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Sexual homicide offenders as repeat and nonrepeat offenders: An empirical study of sexual homicide cases in Mainland China

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Abstract

The comparative examination of different groups of sexual homicide offenders (SHOs) is currently limited. To expand our understanding of Chinese sexual homicides, this study aimed to distinguish between the modus operandi (MO) characteristics of repeat (i.e., with previous arrest and/or conviction) and nonrepeat (i.e., without previous arrest and/or conviction) offenders. Data were gathered from police arrest records, court documents, and published case reports in mainland China, covering a 31-year period (1988–2018). A sample of 86 male SHOs (31 repeat and 55 nonrepeat offenders) was identified and the offenders' MO characteristics were examined. Compared with nonrepeat offenders, repeat offenders were significantly more likely to commit sexual murder in outdoor locations, approach their victims initially using a non-surprise approach, engage in nonvaginal penetration of their victims, use a personal weapon to kill their victims, and move their victims' bodies away from the crime scene. However, repeat offenders were less likely to be arrested immediately after committing the murder. The findings have practical implications for police investigative strategies, such as suspect prioritization.

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KEYWORDS

criminal history, mainland China, modus operandi, nonrepeat offender, repeat offender, sexual homicide, sexual murderer

1 | INTRODUCTION

Sexual violence is a serious criminal offense that transcends age, sex, ethnicity, educational background, and socioeconomic status. It is widely recognized as both a violation of human rights and a public health concern worldwide. A World Health Organization report (2014) estimated that 30% of women experience at least one incident of sexual violence in their lives. A United Nations multi-country cross-sectional study on men and violence reported that 22.7% of men in mainland China had been involved in partner or non-partner rape at least once (Jewkes et al., 2013). Furthermore, data compiled by the China Law Yearbook Committee (2012, 2018) indicated a decrease in the number of rape (including child rape) cases from over 33,000 to around 27,000 per year between 2011 and 2017 in mainland China (Girls' Protection, 2018). An estimate based on studies conducted between 2013 and 2022 suggests that the lifetime prevalence rate of sexual victimization in mainland China ranges from 2% to 35% (see Chan, 2023a for further details).

In extreme cases, sexual assault can lead to the death of the victim. The occurrence of sexual homicide, recognized as the most extreme form of sexual violence, is rare and hence the base rate is lower than for other forms of sexual violence. Prevalence estimates of sexual homicides in various countries (e.g., Australia, Canada, England and Wales, Finland, Jamaica, and the U.S.) vary between 1% and 5% of all reported homicides (Chan, 2019). Given its global rarity, sexual homicide is estimated to have an even lower base rate in mainland China (Chan, 2023a). Consequently, little is known about the nature and dynamics of sexual homicide offenses in mainland China. To date, only a handful of empirical studies have been conducted on sexual homicides in mainland China. Among these studies, Chan (2023b) studied stranger and nonstranger sexual murders; Chan and Li (2019) studied mutilation of the victim's body; Chan and Li (2020) investigated the offender's choice of weapon; Chan, Li, Liu, Lu, et al. (2019) examined the nature and dynamics of Chinese sexual homicides; and Chan, Li, Liu, and Lu (2019) studied the offender's primary motivation. Although these studies utilized the same dataset (albeit with different sample sizes), this dataset is arguably the best available data source for studying sexual homicides in mainland China. More information on this dataset is provided in the methods section.

Knowledge about Chinese sexual homicides are gradually expanding. However, importantly for this study, little is known about the differences in modi operandi (MO; also known as methods of operation) between sexual homicide offenders (SHOs) with no previous arrests and/or convictions (hereafter labeled as nonrepeat offenders) and those with previous convictions (hereafter labeled as repeat offenders).¹ Notably, most studies on sexual homicide and violent sexual offending that have distinguished between the modus operandi (MO) of repeat and nonrepeat offenders have tended to focus on serial offenders, that is, offenders who commit two or more forensically linked offenses on different occasions for personal gratification (Adjorlolo & Chan, 2014; e.g., sexual homicide: Chan et al., 2015, and violent sexual offending: Reale et al., 2021; Slater et al., 2014). Serial offenders differ from repeat offenders in that the former typically exhibit a systematic criminal pattern with an emotional cooling-off period between offenses (Douglas et al., 2006), whereas the offending pattern of the latter group may not necessarily involve these two key elements. In this study, I use the term "repeat offenders" to refer to individuals who have more than one criminal conviction, although not necessarily for the same type of offense. In the sexual homicide literature, there is limited information on how the offending patterns of repeat offenders differ from those of new offenders. Moreover, this study aims to contribute cultural and geographical diversity to the literature by focusing on an under-researched population of offenders, specifically Chinese SHOs. This gap in the sexual homicide literature warrants further investigation. Understanding the MO of Chinese SHOs may have implications for police

practices in suspect prioritization and risk assessment. The findings of this study are expected to be informative for mental health professionals and behavioral scientists, such as forensic psychologists, psychiatrists, and criminal and mental health attorneys, who consult with law enforcement agencies in the investigation of sexually-motivated homicides.

1.1 | The *modi operandi* of repeat and nonrepeat violent sexual offenders

Violent sexual offending, particularly sexual homicide, is a complex criminal event that often involves a sophisticated decision-making process (Higgs et al., 2017; Stefanska et al., 2017). From a criminological perspective, the decision-making of violent sexual offenders, including sexual murderers, largely dictates their offending patterns, and is widely explained from the rational choice perspective. This approach theorizes that sex offenders engage in sexual offenses because doing so provides them with the most effective means of achieving their anticipated benefits (Clarke & Felson, 1993). However, these supposedly rational decisions are often “limited” or “bounded” to a certain extent due to factors such as a lack of available information and time constraints (Cornish & Clarke, 1986). Perfect rationality is nearly impossible without sufficient time, effort, and access to information. In addition, individuals' rationality may be influenced by the consumption of alcohol and/or drugs, which impair the capacity to weigh the costs and benefits of criminal actions.

Many split-second decisions are necessarily made in response to an urgent situation, but they may also reflect an automatic response to a given environmental stimulus acquired through previous experience (Nee & Meenan, 2006). Specifically, in the sexual offending literature, Ward (1999) suggested that experience of criminal activity can influence an individual's decision-making about whether they can successfully carry out an offense; for example, whether they are capable of planning and carrying out an offense, responding to resistance from the victim, and avoiding detection. This cognitive competency is known as criminal expertise. According to Ward (1999), offense-related knowledge and skills can be learned through covert modeling and rehearsal (e.g., sexual fantasies), observational learning (from other offenders), and symbolic modeling (e.g., consumption of pornography) and through the offender's personal experience of early sexual or physical abuse and/or actual commission of the offense.

Sex offenders refine their offending skills through experience, including their past criminal history, which may allow them to commit repeat offenses without being caught. Nee and Ward (2015) described this cognitive ability as “functional expertise,” whereby an individual develops the necessary skills to perform an action well (e.g., repeat offending). Sex offenders are often reluctant to deviate from their established offending strategies, or crime scripts, that have proven effective in the past (Beauregard & Leclerc, 2007). Park et al. (2008) found that serial rapists demonstrated greater criminal sophistication than single rapists, including being more likely to use techniques such as gagging their victims, showing forensic awareness, deterring resistance, and completing the rape. Corovic et al. (2012) also observed similar findings in their study of 31 single-victim rapists and 35 serial rapists in Sweden. Relative to single-victim rapists, serial rapists were generally more criminally sophisticated in that they were more forensically aware (especially during their second rape), were better at controlling their victim physically (e.g., smothering and intimidating them with a weapon) and verbally (e.g., demanding them to do things), were more likely to steal the victim's belongings, and were more likely to complete their act of rape without any effective victim resistance and interruption by others.

In their study of 38 serial and 50 one-off British stranger male rapists, Slater et al. (2014) compared the rapists' crime scene behavior across four domains (control, sex, escape, and style behaviors) and found significant differences between the two kinds of stranger rapists in some control and sexual behaviors. More specifically, they differed in the manner of victim approach (i.e., serial rapists were more likely to use solicitation as a victim approach, but less likely to secure a victim by engaging them in conversation), the offense locations (i.e., serial rapists were more likely to commit their rape in a retail area, a parking area, a street, or a wooded area), methods of

control (i.e., serial rapists were more likely to bind or gag their victims), and the sexual acts perpetrated against their victim (i.e., serial rapists were more likely to fondle their victims, to discuss the sex acts that they wanted the victim to perform, to remove the victim's clothing without damage, and to force their victims to masturbate them). These crime behaviors suggest that serial rapists tend to pose a substantial level of offense-related competencies.

Examining the relationship between criminal expertise and serial offending, Reale et al. (2021) analyzed a sample of 83 serial and 322 nonserial sexual offenses in France. Consistent with the literature, their study found that serial offenders were more sophisticated in their decision-making abilities and offending behaviors than their "novice" counterparts. Specifically, serial offenders were more likely to bring a weapon to the offense and to select a victim who was walking outdoors, which suggest some degree of offense planning. In addition, Chopin et al. (2022) observed that experienced rapists, whom they labeled as "experts in the commission of rape," were better able to control the crime commission process and to destroy or remove forensic evidence than their inexperienced counterparts. This is in line with previous sexual homicide studies that offenders with more criminal experience are more cognitively capable to adapt their MO to minimize their risk of being apprehended (Beauregard & Bouchard, 2010; Beauregard & Martineau, 2014). Clearly, nonrepeat offenders have not yet had the opportunity to develop such cognitive competency. Nee et al. (2019) further claimed that in addition to engaging in similar decision-making (e.g., sexual offending), offenders may develop more generalized or overlapping cognitive skills that transfer across similar domains (e.g., nonsexual criminal activities). Indeed, Lussier and Cale (2013) found that most apprehended sex offenders could be considered generalist offenders, with a versatile criminal history, rather than specialist offenders.

1.2 | The present study

With an estimated population of 1.41 billion in 2020, the People's Republic of China (mainland China) is the most populous country in the world (National Bureau of Statistics of China, 2021). According to the 2020 census, the majority of the population is Han Chinese (91.1%), with the remaining 8.9% belonging to various other minority ethnic groups, including Zhuang, Hui, Manchu, Uyghur, Miao, Yi, Tujia, Tibetan, and Mongol. Many of these minority ethnic groups reside in the northwestern, northern, northeastern, southern, and southwestern borders of China, with some also residing in the central areas. Although Chinese mainlanders generally adopt traditional Chinese values and norms, modernization and Western influences have become increasingly common in many Chinese megacities, such as Shanghai, Beijing, and Guangzhou.

Despite the increase in empirical research on sexual homicide over the past decade, the great majority of these studies have focused on Western offender populations such as Australia, Canada, France, New Zealand, Scotland, the U.K., and the U.S., and only a handful of studies have investigated offender populations in Eastern regions (Chan, 2017; Proulx et al., 2018). In an editorial piece for a journal special issue, Beauregard (2019) called for more international studies on sexual homicide to enhance our understanding from a cross-country and cross-cultural standpoint. As previously mentioned, only five empirical studies have investigated Chinese sexual homicides, leaving a great deal to be discovered about the dynamics of sexual homicide and SHOs in this Asian population. For instance, little is known about the MO of SHOs who are arrested and/or convicted of their first offense compared with those with previous convictions. Most studies of sexual homicide have examined these two groups of offenders independently. It remains unclear whether the criminal history of SHOs significantly influences their MO, and specifically, whether the MO of nonrepeat offenders differ from those of repeat offenders. The primary aim of this study was to address this gap. Therefore, the two outcome variables in this study were: (a) SHOs with previous arrest and/or conviction (i.e., repeat offenders) and (b) SHOs without previous arrest and/or conviction (i.e., non-repeat offenders). Informed by the rational choice perspective, we hypothesized that the MO characteristics of sexual murders committed by repeat offenders tend to be more sophisticated than those of nonrepeat offenders.

Given the novelty of this study, the findings are expected to make an important theoretical and practical contribution to the literature.

2 | METHOD

2.1 | Data and procedure

Sexual homicide cases were collected from three data sources, namely police data, court reports, and Chinese online journal databases containing published case reports. The police data were gathered from three selected regions in mainland China (Shanghai municipality and Guangdong and Hubei provinces) and covered the January 2004 to December 2018 period. These data consisted of crime records from various police departments, including death scene investigation reports, autopsy reports, and suspect interrogation reports. The court reports were identified through online platforms (e.g., China Court and China Justice Observer) and covered the January 1991 to December 2020 period. Academic case reports published between January 1988 and March 2019 were identified through Chinese online journal databases (e.g., China National Knowledge Infrastructure). To be included in this sample, cases had to meet at least one of the defining criteria of a sexual homicide (Chan, 2015):

- (1) the presence of physical evidence indicating pre-, peri, and/or post-mortem sexual assault (vaginal, oral, or anal) against the victim; and/or
- (2) the presence of physical evidence indicating at least one substitute sexual activity (e.g., exposure of sexual organs or sexual positioning of the victim's body, insertion of foreign objects into the victim's body cavities, and genital mutilation) or other physical evidence of the offender's deviant/sadistic sexual fantasy in the immediate area of the victim's body (e.g., masturbation); and/or
- (3) the presence of a legally admissible confession by the offender stating that an offense that resulted in an intentional or unintentional homicide was sexually motivated; and/or
- (4) the presence of evidence indicating the sexual aspect(s) of the offense found in the offender's personal belongings (e.g., a home computer or journal entries).

The police data were collected by medicolegal physicians employed by the police departments in Shanghai, Wuhan, and Guangdong. The manual search for cases in court reports and published case reports was performed using two keyword blocks (i.e., “强奸杀人” [rape murder] and “性变态杀人” [sadistic murder]), which are direct translations of the common terminology used in Chinese to refer to sexual homicides. These terms yielded the most relevant hits in online searches for sexual homicide cases in Chinese court reports and academic publications. The reference lists of the retrieved case reports were also manually reviewed to identify any additional articles of interest. Only court reports and case reports that provided comprehensive case information on the characteristics of sexual homicides that occurred in the selected regions were included in the sample. A research ethics review was not required for this study.

The above search strategy identified 86 sexual homicide cases that were committed by male offenders and met at least one of Chan's (2015) defining criteria for sexual homicide; among these cases, 25 were from police data, 23 were from court reports, and 38 were from case reports. Two researchers, including the author of the study, independently performed the case coding with no knowledge of each other's ratings. In cases where there was disagreement, the researchers discussed the coding until a consensus was reached. Despite inconsistencies in the quality of the data collected from the three sources, the same coders used the same set of rating criteria for all cases. Given the small sample size, most variables were coded dichotomously. The level of agreement, as measured by Cohen's kappa, was very high ($k = 0.91$).

The study examined 86 cases spanning 31 years (1988–2018). The majority of these cases (69%) occurred in 2008–2018, followed by 1998–2007 (25%) and 1988–1997 (6%). The timing of the identified cases was relatively evenly distributed throughout the year, with most cases reported in summer (June–August; 29.4%), followed by winter (December–February; 25.9%), and the fewest cases reported in spring (March–May; 22.4%) and autumn (September–November; 22.4%). In terms of the geographical distribution, most cases occurred in Shanghai municipality (18.6%), Beijing municipality (12.8%), Hubei province (12.8%), Gansu province (11.6%), and other parts of mainland China (44.2%; e.g., Guangdong, Henan, Jiangxi, Heilongjiang, Jiangsu, Fujian, Sichuan, Guangxi, Hunan, Shaanxi, Zhejiang and Anhui provinces, and Chongqing municipality). For this study, 55 cases (64%) of sexual homicide were classified as committed by nonrepeat offenders, and the remaining 31 cases (36%) by repeat offenders.²

2.2 | Data analysis strategy

In addition to analyzing the demographic characteristics of the offenders and victims (age, marital status, education, and employment status), cross-tabular analyses, that is, chi-square (χ^2) and Fisher's exact tests, were conducted to compare the MO of nonrepeat and repeat offenders. The MO variables included the time of day of the offense (day vs. night time), location of the offense (indoor vs. outdoor locations), offender's primary motivation (nonsexually vs. sexually motivated), premeditation (with vs. without structured or unstructured planning), intoxication (with vs. without alcohol and/or drug intoxication immediately prior or during offense), method of approaching the victim (nonsurprise vs. surprise approach), type of victim (nonstranger vs. stranger), abduction of the victim (with vs. without victim abduction as a precrime behavior), physical restraint of the victim (with vs. without physical restraint employed as a controlling behavior), type of sexual penetration (vaginal and nonvaginal penetration vs. only vaginal penetration), type of murder weapon (nonpersonal [e.g., a sharp or contact weapon] vs. personal [e.g., bare hands, strangulation, or asphyxiation] weapon used), mutilation of the victim's body (with vs. without slashing, cutting, or dismembering the victim's body), movement of the victim's body (with vs. without transporting the victim's body to another location after the murder), and whether the offender was arrested immediately after the murder (the offender was arrested within 48 h after the murder vs. beyond 48 h after the murder).

Phi and Cramer's *V* coefficients were used to measure the strength of the relationships and identify meaningful patterns among them. A value of 1.00 demonstrates a perfect relationship. Following Cohen's standard for interpreting the effect size in cross-tabular analyses (for 2×2 tables with 1 degree of freedom), effect sizes with phi values of 0.29 or below were considered weak, values from 0.30 to 0.49 as moderate, and values of 0.50 and above as strong. In the chi-square analysis with 3 degrees of freedom (i.e., a 2×4 matrix), effect sizes indicated by Cramer's *V* values of 0.16 or below were considered weak, values between 0.17 and 0.28 as moderate, and values of 0.29 or above as strong (see Gravetter et al., 2017). The Bonferroni correction was applied when comparing the column proportions when the degrees of freedom exceeded 1 (e.g., a 2×4 matrix). Next, unadjusted odds ratios (ORs) were calculated to demonstrate the probability of an outcome, that is, the offenders' MO, occurring in the presence of a certain exposure (e.g., the sexual homicide was committed by a nonrepeat or repeat offender), compared with the odds of the outcome occurring in the absence of that particular exposure.³ The significance level was set at 0.05.

3 | RESULTS

3.1 | Offender and victim demographic characteristics of the Chinese sexual homicide offenders

Table 1 presents the demographic characteristics of Chinese SHOs who were nonrepeat and repeat offenders and their victims. On average, the Chinese SHOs in this sample were 33.23 years old at the time of the offense

TABLE 1 Frequencies of offender and victim demographic characteristics of Chinese male sexual homicide offenders (SHOs) as nonrepeat and repeat offenders ($N = 86$).

Variables	All sample ($N = 86$) N (%)	Nonrepeat offender ($n = 55$) N (%)	Repeat offender ($n = 31$) N (%)	Group differences χ^2 /Fisher's exact test (Phi/Cramer's V)
Offender characteristics				
Age (mean) of offender at offense ($n = 64$)	33.23 ($SD = 11.51$) Range = 14–61	31.38 ($SD = 9.37$) Range = 14–61	36.77 ($SD = 14.37$) Range = 21–59	$t = -1.59$
Age (mean) of offender at arrest ($n = 64$)	36.75 ($SD = 13.56$) Range = 14–61	36.14 ($SD = 12.87$) Range = 14–61	37.91 ($SD = 15.04$) Range = 21–61	$t = -0.49$
Marital status ($n = 63$)				
Nonsingle	28 (44.4%)	23 (53.5%)	5 (25.0%)	4.49 (0.27)*
Single	35 (55.6%)	20 (46.5%)	15 (75.0%)	
Highest education attainment ($n = 39$)				
Uneducated	2 (5.1%)	0 (0.0%) ^a	2 (25.0%) ^b	8.39 (0.46)*
Primary school education	7 (8.1%)	6 (19.4%)	1 (12.5%)	
Secondary school education	26 (66.7%)	22 (71.0%)	4 (50.0%)	
Tertiary education (e.g., university)	4 (10.3%)	3 (9.7%)	1 (12.5%)	
Employed at the time of offense ($n = 60$)				
No	14 (23.3%)	8 (19.0%)	6 (33.3%)	1.44 (–0.16)
Yes	46 (76.7%)	34 (81.0%)	12 (66.7%)	
Victim characteristics				
Age (mean) of victim ($n = 60$)	30.07 ($SD = 15.04$) Range = 8–85	30.80 ($SD = 16.37$) Range = 8–85	28.47 ($SD = 11.93$) Range = 14–50	$t = 0.56$
Marital status ($n = 44$)				
Nonsingle	13 (29.5%)	8 (25.8%)	5 (38.5%)	0.71 (–0.13)
Single	31 (70.5%)	23 (74.2%)	8 (61.5%)	
Employed at the time of offense ($N = 86$)				
No	43 (50.0%)	25 (45.5%)	18 (58.1%)	1.26 (0.12)
Yes	43 (50.0%)	30 (54.5%)	13 (41.9%)	

^{a,b}indicated significant differences.

* $p < 0.05$.

($SD = 11.51$, range = 14–61) and 36.75 years old at the time of arrest ($SD = 13.56$, range = 14–61). There was no significant age difference between nonrepeat and repeat offenders.⁴ Approximately half of the offenders reported being single (55.6%), and a significant difference was found between nonrepeat (46.5%) and repeat offenders (75%) ($\chi^2 = 4.49$, $p = 0.034$). However, the effect of this relationship was relatively moderate ($\phi = 0.27$). In terms of education level, over three quarters of the offenders had at least a secondary-level education (77%). Significantly more nonrepeat (80.7%) than repeat (62.5%) offenders had a secondary-level education (Fisher's exact test = 8.39, $p = 0.039$). The strength of this relationship was strong (Cramer's $V = 0.46$). The majority of the offenders were employed at the time of the offense (76.7%), although no significant differences in criminal history were observed between employed and unemployed offenders.

Regarding the demographic characteristics of the victims, they were on average younger than the offenders with a mean age of 30.07 years ($SD = 15.04$, range = 8–85). Most of the victims were single (70.5%) and half of them were employed at the time of the offense (50%). No significant differences were found between nonrepeat and repeat offenders in terms of their victim demographics.

3.2 | Modi operandi of Chinese sexual homicide offenders

Out of 86 Chinese SHOs, slightly over half of them (55%) committed their offense at night (see Table 2). The offenders' primary motivation was nonsexual (e.g., power and control, anger, financial) in approximately half of the cases (51.2%). Approximately two thirds (68.6%) planned their attack, very few (7%) were intoxicated at the time they committed the offense. Approximately two thirds (65.1%) selected strangers as their victims, and very few (10%) of them intentionally set out to abduct their victims. Furthermore, about one-third (35%) used physical restraint against their victims, and nearly one-third (29%) mutilate their victims during or after the murder. No significant group differences were observed in the offender's MO variables between nonrepeat and repeat offenders.

Interestingly, significant differences were observed between nonrepeat and repeat offenders in six MO variables. Approximately three quarters (74.4%) of the cases occurred indoors (e.g., the offender's or victim's residence), with significantly more nonrepeat (81.8%) than repeat (61.3%) offenders committing their offenses indoors ($\chi^2 = 4.39$, $p = 0.036$). However, the strength of this association was weak ($\phi = 0.23$). In general, the offenders were more likely to approach their victims using a nonsurprise method such as a con or ruse, or in a forceful manner. Repeat offenders primarily adopted a nonsurprise method (71%) to approach their victims, whereas nonrepeat offenders were slightly more likely to use a surprise method, such as making a sudden approach (50.9%). This difference was significant ($\chi^2 = 3.87$, $p = 0.049$), but with a small effect size ($\phi = -0.21$).⁵

The majority of the Chinese SHOs engaged in vaginal penetration (82.6%), and this choice of sexual penetration was more common among nonrepeat than repeat offenders (89.1% vs. 71%; $\chi^2 = 4.52$, $p = 0.033$). However, the strength of this relationship was weak ($\phi = -0.23$). Regarding the selection of murder weapon, Chinese SHOs were slightly more likely to use a nonpersonal weapon (e.g., a sharp weapon such as a knife or a contact weapon such as a brick) to kill their victims. Interestingly, nonpersonal weapons were most frequently used by nonrepeat offenders (63.6%), whereas repeat offenders were more prone to use a personal weapon, such as their hands or a ligature for strangulation or asphyxiation, to sexually kill their victims (67.7%) ($\chi^2 = 7.84$, $p = 0.005$). The strength of this significant association was moderate ($\phi = 0.30$). Over two thirds of the offenders did not move the bodies of their victims after the murder (70.9%), and this offending pattern was more common among nonrepeat than repeat offenders (80% vs. 54.8%; $\chi^2 = 6.09$, $p = 0.014$). However, the strength of this association was weak ($\phi = 0.27$). Finally, the majority of SHOs were not arrested immediately after their offense (91.9%). There was a significant difference between nonrepeat offenders

TABLE 2 Frequencies of modus operandi (MO) of Chinese male sexual homicide offenders (SHOs) as nonrepeat and repeat offenders ($N = 86$).

Variables	All sample ($N = 86$) N (%)	Nonrepeat offender ($n = 55$) N (%)	Repeat offender ($n = 31$) N (%)	Group differences χ^2 /Fisher's exact test (Phi/Cramer's V)
Offense moment of the day ($n = 80$)				
Day (6am-5.59 PM)	36 (45.0%)	26 (51.0%)	10 (34.5%)	2.03 (0.16)
Night (6pm-5.59 AM)	44 (55.0%)	25 (49.0%)	19 (65.5%)	
Offense location ($N = 86$)				
Indoor	64 (74.4%)	45 (81.8%)	19 (61.3%)	4.39 (0.23)*
Outdoor	22 (25.6%)	10 (18.2%)	12 (38.7%)	
Offender's primary motivation ($N = 86$)				
Nonsexually motivated	44 (51.2%)	24 (43.6%)	20 (64.5%)	3.46 (-0.20) ⁺
Sexually motivated	42 (48.8%)	31 (56.4%)	11 (35.5%)	
Offense premeditation ($N = 86$)				
No	27 (31.4%)	16 (29.1%)	11 (35.5%)	0.38 (-0.07)
Yes	59 (68.6%)	39 (70.9%)	20 (64.5%)	
The offender was intoxicated ($N = 86$)				
No	80 (93.0%)	50 (90.9%)	30 (96.8%)	1.05 (-0.11)
Yes	6 (7.0%)	5 (9.1%)	1 (3.2%)	
Method of victim approach ($N = 86$)				
Non-surprise	49 (57.0%)	27 (49.1%)	22 (71.0%)	3.87 (-0.21)*
Surprise	37 (43.0%)	28 (50.9%)	9 (29.0%)	
Stranger as victim selection ($N = 86$)				
No	30 (34.9%)	20 (36.4%)	10 (32.3%)	0.15 (0.04)
Yes	56 (65.1%)	35 (63.6%)	21 (67.7%)	
Victim was abducted ($N = 86$)				
No	78 (90.7%)	51 (92.7%)	27 (87.1%)	0.75 (0.09)
Yes	8 (9.3%)	4 (7.3%)	4 (12.9%)	
Physical restraint was used ($N = 86$)				
No	56 (65.1%)	39 (70.9%)	17 (54.8%)	2.25 (0.16)
Yes	30 (34.9%)	16 (29.1%)	14 (45.2%)	
Sexual penetration type ($N = 86$)				
Vaginal and nonvaginal	15 (17.4%)	6 (10.9%)	9 (29.0%)	4.52 (-0.23)*
Only vaginal	71 (82.6%)	49 (89.1%)	22 (71.0%)	

(Continues)

TABLE 2 (Continued)

Variables	All sample (N = 86) N (%)	Nonrepeat offender (n = 55) N (%)	Repeat offender (n = 31) N (%)	Group differences χ^2 /Fisher's exact test (Phi/Cramer's V)
Murder weapon type (N = 86)				
Non-personal weapon	45 (52.3%)	35 (63.6%)	10 (32.3%)	7.83 (0.30)**
Personal weapon	41 (47.7%)	20 (36.4%)	21 (67.7%)	
Victim body mutilation (N = 86)				
No	61 (80.9%)	35 (63.6%)	22 (71.0%)	0.48 (−0.07)
Yes	25 (29.1%)	20 (36.4%)	9 (29.0%)	
Victim body moved (N = 86)				
No	61 (70.9%)	44 (80.0%)	17 (54.8%)	6.09 (0.27)*
Yes	25 (29.1%)	11 (20.0%)	14 (45.2%)	
Offender was immediately arrested (N = 86)				
No	79 (91.9%)	48 (87.3%)	31 (100.0%)	4.30 (−0.22)*
Yes	7 (8.1%)	7 (12.7%)	0 (0.0%)	

** $p < 0.01$, * $p < 0.05$, + $p < 0.10$.

(87.3%) and repeat offenders (100%) (Fisher's exact test = 4.30, $p = 0.038$), although the effect size was small ($\phi = -0.22$).

3.3 | The relationship between Chinese SHOs' modus operandi and their criminal history

Table 3 presents 10 significant unadjusted ORs that examine the relationship between the offenders' MO and their criminal history (i.e., nonrepeat vs. repeat offenders). Due to the small sample size, it was only possible to examine the effect of one independent variable at a time; thus, no adjustment for multiple comparisons was made. Sexual murderers who had a previous sexual conviction were 1.55 times more likely than not to commit their offense in an outdoor location ($p = 0.036$). Conversely, those who were nonrepeat offenders were 1.17 times less likely than not to select an outdoor location as their crime scene (formula = $P/(1-P)$; OR = 0.54, $p = 0.036$). Sexual killers who were recidivists were 2.70 times less likely than not to prefer the use of a surprise method to approach their victim (OR = 0.73, $p = 0.049$). The opposite was true for nonrepeat offenders, who were 1.85 times more likely than not to surprise their victim ($p = 0.049$).

In terms of sexual penetration, nonrepeat offenders were 1.94 times more likely than not to engage in vaginal penetration ($p = 0.049$), whereas repeat offenders were 1.38 times less likely to do so than not (OR = 0.58, $p = 0.049$). Sexual homicide offenders with a previous conviction were 1.59 times more likely than not to use a personal weapon (e.g., their hands or a ligature for strangulation or asphyxiation) to murder their victims ($p = 0.005$). In contrast, a personal weapon was 1.33 times less likely than not to be used by SHOs who had no prior conviction (OR = 0.43, $p = 0.005$). Recidivists were 1.64 times more likely than not to move their victim's body away from the crime scene ($p = 0.014$), whereas those who were nonrepeat offenders were equally likely to either move or not move their victim's body after the murder (OR = 0.50, $p = 0.014$).

TABLE 3 Unadjusted odds ratios (ORs) for the relationship between the offenders' modus operandi (MO) and criminal history in Chinese male sexual homicides ($N = 86$).

Modus operandi	Nonrepeat offender ($n = 55$) OR (95% CI)	Repeat offender ($n = 31$) OR (95% CI)
Offense committed during daytime	1.27 (0.92, 1.76)	0.64 (0.34, 1.20)
Offense location was outdoor	0.54 (0.32, 0.93)*	1.55 (0.95, 2.51)*
Sex as the primary motivation	1.74 (0.95, 3.17)	0.74 (0.53, 1.02)
Offense was premeditated	1.20 (0.67, 2.14)	0.90 (0.62, 1.29)
Offender was intoxicated	2.25 (0.37, 13.77)	0.75 (0.51, 1.11)
Victim was a stranger	0.89 (0.48, 1.63)	1.07 (0.77, 1.48)
Surprise as the victim approach method	1.85 (0.97, 3.53)*	0.73 (0.53, 1.00)*
Victim was abducted	0.69 (0.33, 1.48)	1.31 (0.64, 2.66)
Victim was physically restrained	0.65 (0.38, 1.13)	1.31 (0.90, 1.90)
Victim was only vaginally penetrated	1.94 (1.13, 3.32)*	0.58 (0.31, 1.10)*
Victim was murdered by a personal weapon	0.43 (0.23, 0.81)*	1.59 (1.12, 2.26)*
Victim was mutilated	1.24 (0.66, 2.34)	0.89 (0.65, 1.23)
Victim body was moved after murder	0.50 (0.29, 0.85)*	1.64 (1.03, 2.62)*

Note: Odds ratios (OR).

* $p < 0.05$.

4 | DISCUSSION

This study makes an important contribution to our understanding of sexual homicide, especially in relation to the understudied population of sexual killers in mainland China. By analyzing a sample of 86 male SHOs, this study offers several important and meaningful observations that highlight the MO characteristics of both repeat and nonrepeat offenders. Several significant differences were found between repeat and nonrepeat offenders, which provided partial support for the study's hypothesis. Specifically, repeat offenders were significantly more likely than nonrepeat offenders to commit their sexual murders in outdoor locations such as vacant construction sites and quiet roadsides; they were also more likely to adopt a nonsurprise method to approach their victim, engage in nonvaginal perpetration, use a personal weapon to murder their victim, move the victim's body away from the crime scene, and evade immediate police arrest. These findings (e.g., outdoor crime location, nonsurprise victim approach, and forensically aware to reduce risk of apprehension) are consistent with previous studies that compared serial and nonserial sex offenders (e.g., Corovic et al., 2012; Park et al., 2008; Reale et al., 2021; Slater et al., 2014).

Repeat offenders were significantly more likely than nonrepeat offenders to commit their sexual murders outdoors. Previous studies on sexual homicide have demonstrated that offenders with more criminal experience often adapt their MO or take precautions to minimize the risk of apprehension (Beauregard & Bouchard, 2010; Beauregard & Martineau, 2014). These experienced offenders demonstrated their increasing criminal sophistication through rational decision-making based on their forensic and investigative awareness during the commission of their crimes, which helped them to delay detection and avoid being apprehended. An example of this is the choice of crime location. In a study of 125 solved serial homicides, Chapman et al. (2022) found that victims murdered in outdoor locations were less likely to be discovered shortly after death than those who were murdered indoors. Compared with homicides committed indoors, where the victim's body may be relatively well preserved,

the quality of evidence associated with victims killed outdoors can be substantially impaired by weather conditions (Ferguson & Pooley, 2019). For instance, heavy rain and extreme heat may result in degraded or compromised evidence such as DNA, fingerprints, and impressions (Cockle & Bell, 2015).

In addition, this study found that sexual murderers with previous convictions, particularly sexual convictions, tended to approach their victims using a nonsurprise approach. For instance, these offenders tended to use ploys or tricks to lure suitable victims to their homes or other locations where they could exert full control (referred to as a "con approach"), or to engage in an immediate attack upon encountering their victims in locations where they had a great deal of control (referred to as a "blitz approach"). These types of approaches often require a level of premeditation, such as prowling for victims, and hence were more commonly observed in sexual killers or violent sex offenders with previous offending experience (Beauregard et al., 2007). A systematic review by James and Proulx (2016) reported that on average, 85% of serial sexual murderers used a ruse or con tactic to initially approach their victims, compared with 39% of nonserial sexual murderers. Conversely, an average of 13% of nonserial sexual killers first approached their victims using a method involving surprise, compared with 9% of serial sexual killers.

Sexual homicide offenders who were repeat offenders were significantly more likely to engage in nonvaginal penetration against their victims than were their novice counterparts. This finding is somewhat consistent with James and Proulx's (2016) review, which found that anal penetration was more common among serial offenders (69%) than nonserial offenders (18%). Neuwirth and Eher (2003) observed through their daily routine clinical assessments that heterosexual rapists who engaged in anal penetration tended to exhibit a higher degree of sexualization than vaginal rapists. However, it should be noted that in this study, although repeat offenders were less likely to be primarily sexually motivated (65%), they were not necessarily less sexualized than nonrepeat offenders given that they performed more nonvaginal penetration. The reason for this is that anger arousal can also facilitate sexual arousal as both are influenced by the endocrine system, autonomic nervous system, and central nervous system, through the amygdala and septal structures (Zillman, 1989). For sex killers who are motivated by control and domination, physical suffering (e.g., anal penetration) and emotional suffering (e.g., humiliation) are often used as a means to heighten sexual arousal (Healey et al., 2012; Myers et al., 2006). The potential for repetition of similar sexual or sexual homicide offenses is relatively high in these types of SHOs (Briken et al., 2014; Chan, Li, Liu, & Lu, 2019). Therefore, sexual violence committed by repeat offenders is arguably more instrumental than expressive (Adjorlolo & Chan, 2017).

This study also found that repeat offenders were significantly more likely than nonrepeat offenders to use a personal weapon (e.g., their hands or a ligature for strangulation or asphyxiation) to murder their victims. The literature has indicated that the choice of murder weapon in sexual homicide is associated with offenders' sadistic personality characteristics (Healey et al., 2012; Myers et al., 2010). Close-contact killing arguably provides offenders with a high level of psychological stimulation, particularly those prone to sexual fantasy, as a way of "enjoying" the killing process as well as satisfying their sadistic gratification (Chan & Heide, 2009). According to Chan (2015), this "intimate" method of killing enables offenders to achieve sexual euphoria through the expression of anger, power, or a combination of both, toward their victims. The pursuit of such psychological gratification can often increase behavioral habituation and escalation, for example, from sexual offense to sexual murder, leading to further violent sexual offending (Chan et al., 2011). This repetitive cycle of violent sexual offenses only ceases when the perpetrator is stopped by the legal authorities (Arrigo & Purcell, 2001). This finding is in line with James and Proulx's (2016) review, which found that serial sexual murderers were more likely to strangle their victims than were their nonserial counterparts.

Another significant MO observed in this study was that repeat offenders were more likely than nonrepeat offenders to move the body of their victim away from the crime scene. This behavior is largely dictated by the rationality of the sexual murderers' decision-making during the commission of their crimes. Studies have found that SHOs who transported their victim's body to another location for disposal had more criminal experience, higher intelligence, and used more forensic awareness strategies than those who left the body at the site of the

murder (Oliver et al., 2007; Rossmo, 2000). Apart from disposing of the body, these criminally experienced offenders often make rational decisions throughout the offending process to either delay or thwart the police investigation and avoid detection (Chai et al., 2021). James and Proulx (2016) reported that serial SHOs were more likely than non-serial SHOs to exhibit signs of post-crime organization, indicating their superior understanding of forensic knowledge and precautionary measures. This phenomenon was evident in the present study, as repeat offenders were significantly less likely than nonrepeat offenders to be arrested immediately after their crimes.

Although this study provides a valuable initial insight into the comparative characteristics of repeat and nonrepeat Chinese SHOs, the findings should be considered with caution as there are several limitations. First, because the under-reporting of sexual offenses is a universal problem, it is uncertain whether the nonrepeat offenders in this study were truly first-time offenders. Undetected sex offenders are not uncommon, posing significant challenges for risk assessment (Kelley et al., 2023; Lisak & Miller, 2002). Furthermore, given the difficulty of obtaining official crime data in mainland China (see Chan, Li, Liu, Lu, et al., 2019) and the inaccessibility of official crime data on sexual homicides, only basic descriptive information about the offenders, victims, and MO characteristics could be obtained. Although this study analyzed the best available data on sexual homicides in mainland China (i.e., police arrest data, court documents, and published case reports), it is worth noting that the reporting styles of these data sources are not consistent, and hence, their data quality is not comparable. The police arrest and court data typically comprise more information about the offense, while case reports provide more details about the case background and the offender's characteristics. Furthermore, the lack of clinical data constructs (e.g., clinical diagnostic information) limited a more comprehensive examination of the offenders' psychiatric condition and mental status before, during, and after the sexual murders. Finally, the possibility of potential misclassifications, reporting errors, and omissions in data entry should be considered because the case classification was performed by different data coders, such as the legal physicians and clinicians for the police arrest data, and the legal personnel for the court reports. Therefore, in future research, it would be helpful to obtain more comparable and high-quality data, such as first-hand comprehensive data. Without such quality data, it is not possible to perform in-depth analyses into the dynamics of sexual homicide offending patterns (e.g., offender psychopathology and victim-offender interactions during the offense). Furthermore, future research may consider collecting a larger and representative sample to increase the generalizability of findings and to allow for more advanced statistical analyses.

4.1 | Implications of the findings

Despite its limitations, this study offers important information about the MO of repeat and nonrepeat offenders in sexual homicides that occurred in mainland China. To the best of the author's knowledge, this is the first such empirical study on Chinese sexual homicides and a rare comparative study on sexual homicides. The knowledge it provides about the MO characteristics of repeat and nonrepeat SHOs may offer valuable insights for police investigations. For instance, it is more likely that the suspect is a repeat offender if the primary crime scene is an outdoor location (e.g., road, street, alleyway, field, or park), the victim is murdered by a personal weapon (e.g., the offender's hands or a ligature for strangulation or asphyxiation), and the victim's body had been transported from another location. However, if the police suspect that the victim has been conned, there is less likelihood that the suspect is a repeat offender. Similarly, the probability that the suspect is a repeat offender is decreased if the police have reason to believe that the victim only experienced vaginal penetration. Nonetheless, cautious interpretation is necessary given the study's small sample size and the correlational nature of the analysis.

4.2 | Conclusions

Sexual homicide is a complex criminal event that involves a multitude of decision-making processes. Although sexual killers are generally assumed to be rational, multiple factors, including the offender's psychological and emotional state during the offenses, the availability of a weapon at the crime scene, and environmental factors, can influence their decision-making simultaneously. Despite the limitations of the data, this study is important in extending our knowledge not only about sexual homicide in general but also about the dynamics of Chinese sexual homicides and the MO characteristics of the perpetrators. In addition to providing insights for police investigations, the findings of this study may be useful in determining the risk of reoffending of specific groups of SHOs (i.e., repeat vs. nonrepeat offenders) and designing effective interventions.

CONFLICT OF INTEREST STATEMENT

The author declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this manuscript.

ENDNOTES

- ¹ The terms "nonrepeat offenders," and "nonrecidivists" are used interchangeably to refer to the same group of offenders; "repeat offenders" and "recidivists" are similarly used interchangeably in this study.
- ² Among the 31 repeat offender cases, 22 cases (71%) were perpetrated by offenders who had a previous nonsexual conviction (i.e., nonsexual recidivists) and 9 cases (29%) by those who had a previous sexual conviction (i.e., sexual recidivists).
- ³ Unadjusted odds ratios were calculated to estimate the relative risk between a particular event in an exposed group and a certain event in an unexposed group (at a bivariate level). Adjusted odds ratios were used to control for confounding bias (at a multivariate level).
- ⁴ A significant difference was observed between the ages of repeat offenders who had previously committed nonsexual and sexual offenses, both at the time of the offense (32.27 vs. 46.43 years; $t = -2.38$, $p = 0.027$) and at the time of arrest (33.33 vs. 47.71 years; $t = -2.29$, $p = 0.033$).
- ⁵ A significant group difference among repeat offenders was also noted, with the nonsurprise mode of victim approach more frequently used by sexual recidivists than their nonsexual counterparts (100% vs. 59.1%; Fisher's exact test = 5.19, $p = 0.023$). The effect of this difference was moderate ($\phi = -0.41$).

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