this category are primarily interested in having sexual intercourse with young boys. *Homicide serial murderer* (Geberth, 1996) and *sexual predator* (Beauregard & Proulx, 2007) categories partially fit with

this description. Beauregard and Proulx (2007) suggested that sadistic sexual acts were committed but we found that it is rarely the case when victims are children. Geberth (1996) did not consider sexual homicide involving child victims as a cluster in itself but more broadly included victims who were vulnerable (e.g., prostitute, children, etc.). In the new Geberth's (2010, 2014) typology, a specific cluster of *male pedophile homosexual serial killer*, who attacks young males and boys is described. We can hypothesize that the primary motivation of these offenders is sexual. The victim death is due to physical violence used by offenders and may be accidental or instrumental, depending on the situation (Chopin & Beauregard, 2019c).

Our empirical classification confirmed the various types of sexual homicide against male victims previously based on theoretical assumptions and/or clinical observations. The empirical typology generated in this study includes all clusters identified by Geberth (Geberth, 1996, 2010; Geberth, 2014) as well as those by Beauregard and Proulx (2007) (Figure 1). We observed that clusters identified previously fit systematically with one of the three clusters highlighted in this study. Interestingly, clusters from the empirical classification appear as general categories where clusters from the theoretical/clinical typologies can fit in. Our findings showed that the empirical and theoretical/clinical classifications are similar in many ways. Moreover, the theoretical and clinical findings allowed us to better understand the content of the types empirically identified by providing greater details as to the specific context involved in these crimes.

[Insert Figure 1 here]

Limitations

Despite the originality of this research, it is not without limitations. We used police data that are known to present methodological limitations in terms of validity and reliability (see for example Aebi, 2006; Chopin & Aebi, 2018, 2019). First, our findings concern only

cases reported to police authorities. We assume that most of homicides are reported to police (see for example Aebi & Linde, 2012) but we cannot exclude that some of missing person cases could be overlooked as homicides (see the Bruce McArthur investigation). Second, data used in this research concerned only cases solved by the police and we cannot exclude that unsolved crimes follow different patterns (for sexual crimes see Balemba et al., 2014; Beauregard & Martineau, 2016; Chiu & Leclerc, 2019; Chopin et al., 2019). Third, we tested an important number of independent variables which can lead to Type-1 error. Although using Bonferroni correction is one way to avoid this type of error, our study is exploratory in nature and is not meant to test specific hypotheses. Bonferroni correction is a very conservative procedure that is criticized for increasing the risk of Type-2 errors (see for example Napierala, 2012; Simes, 1986; Streiner & Norman, 2011), especially in the context of exploratory studies. Fourth, although no study analyzed the evolution of sexual homicide offenders' behaviors over time, we cannot exclude the possibility that the crime-commission process may have changed between the mid-twentieth century and those committed at the beginning of the twenty-first century. Finally, despite the fact that recent research has shown that the process followed by sexual murderers does not change much between countries (e.g., Chopin & Beauregard, 2019b; Darjee & Baron, 2013; Sea et al., 2019; Skott et al., 2019), these studies have been based on samples including mainly cases involving female victims and we cannot exclude that differences may be observed for male victims in other contexts (e.g., cultural context).

Research Implications and Future Studies

This study aimed to investigate sexual homicide involving male victims. First, we identified differences between crimes involving male and female victims. Using the rational choice and the routine activities theories, we observed that the victim's gender plays an important role in the different choices made by sexual homicide offenders to successfully

complete their crime. When victims of sexual homicides are males, offenders are more aware about the costs associated with the potential physical resistance of another male and thus must adapt their crime-commission process. We observed that sexual homicide offenders adapted their modus operandi to the risks associated with a physical confrontation with a male victim. Specifically, they more often targeted vulnerable victims and used a ruse to approach him as well as they used restraints to limit the risks of resistance during the crime. We highlighted that despite the sexual nature of the murder of the male victims, the overall context in which victims are targeted is equally important, as was evidenced by the McArthur investigation. It seems that some offenders use the vulnerabilities and risks associated with the lifestyle of some of these men to take advantage of them without raising suspicions. Routine activities theory demonstrates that the probability that a crime will occur depends on three factors: an attractive target, the absence of a capable guardian, and the presence of a motivated offender (Cohen & Felson, 1979). As suggested by Beauregard and Proulx (2007), this theoretical framework is directly applicable to sexual homicide against male victims. As shown in our findings as well as those from previous studies, generally male victims of sexual homicide live alone, they have used alcohol or drugs before the crime, they are reputed to not report certain crime to the police, and some of them go to gay bars in order to get acquainted with a stranger. The combination of these behaviors may make some men as very attractive (for money, sex) and vulnerable targets for some sexual homicide offenders (Beauregard & Proulx, 2007).

Second, using LCA, we established the first empirical typology focused specifically on male victims. Our model generated three types of sexual homicide offenders assaulting male victims: the *robber sexual homicide offender*, *sadistic sexual homicide offender*, and the *pedophile sexual homicide offender*. This three-class model allowed us to confirm that sexual homicide involving male victims is a heterogeneous phenomenon characterized by different motivations identified from the crime-commission process.

As to the implications, this study provides new findings on an understudied type of crime. First, we confirmed the validity of previous typologies based on clinical and theoretical approaches. This research highlighted the complementarity of these two methodologies to provide both a true picture of the reality and a comprehensive understanding of this phenomenon. Second, we found that sexual homicide offenders are capable of rational decision-making and adapt their crime-commission process to the characteristics of their targets.

Although sexual homicide against male victims constitutes an unusual crime, more research is needed. Further research should replicate these analyses with other data to test the validity of this typology and determine whether other dimensions and clusters of offenders exist. More research is also needed to better understand why the sadistic dimension is overrepresented in sexual homicide of male victims. Developmental and psychological data should be used to provide a more global overview of this phenomenon.

Investigative and Clinical Implications

This research also provides practical implications. As was suggested by some following the investigation of the sexual murders committed by Bruce McArthur, it took the police quite some time to react to the disappearance of some men who were regulars of the Gay Village of Toronto. Our findings may be useful to the police who are not familiar with the investigation of sexual homicide of men. More specifically, our results have shown that the crime-commission process involved in the sexual murder of men presents several differences with the one involving adult female victims. Thus, a better understanding of the target selection and crime-commission processes could help investigators to identify the sexual nature of the homicide and the patterns involved (in case of a series), as well as react more quickly to adapt their investigation accordingly. The current findings are also relevant for correctional intervention. Hence, identification of offenders' motivations may appear as

central to the choice of intervention or even the placement of the offender in a correctional institution adapted to his required level of security. For instance, among the three different motivations identified in our study, one is clearly oriented toward property crime (i.e., robber sexual murderer), whereas the two others are sexually oriented (i.e., sadism and pedophilia). Therefore, it would be important to direct offenders from the robber sexual murderer category to a form of intervention more general, addressing antisocial tendencies as opposed to the sadistic and pedophile sexual murderers who should benefit from a sexual violence treatment program (e.g., deviant sexual fantasies). Furthermore, a good understanding of the underlying motivation for the sexual homicide following his initial admission may help to place the offender in the right correctional institution according to his needs. The sadistic and pedophile sexual murderers should be sent to an institution housing sex offenders, whereas the robber should be sent to the general population.

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Tables

Table 1. Characteristics of the *target selection* (N=662)

Variables	Female victims (n=562)		Male victims (n=100)		χ^2
	n	%	n	%	
Victim was less than 16 y/o	111	19.75	25	25.00	1.43
Lifestyle					
Victim used alcohol/drugs	165	29.35	32	32.00	0.28
Victim likes to socialize/party	155	27.58	15	15.00	7.04**
Victim is a loner	25	4.45	20	20.00	32.41***
Victim has no fixed address	28	4.98	11	11.00	5.55*
Victim is a sex trade worker	43	7.65	3	3.00	2.84
Routine activities					
Domestic activities	126	22.42	29	29.00	2.05
Sleeping	43	7.65	5	5.00	0.87
Playing	19	3.38	13	13.00	17.08***
Jogging	147	26.16	14	14.00	6.82**
Socializing in a bar	58	10.32	10	10.00	0.01
Victim selection					
Offender targeted the victim	169	30.07	41	41.00	4.68*
Victim and offender are strangers	277	49.29	38	38.00	4.34*

Notes. * $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

^a Represents the mean

^b Represents the standard deviation

Table 2. Crime characteristics (N=662)

Variables	Female victims (n=562)		Male victims (n=100)		χ^2 / Mann- Whitney U
	n	%	n	%	
Type of approach: Con	303	53.91	74	74.00	13.97***
Sexual acts					
Intrusive sexual acts with a penis	362	64.41	47	47.00	10.90***
Number of sexual acts committed	1.73	0.31	1.44	1.44	23574**
Sadism (SADSEX-SH scale)	161	28.65	38	38.00	3.53*
Method of killing					
Stabbing	114	20.28	26	26.00	1.66
Strangulation	247	43.95	19	19.00	21.97***
Other acts committed during the crime					
Any use of restrains	101	17.97	27	27.00	4.44*
Weapon intentionally used	371	66.01	70	70.00	4.02*
Offender took any items from victim/offense	213	37.90	40	40.00	0.16
Postcrime behaviors					
Body moved	168	29.89	21	21.00	3.29*
Offender used forensic awareness strategies	312	55.52%	62	62.00	1.45

Notes. * $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

^a Represents the mean

Table 3. Sequential binomial regression of factors predicting sexual homicide involving male victims (N=662)

			Model 1			Model 2			Best Model		
			β	S.E.	OR	β	S.E.	OR	β	S.E.	OR
Target selection											
	Victim likes to socialize/party		-0.35	0.31	0.71						
	Victim is a loner		1.70	0.34	5.48***				1.59	0.36	4.91***
	Victim has no fixed address		0.61	0.40	1.85						
	Playing		1.61	0.39	4.97***				1.77	0.42	5.86***
	Jogging		-0.74	0.32	0.48*				-0.64	0.33	0.53*
	Offender targeted the victim		0.38	0.25	1.47						
	Victim and offender are strangers		-0.40	0.25	0.67						
Crime characteristics											
	Type of approach: Con					1.03	0.26	2.81***	0.74	0.26	2.11**
	Intrusive sexual acts					-0.62	0.27	0.54*	-0.72	0.25	0.49**
	Number of sexual acts committed					-0.14	0.98	0.87			
	Sadism (SADSEX-SH scale)					0.17	0.06	1.18**	0.17	0.51	1.18***
	Strangulation					-1.30	0.29	0.27***	-1.28	0.29	0.28***
	Any use of restrains					0.50	0.29	1.64			
	Weapon intentionally used					-0.02	0.26	0.98			
	Body moved					-0.52	0.28	0.59			
Constant			-1.86	0.16	0.16***	-2.06	0.36	0.13***	-2.30	0.33	0.10***
	χ^2		51.54***			73.75***			93.41***		
	-2 Log likelihood		510.56			488.34			468.68		
	Cox & Snell R ²		0.08			0.11			0.13		
	Nagelkerke R ²		0.13			0.18			0.23		
	Overall % predicted		86			83.8			87		

Notes. *p < .05. **p ≤ .01. ***p ≤ .001.

Table 4. Profile of three latent classes - Mean probabilities of crime characteristics based on class membership (N=100)

	Class 1 Robber Sexual Murderer	Class 2 Sadistic Sexual Murderer	Class 3 Pedophile Sexual Murderer
Cluster Size	0.40	0.35	0.25
n=	40	35	25
Indicators			
Offender target his victim	0.40	0.34	0.52
Victim was less than 16 y/o	0.00	0.00	0.99
Intrusive penetration with a penis	0.37	0.43	0.68
Offender took any items from victim/offense	0.93	0.00	0.28
Sadism (SADSEX-SH scale)	0.15	0.74	0.24

Notes. *p < .05. **p ≤ .01. ***p ≤ .001.

Figure 1. Comparison between empirical and theoretical/clinical classifications of SH against male victims

Appendix

Appendix A. Fit indices for latent classes.

No of class	LL	BIC(LL)	AIC(LL)	Npar	L ²	Class.Err.	Entropy R ²
1	-260.3551	539.131	528.7103	4	520.71***	0	1
2	-163.9809	539.7996	419.9618	46	327.96***	0.0036	0.99
3	-201.4245	517.9782	452.849	25	402.8***	0.0002	0.98
4	-140.3734	589.2931	414.7467	67	280.74***	0.0051	0.98
5	-118.3572	641.9695	412.7145	88	236.71***	0.0061	0.98