

Female-Perpetrated Sexual Homicide: A Systematic Review

By
Hannah Rose MacCallum

A Thesis Submitted to
Saint Mary's University, Halifax, Nova Scotia
in Partial Fulfillment of the Requirements for
the Degree of Bachelor of Arts, Honours Criminology.

April 2023, Halifax, Nova Scotia

Copyright © Hannah Rose MacCallum, 2023

Approved: Jay Healey, PhD
Assistant Professor

Date: April 21, 2023

Female-Perpetrated Sexual Homicide: A Systematic Review

by Hannah Rose MacCallum

Abstract

Research into the aetiology of sexual homicide perpetrators often highlights the impact of adverse childhood experiences and deviant sexual interests on offence commission. However, this research traditionally focuses on samples of male offenders. In attempts to facilitate the generation of knowledge concerning female sexual homicide offenders (FSHO), a systematic review was conducted to establish the current state of literature on this population. In identifying how the developmental antecedents of adverse childhood experiences and deviant sexual interests impact FSHOs, we can further identify how they differ from male sexual murderers.

According to the current literature, a population of North American FSHO reflect a balanced ethnic distribution and target individuals within their own ethnic group. Additionally, FSHO were far more likely to use a weapon whilst killing a victim that they were previously acquainted with. Besides differentiating them from their male counterparts, this suggests that there is further heterogeneity within the motivations behind female sex offending based on the ethnic distribution and weapon preferences.

While all developmental factors were absent from the literature gathered, heterogeneity within the sexual murderer population is reflected in the demographics, victimology, and modus operandi of FSHO. Implying not only are they distinguishable from male perpetrators but may further be distinguished from each other. This review highlights a knowledge gap concerning the developmental processes and relevant factors to female sexual offending and establishes that more research into this population is necessary.

April 21, 2023

Female-Perpetrated Sexual Homicide: A Systematic Review

Sexual homicide is a complex and rare phenomenon, with only 1% to 5% of global homicides containing a sexual element (Chan & Heide, 2009). Many professionals have proposed differing criteria for this crime type, causing a discrepancy in the reportage of sexual homicides by the police, academics, and the media. Public fascination with sexual homicide accumulates immense media attention, lending further to social misconceptions of sexual crimes and offenders. In attempts to mitigate these issues, a standardised definition of sexual homicide should be established when undertaking research.

Like many other criminal offences, sexual homicide has had varying definitions since the first scientific study into the phenomenon conducted by Richard von Krafft-Ebing in 1886. Nonetheless, appropriate consideration of qualifying criteria is essential to maintain consistency when reporting, evaluating, and examining any crime type. While numerous definitions of sexual homicide exist, they traditionally include essential elements reflecting the sexual nature of the offence. Additionally, a strong definition should also acknowledge homicides that reflect a more nuanced sexual gratification experienced by an offender.

The Federal Bureau of Investigations' (FBI) definition outlines criteria to be met to constitute a sexual homicide. According to Ressler and colleagues (1988), for an instance of homicide to be classified as sexual in nature one of the following characteristics must be present: (a) victim's attire or lack of attire; (b) exposure of the sexual parts of the victims' body; (c) sexual positioning of the body; (d) insertion of foreign objects into the victim's cavities; (e) evidence of sexual intercourse either oral, anal, or vaginal; and (f) evidence of substitute sexual activity, interest, or sadistic fantasy (Burgess, Hartman, Ressler, Douglas, McCormack, 1986).

This definition will be adopted for the purpose of this research as it is applied often throughout the literature.

Previous criminological research into the origins of criminal and sexual offending posits that various biological, psychological, sociological, and situational risk and protective factors can be concurrently considered for adulthood criminal behaviour (Burgess, et al., 1986; Arrigo & Purcell, 2001; Farrington, Kazemian, & Piquero, 2019; Lussier, 2017; Chan & Heide, 2009). With an increase in academic interest into this phenomenon, studies over the past few decades have broaden our considerations of sexual homicide through the introduction of multiple typologies of sexual murderers and models of offending, in attempts to identify intra- and extra-elements that play a role in the commission of this offence (Proulx, Beauregard, Carter, Mokros, Darjee, & James, 2018).

Due to the rarity of sexual homicide, existing empirical studies have focused on male offenders. Male offenders commit the majority of sexual homicides, are often in their 30s at offence commission, and commonly identify as white (Oliver, Beech, Fisher, & Beckett, 2007;). Male sexual homicide offenders (MSHO) prefer to kill via strangulation, with only around one-third utilising a weapon in the commission of their offence (Fisher & Beech, 2007; Chéné & Cusson, 2007). However, the presence of a weapon during the criminal event has been shown to positively impact attack severity. Use of a weapon is further associated with experiencing precrime-anger and an abundance of childhood delinquency. In addition to the likelihood of the offender exhibiting sexually sadistic behaviours during the commission of their offence (Chéné, & Cusson, 2007; Nicole & Proulx, 2007; Beauregard, Proulx, & St-Yves, 2007). MSHO are more prone to targeting victims that are unknown to them; in contrast to general murderers which most often (80%) target victims that are known to them (Campos & Cusson, 2007).

Despite these distributions, sexual homicide offenders appear as a heterogeneous group that have exhibited individual victim proclivity and motivations. Studies comparing sexual murderers to other violent offenders demonstrates that they are a distinct class of criminals with unique profiles, criminal careers, modus operandi, developmental variables, personality disorders, and lifestyle features (Proulx, 2018; Healey, Beauregard, Beech, & Vettor, 2016; Chopin & Beauregard, 2019). It is recommended throughout the literature for future sexual homicide research to consider alternate offender groups rather than the traditional focus on male sexual murderers of adult women (Chan & Heide, 2009;).

To date, there have been limited systematic studies conducted concerning the phenomenon of female-perpetrated sexual homicide (Chan & Heide, 2009; Chopin & Beauregard, 2019; Chan & Frei, 2013). This may be attributed to the rarity of the phenomenon in general and the extreme rarity of female sexual homicide offenders (FSHO). In addition to the lower arrest rates of female sexual offenders and infrequent reportage of female-perpetrated sexual abuse (Laws & O'Donohue, 2008; Chan & Frei, 2013). This raises concerns regarding our understanding of extreme sexual offending, the generalisability of research findings, and the development and application of treatments, assessments, and policies (Laws & O'Donohue, 2008; Chan & Frei, 2013). In addition to maintaining the binary motivations often allotted to female offenders that limit our academic considerations of female sexual offending (Howard, 2018).

In attempts to facilitate the generation of knowledge concerning FSHO, a systematic review should be conducted to establish the current state of literature on this population. This review will contain all studies published until December 2022 concerning the empirically supported factors previously shown to impact sexual homicide offending. In particular, the

developmental antecedents of adverse childhood experiences and deviant sexual interests. This will aid in the identification of developmental similarities and differences reflected in this under researched subpopulation of sexual offenders. Academic understandings of extreme sexual violence hold implications for prevention, assessment, treatment, policy, and investigation. In addition to future research focuses and theoretical development.

Theoretical considerations, and the resulting empirical studies, have utilised only male offender populations and the current research on female-perpetrated sexual violence is extremely limited. Studies into female sexual offenders have additionally revealed multiple typologies of offender and female-perpetrated homicide research often presents contradictory findings (Chan & Frei, 2013). In both cases, female offenders are more likely than their male counterparts to have experienced childhood physical and sexual abuse- the severity of which has been linked to severity of sexual criminal behaviours in adulthood in MSHO (Chan & Frei, 2013; Marshall & Barbaree, 1990; Proulx, et al., 2018; Pflugradt, Allen, & Zintsmaster, 2018). The current study will strive to expand empirical knowledge on female sexual offenders and contribute further to the discussion of sexual homicide, through the consideration of how biological sex differences may present in the development of violent sexual offending.

Literature Review

The current body of research concedes that a strong proclivity to engage in fatal sexual violence is developed throughout the life-course and is additionally influenced by temporary or situational elements, such as the victim-offender relationship, presence of a weapon, and the consumption of drugs or alcohol (Lussier, 2017; Nicole & Proulx, 2007; Chopin, & Beauregard, 2019; Healey, Beauregard, Beech, & Vettor, 2016; Arrigo & Purcell, 2001). The relevance of

developmental elements in the aetiology of sexual criminality is highlighted by general theories of sexual assault and offending models, in addition to sexual homicide (Marshall & Barbaree, 1990; Nicole & Proulx, 2007).

Many of the prominent models of sexual homicide, including the motivational model, trauma control model, criminal event perspective, social learning-routine activity integrated model, and paraphilic model, incorporate the interplay between individual characteristics, developmental antecedents, psychological factors, and external facilitators that influence the commission of a sexual homicide (Burgess et al., 1986; Chopin & Beauregard, 2019; Hickey, 2002; Arrigo & Purcell, 2001; Chan, 2018). The developmental antecedents of adverse childhood experiences are present in most of these models as they have been shown to significantly influence sexual homicide offending (Proulx, et al., 2018).

Various researchers agree with the assertion that developmental and interpersonal failures are significant factors in the cultivation of adulthood aggression, in addition to the genesis of deviant fantasies or sadistic sexual interests. Through experiencing familial, social, and sexual dysfunction in adolescence, offenders may develop sexual deviant interests, which have further been shown to impact the severity of criminal sexual behaviour (James & Proulx, 2014; Laws & O'Donohue, 2008; Chan & Heide, 2009; Healey & Beauregard, 2015).

Adverse Childhood Experiences and Sexual Homicide

Since they have been demonstrated to have a major impact on sexual homicide offending, most sexual homicide models incorporate negative childhood experiences. (Proulx, et al., 2018). Experiencing inadequate parenting—such as abuse, substance use, and parental criminality—often fails to enforce restraints of sexual behaviours and may result in the

amalgamation of sex and aggression (Nicole & Proulx, 2007). It has been empirically demonstrated that inadequate parenting and adverse events in early developmental stages do not effectively prepare children for the higher hormone levels associated with puberty. In addition to inadequate socialisation exacerbating feelings of aggression and isolation (Marshall & Barbaree, 1990; Laws & O'Donohue, 2008).

Physical abuse in childhood is frequently reported by sexual murderers, with the most common form being struck by an object, (Oliver, et al., 2007; Proulx, et al., 2018; Proulx, et al., 2007; Arrigo & Purcell, 2001; Ressler, et al., 1988; Burgess et al., 1986). In addition to causing developmental deficits in the socialisation of the child, early encounters with uncaring or violent adults may serve as a model for aggressive actions and self-centred attitudes that carry into adulthood (Marshall & Barbaree, 1990).

Experiences of childhood sexual abuse have been observed to influence the severity of sexual violence perpetrated in adulthood, with serial MSHO reporting higher rates of childhood sexual abuse than their non-serial counterparts (Nicole & Proulx, 2007; Proulx, et al., 2018). Psychological Abuse—such as neglect, emotional deprivation, or verbal humiliation—further prompts social isolation and reduces self esteem that can impact the child's ability to establish meaningful connections in adulthood (Laws & O'Donohue, 2008; Chan & Heide, 2009; Burgess, et al., 1986). Resentment is also a frequent motive for MSHO, as well as extreme feelings of hostility towards women (Chan & Heide, 2009).

These types of childhood victimisation can prompt the development of various social deficits. These include many traits commonly exhibited by sexual murderers, such as an inability to form attachments and maintain relationships and feelings of low-self esteem (Faupel, 2015;

Nicole & Proulx, 2007). They have difficulty feeling empathy for others and have few adult attachments, in addition to a variety of other antisocial behaviours. Exposure to a variety of inadequate parenting models, in particular maltreatment in the forms of physical and sexual abuse may result in the amalgamation of sex and aggression and are common in sexual homicide. The degree of these early developmental experiences may differentiate between those who choose to perform their sadistic sexual desires and those who do not (Laws & O'Donohue, 2008).

Often attributed to parental dysfunction and physical and sexual abuse, social isolation and emotional loneliness experienced in childhood performs a significant role in the perpetration of fatal sexual violence (Ressler, et al., 1986). While physical, sexual, and psychological abuse and social isolation impact a variety of delinquent and criminal behaviours, in the case of sexual murderers childhood isolation occasionally becomes severe and leads to excessive fantasies—which may disinhibit sexual urges and prompt the genesis of paraphilic interests (Laws & O'Donohue, 2008; James & Proulx, 2014; Chan & Heide, 2009; Knight & Sims-Knight, 2003; Arrigo & Purcell, 2001; Burgess et al., 1986.)

Deviant Sexual Interests and Sexual Homicide

Through experiencing familial, social, and sexual dysfunction in adolescence, offenders may develop sexual deviant interests, which have further been shown to impact the severity of criminal sexual behaviour (Chéné, & Cusson, 2007; Nicole & Proulx, 2007; Beauregard, Proulx, & St-Yves, 2007). These interests have been directly linked to sexual severity in an offence and deviant sexual fantasies in particular are more often found in instances of sadistic sexual homicide (Burgess et al., 1986; Chan & Heide, 2009; Proulx et al., 2007).

Exhibiting inappropriate behaviours, having a disturbed developmental profile, and engaging in deviant sexual fantasy have each been directly related to sexual and criminal severity, with a disturbed developmental profile being predictive of adulthood offending (Maniglio, 2010; Nicole & Proulx, 2007; Arrigo & Purcell, 2001; Burgess et al., 1986; Healey et al., 2014). Low self-esteem has further been empirically linked to fantasy development and sexual homicide has been shown to be strongly predicted by both persistent atypical sexual preferences and low self-esteem (Arrigo & Purcell, 2001; Ressler et al., 1988; Healey & Beauregard, 2015).

Findings reflect that developmental dysfunction, deviant sexual fantasies, and a history of violent crime are more often found in sexual murderers than sexual aggressors. Therefore, these two populations can be distinguished based on the severity of their developmental disruption (Nicole & Proulx, 2007). Due to the differences and similarities presented by sexual homicide offenders, many of these variables must be considered in conjunction with one another to produce a comprehensive overview of the various motivations for and precipitating factors of this offence.

Analytic Strategy

Purpose

The aim of this systematic review is fundamentally to explore how biological sex differences manifest in instances of extreme sexual violence. Through utilising empirically supported variables that have been shown to influence the outcome of sexual offending, identifying the developmental antecedents of female sexual homicide offenders (FSHO) will contribute to the study of this rare phenomenon. The identification of similarities and differences

between male sexual homicide offenders (MSHO) and FSHO will aid the academy to develop a more comprehensive perspective of female sexual offending and sexual homicide.

The specific objectives of this research project include an in-depth review and synthesis of relevant literature on how the developmental antecedents of adverse childhood experiences and deviant sexual interests impact female perpetrated sexual homicide. Through the consideration of the childhood experiences and subsequent deviant sexual interests of FSHO, a comparison can be made between the experiences and development of deviant sexual interests of male and female sexual murderers. The similarities and differences present within the empirical literature of MSHO and FSHO can be discussed in attempts to identify if biological sex has any impact on the progression from sexually aggressive fantasies to sexual violence, and finally to fatal violence.

Theoretical Framework

Due to the complexity of sexual murder and its perpetrators, a thorough conceptual framework is required to consider the interplay of all factors pertinent to the development and exhibition of this type of extreme sexual violence. This study aims to consider a range of developmental antecedents and risk variables that are already incorporated into and empirically supported by many theories of sexual homicide. Therefore, a developmental and life-course approach should be appropriate for the study of FSHO, in addition to MSHO.

Research into the aetiology of criminal and sexual offences suggests that an array of biological, psychological, sociological, and situational risk and protective factors should be taken into consideration when determining potential delinquency. (Farrington, Kazemian, & Piquero, 2019; Lussier, 2017; Chan & Heide, 2009). Current research concedes that a strong proclivity to

engage in fatal sexual violence is developed throughout the life-course and is additionally influenced by temporary elements (Lussier, 2017; Nicole & Proulx, 2007; Chopin, & Beauregard, 2019). A developmental and life-course criminological approach may be applied to effectively consider the multiplicity of factors that influence the perpetration of sexual homicide.

Developmental and life-course (DLC) theories are frequently dynamic and incorporate change and continuity across time. These studies are concerned with the identification of explanatory or causal elements that precede or co-occur with behavioural development and have an influence on its trajectory. The onset, progression, and discontinuation of sexually aggressive behaviour has been attributed to the biological characteristics and adolescent background of the offender; the sociocultural milieu in which the offender is positioned; and the transient situational conditions that may escalate sexual aggression to homicide. Through the application of a theoretical framework focusing on longitudinal behavioural patterns, a variety of developmental antecedents and risk factors may be considered in attempts to further develop our academic understanding of the rare phenomenon of sexual homicide.

Limitations of this theoretical approach include its microlevel considerations of criminal behaviour. Largely ignoring the influence of macro level factors, such as social institutions, may hold implications for the generalisability of the garnered results; However, various theories and models of sexual homicide also encompass situational factors to mitigate this concern, as sexual behaviour of this type will occur within a social context (Arrigo & Purcell, 2001; Chéné & Cusson, 2007; Chan & Heide, 2009; Marshall & Barbaree, 1990; Ressler, Burgess, & Douglas, 1988).

An additional limitation of this study and its framework is that all current theories and models of sexual homicide have been developed based upon samples of MSHO. However, to date there has been no hypotheses, models, or theories of sexual homicide developed based on a female sample. Therefore, it is important to consider the application and fit of existing empirical perspectives to female sexual offending.

Methodology

The current study consists of a systematic review of the literature pertaining to FSHO and the developmental antecedents of adverse childhood experiences and possible subsequent deviant sexual interests. This type of method offers a comprehensive understanding of the current body of knowledge and is appropriate for the topic of sexual homicide due to the rarity of the phenomenon and limited understanding of FSHO. A synthesis of all data concerning the research topic of female perpetrated sexual homicide will offer a foundational piece for future research into this offence and offender type.

Systematic Reviews

A systematic review is a structured and formalised method that uses clear and outlined criteria in locating, obtaining, and evaluating existing literature on a chosen and focused research topic (Davies & Francis, 2018). Systematic reviews can offer a comprehensive collection of the current knowledge on a topic given through an unbiased and rigorous evaluation not possible in other types of reviews (Jolliffe & Farrington, 2017; Davies & Francis, 2018). In addition to offering the opportunity to develop both research skills and a deeper appreciation for the research process (Boland, Cherry, & Dickson, 2017).

Gaining popularity in the social sciences in the early 2000s, criminologists use this method of secondary research to facilitate empirical assessments of policies as described in prior studies but can also include hypothesis testing (Davies & Francis, 2018). Systematic reviews can also be employed when attempting to advance epidemiological knowledge and identify risk and preventative factors of criminal behaviour (Jolliffe & Farrington, 2017).

Sections of a systematic review in criminology often include an introduction to the research topic, a method section describing data sources, and a study selection section with explicitly outlined inclusion and exclusion criteria. In addition to data extraction, study appraisal, data summary, and synthesis procedures; a results section describing all findings; and a discussion of significant findings and appropriate conclusions (Davies & Francis, 2018; Jolliffe, & Farrington, 2017; James & Proulx, 2014).

Advantages of a systematic review approach includes flexibility, lack of ethics requirements, comprehensive insight into the published literature, and opportunities for critical appraisal (Boland, Cherry, & Dickson, 2017). In addition to a robust scientific and replicable approach offered through its clearly outlined search techniques and criteria development that reduces bias. This method further allows the opportunity to consider contradictions or uncertainties that may be minimised in other types of reviews (Davies & Francis, 2018).

Limitations of utilising a systematic review include the lack of ethics experience, possible feelings of isolation due to the independent and time-consuming nature of this methodology, lack of lived experience with the topic of interest, and reliance on information extracted from the studies of others, of which there may be too many to review within a given time period (Boland, Cherry, & Dickson, 2017; Davies & Francis, 2018).

The Current Study

The methodology for this systematic review was informed by the Centre for Reviews and Dissemination (CDR; 2009) and the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA; 2020).

Data Sources

This review was conducted using two methods of data collection. First, three online full-text platforms available through the Saint Mary's University Patrick Power Library were searched: ProQuest, EBSCOhost, and Web of Science. These platforms encompassed the following 14 databases: Academic Search Premier, APA PsycArticles, APA PsycInfo, Canadian Business & Current Affairs Database (CBCA), International Bibliography of the Social Sciences (IBSS), KCI-Korean Journal Database, MEDLINE, Preprint Citation Index, ProQuest Dissertations & Theses (PQDT) at Saint Mary's University, PTSDpubs, Social Services Abstracts, SciELO Citation Index, Sociological Abstracts, Web of Science Core Collection. Three additional databases were searched to confirm all relevant materials were collected: SAGE Journals, and Taylor and Francis, and Wiley Online Library. These databases were utilised to collect citation information and abstracts for screening and subsequently the full-text articles.

Three databases were excluded from the search. These include JSTOR, Science Direct, and SpringerLink. JSTOR was excluded due to their character limit of less than 200-characters, which is well below the 518-character count of the used terms. Additionally, ScienceDirect was excluded due to their restrictions on Boolean phrases to a maximum of seven. This restriction would not allow for inclusion of all variables of interest due to the 28 Boolean phrases being utilised to encompass the range of the factors of interest. Finally, SpringerLink was excluded due

to the search interface not offering space for multiple search terms. Being limited to a basic search containing one block would not allow for the filter and collect method applied during the search.

While the CDR provides room for adaptation, altering the applied search terms to fit these restrictions would impact the integrity of the search strategy. Instead, a broad strategy was applied to ensure all relevant literature was collected.

A Google Scholar search was conducted to confirm that all appropriate and relevant databases were included in the search and to further identify relevant research in alternate formats, such as book chapters and reports. This search identified both ScienceDirect and SpringerLink as relevant to this search. However, these databases provide indexing for Elsevier and Springer publications respectively, which are both additionally indexed by Web of Science, effectively rectifying this issue. This search further identified SAGE Journals, Taylor and Francis, and Wiley Online Library as relevant databases, which were included in the search. Grey literature sources were also included.

Second, a manual reference search was conducted on published studies following the first stage of title and abstract screening which is recommended by the CRD (2009).

Search Strategy

To assess the state of the literature on adverse childhood experiences and deviant sexual interests of FSHO, a filter method was utilised. Three keyword blocks were used in conducting the literature search: One to elicit results concerning adverse childhood experiences and deviant sexual interests (e.g., abandonment, daydreams, deviant sexual fantasy, emotional abuse,

fantasies, foster care, maltreatment, neglect, physical abuse, sexual abuse, single parent, welfare); A second to identify the sexually homicidal act (e.g., sexual homicide, sexual killer, sexual murder); With a third block reflecting the specific population of interest (e.g., female offender, woman perpetrator, female criminal). The yielded results were noted after each block of terms was applied and are outlined in Appendix A and B.

Wildcard searches were used to further refine these queries (e.g., abandon*, sexual kill*, female offend*) and a review of individual database thesauruses and indices was conducted. Both to account for variations in spelling within the literature and the variety of indexing methods applied by each database (Centre for Reviews and Dissemination, 2009). No filters or limits were applied.

Due to the extreme rarity of FSHO, there were many concerns regarding the availability of relevant studies. To ensure all studies on female sexual murderers were collected, two searches were conducted using the method outlined above. The first search was conducted through the application of all three search blocks with the second search being conducted with only the second and third search blocks. This phase of the search strategy is briefly outlined below in Figure 1, which details the number of results yielded by each database.

These two searches were then combined, and duplicates were removed. Title and abstract screening was conducted and followed by full text screening; with both being completed using the web-based platform Covidence. Through partnership with both Cochrane and Campbell Collaboration, Covidence offers a comprehensive literature review tool that is used to track both abstract and full text article screening. Finally, a detailed and in-depth review of the remaining articles was completed, with this phase of the search strategy being outlined in Figure 2.

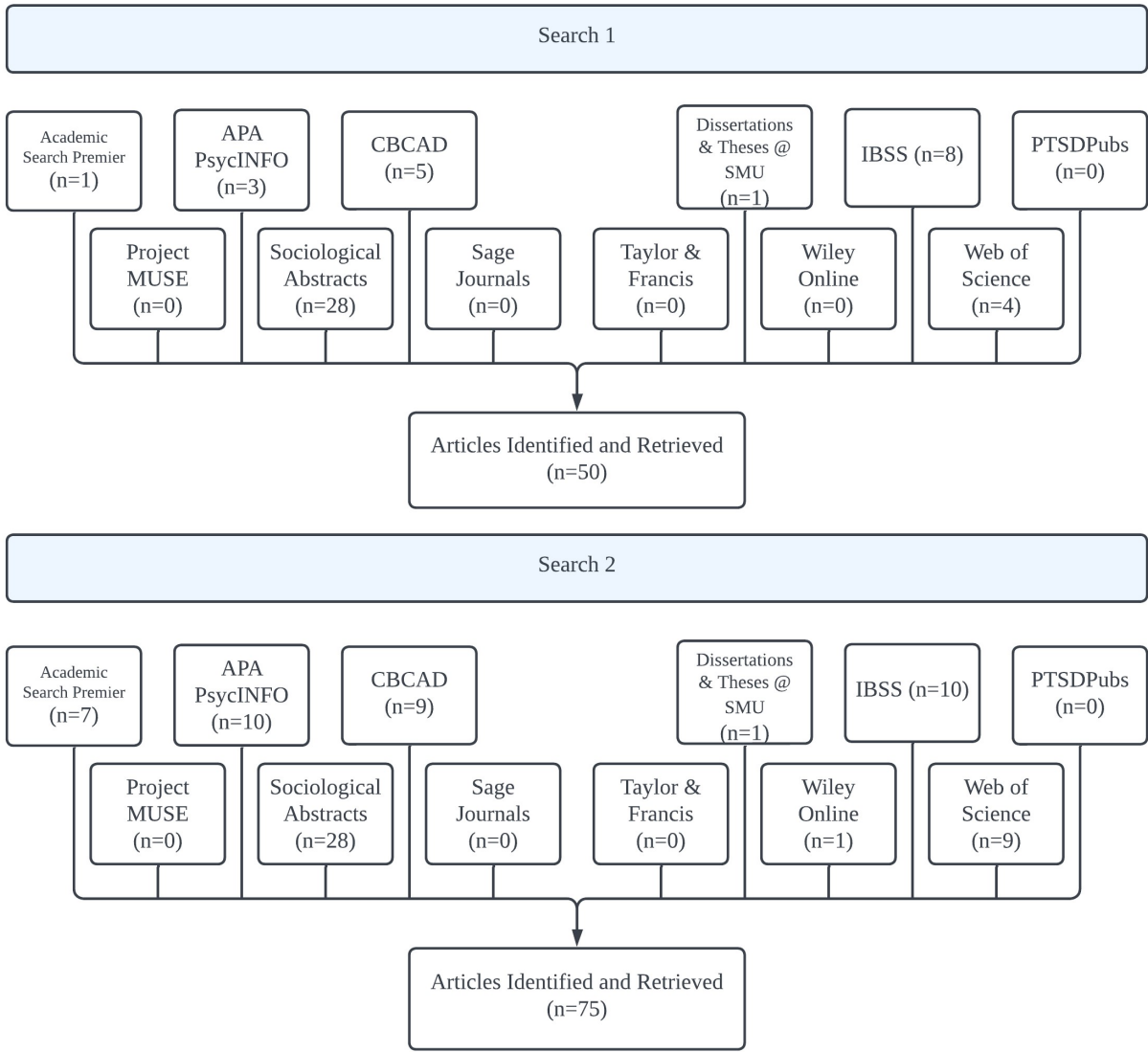


Figure 1. This flow chart details the results yielded from each individual database from both search 1 and search 2.

Eligibility Criteria

Inclusion criteria

Studies were retained for abstract and title screening if they: (1) had a clear theoretical framework; (2) were empirical in nature; (3) had a sample size of at least 10; (4) had been published between 1958 and 2023; (5) contained findings on female perpetrators of sexual homicide; and (6) were published in English.

A theoretical framework can be used to accurately identify the key variables that were considered and the limitations of the findings. Empirical studies meeting the minimum sample size will offer increased validity of the evidence presented. The selected studies must be published following the first empirical study of female murderers conducted by Dr. Marvin Wolfgang in 1958, in addition to containing empirical findings on female-perpetrators of sexual homicide—the population of interest.

Multiple publications concerning the same sample will be excluded in favour of the one containing the most robust conclusions and any duplicate studies were removed during the abstract and title screening.

Exclusion criteria

The following exclusion criteria were then applied to the seventeen studies during the full text review:

1. Lacks a clear theoretical framework.

2. Fewer than ten individuals in the sample (e.g., Cameron, 1999; Skott, Beauregard, & Rajan, 2019).
3. Publication date earlier than 1958.
4. Sexual murderers are not distinguished from other types of criminals (e.g., Bodkin et al, 2019; Isira, 2009; Karakasi et al, 2021; Lang, 2019; Leonard, 2014; Messori, 2016; Salfati, 2003).
5. Samples of male sexual murderers only (Skott, Beauregard, & Rajan, 2021).
6. Sample includes a mix of male and female offenders or does not disclose gender proportions (e.g., Clarkson, Eichinger, & Darjee, 2020; Heide, Beauregard, & Myers, 2009).
7. Samples of juvenile sexual murderers only (e.g., Myers & Chan, 2012).

The application of this criteria reduced the article total from seventeen to the final four to be included in this review.

Selection Process

The bibliographic software Zotero was used to record and manage the collected references and Covidence was used in all screening processes. Full text articles were obtained from the individual databases in which they were located, and Microsoft OneDrive was used to store the studies.

The study selection was conducted in four stages. Stage one consisted of identifying all the relevant studies yielded by the search procedure outlined above. During this stage, all studies

were collected and uploaded to Covidence for further review. All duplicates were identified before the articles moved onto the next stage. Stage two marked the beginning of the screening process. This consisted of a preliminary consideration of the retrieved articles based upon the relevance of the article's title, abstract, and any available keywords. Studies that appeared to satisfy the requirements continued onto stage three. During which, the full text article was obtained for a detailed review and assessment against the eligibility criteria. Relevant articles then continued onto stage four: inclusion in the systematic review. This process is outlined in Figure 2.

The database search resulted in the identification of a collective 125 candidate studies. Based on the applicability of the article title, abstract, and keywords, the author used Covidence to assess the eligibility of all potential studies. Seventeen studies remained following this selection procedure. The author then examined the eight papers to determine whether they fulfilled the eligibility requirements and were relevant to the research question. Analysis of the bibliographies of each retained article revealed no additional articles to be included. Overall, four articles were retained for this systematic review.

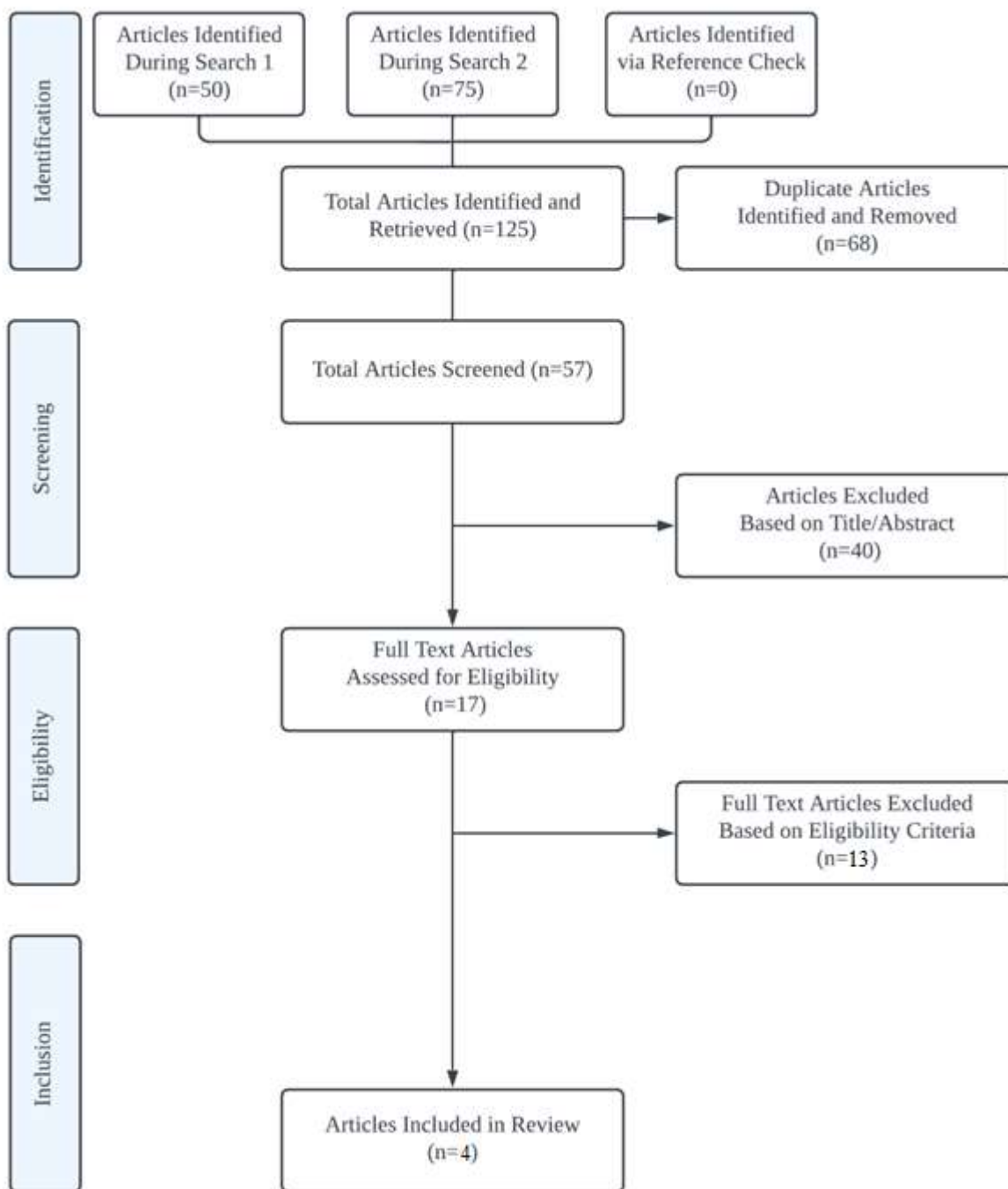


Figure 2. Flowchart detailing the search strategy and study selection procedure applied in this systematic review based upon the Four-Phase Flow Diagram developed by Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA, 2019).

Quality Assessment

In systematic reviews, critical appraisal is to be conducted on each retained study following a quality assessment tool developed specifically for the review of empirical studies.

These considerations often include:

1. Sufficient description of the sample.
2. Informative method guidelines.
3. Applicable measurement instruments
4. Reliability of the presented evidence (Centre for Reviews and Dissemination, 2009).

Maniglio (2010) recommends critical appraisal being conducted by two researchers in an attempt at bias and error reduction, in conjunction with increased relevance of studies and reliability of conclusions. However, appraisal beyond the basic consideration of these four factors is outside the scope of this Honours Thesis.

Data Extraction

Prior to detailed data extraction, a concise descriptive overview was completed for each article containing details on study design, sample population, and conclusions. This preliminary summary is beneficial in demonstrating that the studies are comparable, reliable, and that results can be considered collectively. Due to time constraints, extraction was conducted independently by the author utilising the guidelines provided by the Centre for Reviews and Dissemination.

Both numerical and free text data was extracted from all articles with an example form detailing the collection shown below (Table 1).

Table 1

Sample Data Extraction

Name of Extractor	Hannah Rose MacCallum	
Date of Extraction	March 3 2023	
General Information		
Author (Year)	Heng Choon (Oliver) Chan (2021)	
Title	Sex worker homicides and sexual homicides: A comparative study of offender, victim, and offense characteristics.	
Country	United States	
Study Characteristics		
Period	1976-2012	
Design	Prevalence Study	
Aim of Study	To identify similarities and differences in cases of sex worker homicide when compared to cases of sexual homicide	
Data Source	US Supplementary Homicide Reports	
Sample Size	134	
Offender Demographic Characteristics		
Age		
	< 18	17
	18-39	100
	40-60	13
	60+	2
	N/A	
Race		
	White	58
	Nonwhite	75
Victim Demographic Characteristics		
Age		
	< 18	4
	18-39	74
	40-60	42
	60+	14
	N/A	
Race		
	White	52
	Nonwhite	82
Group Type of Murder Weapon		
	Personal or Contact	7
	Edged or Firearm	126
Victim-Offender Relationship		
	Stranger	24
	Known	105

Research Findings

125 candidate articles were identified by using our search strategy, of which sixty-eight were duplicates and subsequently eliminated. In total fifty-seven articles were then screened based on their title and abstract, with 40 articles being excluded. 17 full text articles were retrieved and given a detailed evaluation to their relevance to the research question based upon the eligibility criteria outlined in the previous section of this report. Ultimately 13 were excluded, leaving four articles to be included in this review.

Table 2

General Information and study characteristics of empirical studies included in the systematic review (N = 4).

Study	Country	Sample size (n)	Study Period	Data Source	Study Aim
Chan (2021)	United States	134	1976-2012	US Supplementary Homicide Reports	To identify similarities and differences in cases of sex worker homicide when compared to cases of sexual homicide
Chan & Frei (2013)	United States	204	1976-2007	US Supplementary Homicide Reports	To examine the epidemiology, victimology, victim-offender relationship, and weapon-use patterns of female sexual murderers
Chan, Heide, & Beauregard (2019)	United States	151	1976-2012	US Supplementary Homicide Reports	To examine biological sex differences in the types of murder weapons used by sexual murderers
Chan, Frei, & Myers (2013)	United States	204	1976-2007	Uniform Crime Report & US Supplementary Homicide Reports	To identify similarities and differences in female sexual murderers of different races

The most common reason for exclusion included a failure to distinguish between male and female offenders, in addition to failure to distinguish between sexual and non-sexual homicide. Of the four included articles, two had a primary focus on female sexual homicide offenders, with the remaining two considering both MSHO and FSHO.

Female-Only Samples

Chan and Frei (2013) sought to examine female sexual murderers through analysing the U.S. Supplementary Homicide Report data from a 32-year period (1976–2007). 204 cases were examined (27 juveniles and 177 adults). The results reflected equal racial distributions of the offender and victim. Additionally, female sexual murders were more prone than their male counterparts to target victims of the opposing gender (75%).

The victims of FSHO were overwhelmingly above the age of 18 (78%) and previously known to the offender (81%), through familial relation or acquaintanceship. Results indicated that female sexual murderers committed intra-racial murder and that they tend to utilise weapons in their sex killings (78%). The authors posit that based on the difference in physical strength between the offender and victim, the victim's gender and age were the main factors in determining the murder weapon.

Myers, Chan, and Frei (2013) continued their exploration into female sexual murderers through investigating offending patterns of 204 female sexual murderers. Data was again collected from U.S. Supplementary Homicide Reports from 1976 to 2007. Regardless of race, the majority of female sexual murderers committed crimes against people of the opposite gender. Most frequently targeted by female sexual murderers of both races were known victims who were not intimate partners or family members.

FSHO often employed weapons in their offence commission, with the most common weapon was a firearm. Edged weapons were the second most frequently utilised weapon type by Black offenders (32%), whilst personal weapons were the second most frequent choice for White offenders (17%). While White FSHO committed crimes more frequently in suburban regions (40%), Black FSHOs typically committed crimes in big cities (69%). Other races were not considered in this study as they only accounted for 1.9% of all sexual homicides committed within the study period and victim demographics outside of gender were not disclosed.

Male and Female Samples

Chan (2021) considered the similarities and differences between sex worker homicides and sexual homicides. In this study, the author compared offender, victim, and offence characteristics of 243 sex worker homicides with 2608 sexual homicides over a 37-year period (1976-2012) from the U.S. Supplementary Homicide Report database.

According to the findings, male- and female-offender sex worker homicides can be distinguished from sexual homicides due to variance in their offender characteristics and victimology. Their sample of 134 female sexual murderers reflected only 5.1% of their total sample (2608) and revealed that most female offenders were adults (86%), with only 17 of the cases being committed by an offender under the age of 18, and 43% were White. The victims were also majority adults with only four victims being under the age of 18 and 39% of the victims were White. 78% of the sample had a known victim-offender relationship and the majority (94%) of female sexual murderers utilised an edged weapon or a firearm in the commission of their offence (Chan, 2021).

Chan, Heide, and Beauregard (2019) sought to examine the differences between male and female sexual murderers, focusing on weapon prevalence. Over a 37-year period (1976-2012) this study used a sample of 3160 single-victim sexual homicide cases (3,160 male and 151 female) from the U.S. Supplementary Homicide Reports database. Offenders over the age of 18 again made up the bulk of the sample (89%) and 56% of the sample identified as White.

Victim demographics reflected that 95% of victims were over the age of 18, with 53% being between the ages of 18 and 39. 39% of the sample victims were identified as White and 89% were male. Further, results showed that more female sexual murderers (63%) than male sexual murderers (43%) employed firearms during the commission of their crimes. 89% of the female sample utilised firearms and edged weapons during their offence. This study did not outline the victim-offender relationship of those in the sample.

The factors of interest for the research question were unaccounted for in all the studies, therefore, all available data was extracted for the population of interest to fulfil the general aims of this study.

Discussion

The development factors of interest for the research question, adverse childhood experiences and deviant sexual interests, were unaccounted for in all the studies. However, a comparison of offender and victim demographics, such as age and ethnicity, can still be conducted. In addition to examining the victim-offender relationships and weapon preferences prevalent in cases of female-perpetrated sexual murder. Through analysing the demographic makeup of a population of female sexual murders, in addition to their victim and weapon

preference, we can consider how similar these distributions and characteristics are to their male counterparts.

Offender Demographics

All eligible studies contained a sample population that was over 85% adults (Chan & Frei, 2013; Myers, Chan & Frei, 2013; Chan, 2021; Chan, Heide, & Beauregard, 2019). With Myers, Chan, and Frei's (2013) sample containing 81% of offenders between the ages of 18 and 39, suggesting similarity to their male counterparts for age during the commission of their sexual homicide (Oliver, Beech, Fisher, & Beckett, 2007).

In three of the four studies, over half of each sample identified as white (Chan & Frei, 2013; Myers, Chan & Frei, 2013; Chan, Heide, & Beauregard, 2019), with Chan's (2021) sample identifying 43%. Myers, Chan, and Frei (2013) disclosed in their study that ethnicities outside of 'White' or 'Black' made up only 1.9% of the sample and were subsequently excluded from their study. The racial distribution in all four studies was much more balanced than white male sexual murderer samples (Oliver, Beech, Fisher, & Beckett, 2007).

Victim Demographics

Three of the studies revealed that female sexual murders were more prone than their male counterparts to target victims of the opposing gender, with the 2021 study not disclosing victim demographics (Myers, Chan & Frei, 2013; Chan & Frei, 2013; Chan, Heide, & Beauregard, 2019; Chan, 2021). The victims in each sample were overwhelmingly adults and often between the ages of 18 and 39 (Myers, Chan & Frei, 2013; Chan & Frei, 2013; Chan, Heide, &

Beauregard, 2019). Victims of female sexual murderers were often the same race when victim ethnicity was disclosed (Chan & Frei, 2013; Chan, 2021; Chan, Heide, & Beauregard, 2019).

Victim-Offender Relationship

While one study did not discuss the victim-offender relationships within their sample population (Chan, Heide, Beauregard, 2019), female sexual murderers appeared to more often target victims that were previously known to them, however they were not necessarily intimate partners or family members (Chan & Frei, 2013; Chan, 2021; Myers, Chan & Frei, 2013). This is in contrast with the common male sexual murderer who prefers to target strangers and is more reflective of general homicide (Campos & Cusson, 2007).

Weapon

The majority of FSHO employed the use of a weapon during the commission of their offence (Chan & Frei, 2013; Myers, Chan & Frei, 2013; Chan, 2021; Chan, Heide, & Beauregard, 2019). While the most common weapon was a firearm, edged weapons were also prevalent in every sample. Myers, Chan, and Frei (2013) suggest that firearms are the most common weapon used interracially, with the next most used weapon being an edged weapon for those identified as Black and personal weapons for those identified as White.

In cases of MSHO, strangulation is preferred by the bulk of offenders (Fisher & Beech, 2007). With weapon use in these cases increasing the severity of the attack and suggesting extreme dysfunction in childhood and possible sadistic tendencies (Chéné & Cusson, 2007; Nicole & Proulx, 2007; Beauregard, Proulx, & St-Yves, 2007). However, in studies of FSHO,

the application of a weapon is attributed to the differences in physical strength between the offender and their victim (Chan & Frei, 2013).

Conclusion

Despite the lack of literature on the developmental antecedents of FSHO, relevant data on the population of interest was available to consider. The current state of knowledge reveals that a female population of sexual murderers appear equally as likely to be of White or Black descent and target intra-rationally. They were also much more likely to target a victim that they were familiar with and utilise a weapon during their killings. This not only distinguishes them from their male counterparts, but the racial distribution and weapon preferences suggest there is further heterogeneity within female samples-as there is within male samples.

Future research into not only the development of female sexual murders, but the population in general may prove fruitful in aims to develop a more comprehensive perspective of female sexual offending and sexual homicide. The developmental events and factors of FSHO can be studied further, in addition to offender motivations and modus operandi. The impact of deviant sexual interests on FSHO should also be considered in future research, as the prevalence of weapons may suggest the possibility of more frequent sadistic behaviours within this population.

In conclusion, while the developmental differences remain unclear, sex differences are present in the demographics, victimology, and modus operandi of sexual murderers. The demographic differences found when comparing FSHO to their male counterparts suggest that this population be analysed as a distinct group of offenders. This female subpopulation of sexual murderers further reflects heterogeneity within itself due to its diverse characteristics in terms of

ethnicity, victim-offender relationship, and weapon preferences and additional research into their motivations would provide further insight into their offending patterns.

References

- Archer, J., Hartup, W., & Tremblay, R. (2005). *Developmental origins of aggression*. Guilford Press.
- Arrigo, & Purcell, C. E. (2001). Explaining paraphilias and lust murder: Toward an integrated model. *International Journal of Offender Therapy and Comparative Criminology*, 45(1), 6–31. <https://doi.org/10.1177/0306624X01451002>
- Beauregard, E., Lussier, P., & Proulx, J. (2004). An exploration of developmental factors related to deviant sexual preferences among adult rapists. *Sexual Abuse*, 16(2), 151–161. <https://doi.org/10.1177/107906320401600205>
- Bodkin, C., BA, Pivnick, L., MD, MSc, Bondy, S. J., PhD, Ziegler, C., MA MIS, Martin, R. E., MD, Jernigan, C., BSc, & Kouyoumdjian, F., MD, PhD, MPH. (2019). History of childhood abuse in populations incarcerated in Canada: A systematic review and meta-analysis. *American Journal of Public Health*, 109(3), E1–E11. <https://doi.org/10.2105/AJPH.2018.304855>
- Boland, A., Cherry, M., & Dickson, R. (2017). *Doing a systematic review: A student's guide* (2nd ed.). SAGE.
- Burgess, A., Hartman, C., Ressler, R., Douglas, J., McCormack, A. (1986). Sexual Homicide: A Motivational Model. *Journal of Interpersonal Violence*, 1(3), 251-272.

- Campos, E. & Cusson, M. (2007). Serial killers and sexual murderers. In J. Proulx, E. Beaugard, M. Cusson, & A. Nicole (Eds.), *Sexual murderers: A comparative analysis and new perspectives* (pp. 99-106). Hoboken, NJ: John Wiley.
- Centre for Reviews and Dissemination (CRD). (2009). *Systematic reviews: CRD's guidance for undertaking reviews in health care*. Centre for Reviews and Dissemination. University of York.
- Chan, H., (2021). Sex worker homicides and sexual homicides: A comparative study of offender, victim, and offense characteristics. *Behavioral Sciences & the Law*, 39(4), 402–427.
- Chan, H., & Frei, A. (2013). Female Sexual Homicide Offenders: An Examination of an Underresearched Offender Population. *Homicide Studies*, 17(1), 96–118.
<https://doi.org/10.1177/1088767912449625>
- Chan, H., Frei, A., & Myers, W. (2013). Female sexual homicide offenders: An analysis of the offender racial profiles in offending process. *Forensic Science International*, 233, 265-272. 10.1016/j.forsciint.2013.09.011
- Chan, & Heide, K. (2009). Sexual homicide: A synthesis of the literature. *Trauma, Violence & Abuse*, 10(1), 31–54. <https://doi.org/10.1177/1524838008326478>
- Chan, H., Heide, K., & Beaugard, E. (2019). Male and female single-victim sexual homicide offenders: distinguishing the types of weapons used in killing their victims. *Sexual Abuse-A Journal Of Research And Treatment*, 31(2), 127–150.
<https://doi.org/10.1177/1079063217724765>

- Chéné, S., & Cusson, M. (2007). Sexual murderers and sexual aggressors: Intention and situation. In J. Proulx, E. Beauregard, M. Cusson, & A. Nicole (Eds.), *Sexual murderers: A comparative analysis and new perspectives* (pp. 71-86). Hoboken, NJ: John Wiley.
- Chopin, J., & Beauregard, E. (2019). Sexual homicide: A criminological perspective. *Current Psychiatry Reports*, 21(12), 120–129. <https://doi.org/10.1007/s11920-019-1107-z>
- Clarkson, R., Eichinger, M., & Darjee, R. (2020). Multiple perpetrator sexual homicide in Australia and New Zealand: An exploratory study of groups, victims, offenders and offences. *Journal of Criminal Justice*, 71, 1-11.
<https://doi.org/10.1016/j.jcrimjus.2020.101726>
- Davies, P., & Francis, P. (2018). *Doing criminological research* (3rd ed.). SAGE.
- Farrington, D. (2005). *Integrated developmental & life-course theories of offending*. Transaction Publishers.
- Farrington, D, Kazemian, L., & Piquero, A. (2019). *The Oxford handbook of developmental and life-course criminology*. Oxford University Press.
- Faupel, S. (2015). Etiology of adult sexual offending. In *SOMAPI Research Brief: Sex offender management assessment and planning initiative*. National Criminal Justice Association.
- Fisher, D & Beech, A. (2007). Identification of motivations for sexual murder. In J. Proulx, E. Beauregard, M. Cusson, & A. Nicole (Eds.), *Sexual murderers: A comparative analysis and new perspectives* (pp. 175-190). Hoboken, NJ: John Wiley.

- Healey, J., & Beauregard, E. (2015). The Impact of Persistent Deviant Sexual Interests and Persistent Low Self-Esteem on Sexual Homicide. *Criminal Justice and Behaviour*, 42(12), 1225–1242. <https://doi.org/10.1177/0093854815605874>
- Healey, J., Beauregard, E., Beech, A., & Vettor, S. (2014). Is the sexual murderer a unique type of offender? A typology of violent offenders using crime scene behaviors. *Sexual Abuse: A Journal of Research and Treatment*. Advance online publication. doi:10.1177/1079063214547583
- Heide, K. M., Beauregard, E., & Myers, W. C. (2009). Sexually Motivated Child Abduction Murders: Synthesis of the Literature and Case Illustration. *Victims & Offenders*, 4(1), 58–75. <https://doi.org/10.1080/15564880802561770>
- Hickey, E. (2002). *Serial murderers and their victims* (2nd ed.). Belmont, CA: Wadsworth.
- Howard, H. (2018). The offence/defence of infanticide: A view from two perspectives. *The Journal of Criminal Law*, 82(6), 470–481. <https://doi.org/10.1177/0022018318801679>
- James, J., & Proulx, J. (2014). A psychological and developmental profile of sexual murderers: A systematic review. *Aggression and Violent Behavior*, 19(5), 592–607. <https://doi.org/10.1016/j.avb.2014.08.003>
- Jolliffe, D., & Farrington, D. (2017). Special issue on systematic reviews in criminology. *Aggression and Violent Behavior*, 33, 1–3. <https://doi.org/10.1016/j.avb.2017.01.020>
- Karakasi, M., Nastoulis, E., Zisopoulos, K., Markopoulou, M., Alexandri, M., Bakirtzis, C., Douzenis, A., Zaggelidou, E., & Pavlidis, P. (2021). Investigating the phenomenon of

- overkill in Greece: A forensic psychiatric autopsy study between 2005 and 2020. *Journal Of Forensic and Legal Medicine*, 81. <https://doi.org/10.1016/j.jflm.2021.102184>
- Knight, R., & Sims-Knight, J. E. (2003). The developmental antecedents of sexual coercion against women: Testing alternative hypotheses with structural equation modeling. *Annals of the New York Academy of Sciences*, 989(1), 72–85. <https://doi.org/10.1111/j.1749-6632.2003.tb07294.x>
- Laws, & O'Donohue, W. T. (2008). *Sexual deviance theory, assessment, and treatment* (2nd ed.). Guilford Press.
- Lussier, P. (2017). Juvenile sex offending through a developmental life course criminology perspective: An agenda for policy and research. *Sexual Abuse*, 29(1), 51–80. <https://doi.org/10.1177/1079063215580966>
- Maniglio, R. (2010). The role of deviant sexual fantasy in the etiopathogenesis of sexual homicide: A systematic review. *Aggression and Violent Behavior*, 15(4), 294–302. <https://doi.org/10.1016/j.avb.2010.02.001>
- Marshall, W., & Barbaree, H. (1990). An integrated theory of the etiology of sexual offending. In *Handbook of sexual assault: Issues, theories, and treatment of the offender*. Plenum Press.
- Mieczkowski, T., & Beauregard, E. (2010). Lethal outcome in sexual assault events: A conjunctive analysis. *Justice Quarterly*, 27, 332-361.

- Myers, W., & Chan, H. (2012). Juvenile Homosexual Homicide. *Behavioral Sciences & The Law*, 30(2), 90–102. <https://doi.org/10.1002/bsl.2000>
- Nicole, A., & Proulx, J. (2007). Sexual murderers and sexual aggressors: developmental paths and criminal history. In Proulx, K., Beauregard, E., Cusson, M., Nicole, A., *Sexual murderers: A comparative analysis and new perspectives* (pp. 29-50). John Wiley & Sons.
- Nicole, A., & Proulx, J. (2007). The factors distinguishing sexual murderers from sexual aggressors: A multivariate analysis. In Proulx, K., Beauregard, E., Cusson, M., & Nicole, A., *Sexual murderers: A comparative analysis and new perspectives* (pp. 87-97). John Wiley & Sons.
- Oliver, C., Beech, A., Fisher, D., & Beckett, R. (2007). A comparison of rapists and sexual murderers on demographic and selected psychometric measures. In J. Proulx, E. Beauregard, M. Cusson, & A. Nicole (Eds.), *Sexual murderers: A comparative analysis and new perspectives* (pp. 159-173). Hoboken, NJ: John Wiley.
- Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA). (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *Systematic Reviews*, 10(89). <https://doi.org/10.1186/s13643-021-01626-4>
- Petticrew, M. (2008). Why do we need systematic reviews? In *Systematic reviews in the social sciences: A practical guide* (pp. 1-26). SAGE.
- Pflugradt, D., Allen, B., & Zintsmaster, A. (2018). Adverse Childhood Experiences of Violent Female Offenders: A Comparison of Homicide and Sexual Perpetrators. *International*

Journal of Offender Therapy and Comparative Criminology, 62(8), 2312–2328.

<https://doi.org/10.1177/0306624X17712966>

Proulx, J., Beauregard, E., Carter, A., Mokros, A., Darjee, R., & James, J. (2018). Serial and non-serial sexual murderers: An exploratory study of developmental antecedents. In *Routledge International Handbook of Sexual Homicide Studies*. Routledge

Proulx, K., Beauregard, E., Cusson, M., & Nicole, A. (2007). *Sexual murderers: A comparative analysis and new perspectives*. John Wiley & Sons.

Ressler, R. K., Burgess, A. W., & Douglas, J. E. (1988). *Sexual homicide: Patterns and motives*. New York, NY: The Free Press

Salfati, C. G. (2003). Offender interaction with victims in homicide: A multidimensional analysis of frequencies in crime scene behaviors. *Journal of Interpersonal Violence*, 18(5), 490–512. <https://doi.org/10.1177/0886260503251069>

Skott, S., Beauregard, E., & Darjee, R. (2019). Female Sexual Homicide Offenders: A descriptive and comparative study. *Journal Of Forensic Sciences*, 64(1) 154-162. [10.1111/1556-4029.13807](https://doi.org/10.1111/1556-4029.13807)

Stefanska, E., Beech, A., & Carter, A. (2016). A systematic review of the literature comparing male non-serial sexual killers and sexual aggressors: Examining homogeneous and heterogeneous characteristics of these groups. *The Journal of Sexual Aggression*, 22(3), 323–341. <https://doi.org/10.1080/13552600.2015.1126657>

Appendix A

Database Search One

Date		February 6 2023	
Included Databases		Academic Search Premier, APA PsycArticles, APA PsycInfo	
Search	Topic	Search Terms	Results
S1	ACE & DSF	abandon* OR child abuse OR daydream* OR deviant sexual fantas* OR emotional abuse OR fantas* OR foster care OR maltreat* OR neglect* OR physical abuse OR sexual abuse OR single parent OR welfare OR abuse OR injury OR childhood victimisation OR youth victimisation	217754 4
S2	Crime Type	S1 AND “sexual homicid*” OR “sexual kill*” OR “sexual murder*”	200
S3	Population of Interest	S1 AND S2 AND “female offend*” OR “women offend*” OR “woman offen*” OR “female perpetr*” OR “women perpetr*” OR “woman prepetrat*” OR “female criminal*” OR “woman criminal” OR “women criminal*”	4
Articles retained for screening			4

Table A1. Search conducted on the EBSCO Database, encompassing Academic Search Premier, APA PsycArticles, and APA PsycInfo. Outlines the date the search was conducted, and articles retained for screening. In addition to the three-step process of the search, all Booleans that were applied, and the results yielded from each block.

Date Conducted		February 6 2023	
Included Databases		Project MUSE	
Search	Topic	Search Terms	Results
S1	ACE & DSF	abandon* OR adverse childhood experiences OR child abuse OR daydream* OR deviant sexual fantas* OR emotional abuse OR fantas* OR foster care OR maltreat* OR neglect* OR physical abuse OR sexual abuse OR single parent OR	3

		welfare OR abuse OR injury OR childhood victimisation OR youth victimisation	
S2	Crime Type	S1 AND “sexual homicid*” OR “sexual kill*” OR “sexual murder*”	2
S3	Population of Interest	S1 AND S2 AND “female offend*” OR “women offend*” OR “woman offen*” OR “female perpetr*” OR “women perpetr*” OR “woman preperat*” OR “female criminal*” OR “woman criminal” OR “women criminal*”	0
Articles retained for screening			0

Table A2. Search conducted on the Project MUSE Database. Outlines the date the search was conducted, and articles retained for screening. In addition to the three-step process of the search, all Booleans that were applied, and the results yielded from each block.

Date Conducted		February 6 2023	
Included Databases		Canadian Business & Current Affairs Database (CBCA), ProQuest Dissertations & Theses (PQDT) at Saint Mary’s University, International Bibliography of the Social Sciences (IBSS), PTSDpubs, Social Services Abstracts, Sociological Abstracts	
Search	Topic	Search Terms	Results
S1	ACE & DSF	abandon* OR adverse childhood experiences OR child abuse OR daydream* OR deviant sexual fantas* OR emotional abuse OR fantas* OR foster care OR maltreat* OR neglect* OR physical abuse OR sexual abuse OR single parent OR welfare OR abuse OR injury OR childhood victimisation OR youth victimisation	2119623
S2	Crime Type	S1 AND “sexual homicid*” OR “sexual kill*” OR “sexual murder*”	330
S3	Population of Interest	S1 AND S2 AND “female offend*” OR “women offend*” OR “woman offen*” OR “female perpetr*” OR “women perpetr*” OR “woman preperat*” OR “female criminal*” OR “woman criminal” OR “women criminal*”	42
Articles retained for screening			42

Table A3. Search conducted on the ProQuest Database, encompassing Canadian Business & Current Affairs Database (CBCA), ProQuest Dissertations & Theses (PQDT) at Saint Mary's University, International Bibliography of the Social Sciences (IBSS), PTSDpubs, Social Services Abstracts, and Sociological Abstracts. Outlines the date the search was conducted, and articles retained for screening. In addition to the three-step process of the search, all Booleans that were applied, and the results yielded from each block.

Date Conducted		February 6 2023	
Included Databases		SAGE Journals	
Search	Topic	Search Terms	Results
S1	ACE & DSF	abandon* OR child abuse OR daydream* OR deviant sexual fantas* OR emotional abuse OR fantas* OR foster care OR maltreat* OR neglect* OR physical abuse OR sexual abuse OR single parent OR welfare OR abuse OR injury OR childhood victimisation OR youth victimisation	4078
S2	Crime Type	S1 AND "sexual homicid*" OR "sexual kill*" OR "sexual murder*"	22
S3	Population of Interest	S1 AND S2 AND "female offend*" OR "women offend*" OR "woman offen*" OR "female perpetr*" OR "women perpetr*" OR "woman preperat*" OR "female criminal*" OR "woman criminal" OR "women criminal*"	0
Articles retained for screening			0

Table A4. Search conducted on the SAGE Journals database. Outlines the date the search was conducted, and articles retained for screening. In addition to the three-step process of the search, all Booleans that were applied, and the results yielded from each block.

Date Conducted	February 6 2023
Included Databases	Taylor and Francis Online

Search	Topic	Search Terms	Results
S1	ACE & DSF	abandon* OR child abuse OR daydream* OR deviant sexual fantas* OR emotional abuse OR fantas* OR foster care OR maltreat* OR neglect* OR physical abuse OR sexual abuse OR single parent OR welfare OR abuse OR injury OR childhood victimisation OR youth victimisation	6324
S2	Crime Type	S1 AND “sexual homicid*” OR “sexual kill*” OR “sexual murder*”	17
S3	Population of Interest	S1 AND S2 AND “female offend*” OR “women offend*” OR “woman offen*” OR “female perpetr*” OR “women perpetr*” OR “woman preperat*” OR “female criminal*” OR “woman criminal” OR “women criminal*”	0
Articles retained for screening			0

Table A5. Search conducted on the Taylor and Francis Online Database. Outlines the date the search was conducted, and articles retained for screening. In addition to the three-step process of the search, all Booleans that were applied, and the results yielded from each block.

Date Conducted		February 6 2023	
Included Databases		Web of Science Core Collection, KCI-Korean Journal Database, MEDLINE, Preprint Citation Index, SciELO Citation Index	
Search	Topic	Search Terms	Results
S1	ACE & DSF	abandon* OR child abuse OR daydream* OR deviant sexual fantas* OR emotional abuse OR fantas* OR foster care OR maltreat* OR neglect* OR physical abuse OR sexual abuse OR single parent OR welfare OR abuse OR injury OR childhood victimisation OR youth victimisation	3741827
S2	Crime Type	S1 AND “sexual homicid*” OR “sexual kill*” OR “sexual murder*”	116
S3	Population of Interest	S1 AND S2 AND “female offend*” OR “women offend*” OR “woman offen*” OR “female perpetr*” OR “women perpetr*” OR “woman preperat*” OR “female criminal*” OR “woman criminal” OR “women criminal*”	4
Articles retained for screening			4

Table A6. Search conducted on the Web of Science Database, encompassing Web of Science Core Collection, KCI-Korean Journal Database, MEDLINE, Preprint Citation Index, and SciELO Citation Index. Outlines the date the search was conducted, and articles retained for screening. In addition to the three-step process of the search, all Booleans that were applied, and the results yielded from each block.

Date Conducted		February 6 2023	
Included Databases		Wiley Online Library	
Search	Topic	Search Terms	Results
S1	ACE & DSF	abandon* OR child abuse OR daydream* OR deviant sexual fantas* OR emotional abuse OR fantas* OR foster care OR maltreat* OR neglect* OR physical abuse OR sexual abuse OR single parent OR welfare OR abuse OR injury OR childhood victimisation OR youth victimisation	4042
S2	Crime Type	S1 AND “sexual homicid*” OR “sexual kill*” OR “sexual murder*”	21
S3	Population of Interest	S1 AND S2 AND “female offend*” OR “women offend*” OR “woman offen*” OR “female perpetr*” OR “women perpetr*” OR “woman preperat*” OR “female criminal*” OR “woman criminal” OR “women criminal*”	0
Articles retained for screening			0

Table A7. Search conducted on the Wiley Online Library Database. Outlines the date the search was conducted, and articles retained for screening. In addition to the three-step process of the search, all Booleans that were applied, and the results yielded from each block.

Appendix B

Database Search Two

Date		February 6 2023	
Included Databases		Academic Search Premier, APA PsycArticles, APA PsycInfo	
Search	Topic	Search Terms	Results
S1	Crime Type	“sexual homicid*” OR “sexual kill*” OR “sexual murder*”	604
S2	Population of Interest	S1 AND “female offend*” OR “women offend*” OR “woman offen*” OR “female perpetr*” OR “women perpetr*” OR “woman preperat*” OR “female criminal*” OR “woman criminal” OR “women criminal*”	17
Articles retained for screening			17

Table B1. Second search conducted on the EBSCO Database, encompassing Academic Search Premier, APA PsycArticles, and APA PsycInfo. Outlines the date the search was conducted, and articles retained for screening. In addition to the two-step process of the search, all Booleans that were applied, and the results yielded from each block.

Date Conducted		February 6 2023	
Included Databases		Project MUSE	
Search	Topic	Search Terms	Results
S1	Crime Type	“sexual homicid*” OR “sexual kill*” OR “sexual murder*”	10111
S2	Population of Interest	S1 AND “female offend*” OR “women offend*” OR “woman offen*” OR “female perpetr*” OR “women perpetr*” OR “woman preperat*” OR “female criminal*” OR “woman criminal” OR “women criminal*”	0

Articles retained for screening	0
----------------------------------------	----------

Table B2. Second search conducted on the Project MUSE Database. Outlines the date the search was conducted, and articles retained for screening. In addition to the two-step process of the search, all Booleans that were applied, and the results yielded from each block.

Date Conducted		February 6 2023	
Included Databases		Canadian Business & Current Affairs Database (CBCA), ProQuest Dissertations & Theses (PQDT) at Saint Mary's University, International Bibliography of the Social Sciences (IBSS), PTSDpubs, Social Services Abstracts, Sociological Abstracts	
Search	Topic	Search Terms	Results
S1	Crime Type	“sexual homicid*” OR “sexual kill*” OR “sexual murder*”	447
S2	Population of Interest	S1 AND “female offend*” OR “women offend*” OR “woman offen*” OR “female perpetr*” OR “women perpetr*” OR “woman prepetrat*” OR “female criminal*” OR “woman criminal” OR “women criminal*”	48
Articles retained for screening			48

Table B3. Second search conducted on the ProQuest Database, encompassing Canadian Business & Current Affairs Database (CBCA), ProQuest Dissertations & Theses (PQDT) at Saint Mary's University, International Bibliography of the Social Sciences (IBSS), PTSDpubs, Social Services Abstracts, and Sociological Abstracts. Outlines the date the search was conducted, and articles retained for screening. In addition to the two-step process of the search, all Booleans that were applied, and the results yielded from each block.

Date Conducted		February 6 2023	
Included Databases		SAGE Journals	
Search	Topic	Search Terms	Results

S1	Crime Type	“sexual homicid*” OR “sexual kill*” OR “sexual murder*”	165
S2	Population of Interest	S1 AND “female offend*” OR “women offend*” OR “woman offen*” OR “female perpetr*” OR “women perpetr*” OR “woman preperat*” OR “female criminal*” OR “woman criminal” OR “women criminal*”	0
Articles retained for screening			0

Table B4. Second search conducted on the SAGE Journals database. Outlines the date the search was conducted, and articles retained for screening. In addition to the two-step process of the search, all Booleans that were applied, and the results yielded from each block.

Date Conducted		February 6 2023	
Included Databases		Taylor and Francis Online	
Search	Topic	Search Terms	Results
S1	Crime Type	“sexual homicid*” OR “sexual kill*” OR “sexual murder*”	122
S2	Population of Interest	S1 AND “female offend*” OR “women offend*” OR “woman offen*” OR “female perpetr*” OR “women perpetr*” OR “woman preperat*” OR “female criminal*” OR “woman criminal” OR “women criminal*”	0
Articles retained for screening			0

Table B5. Second search conducted on the Taylor and Francis Online Database. Outlines the date the search was conducted, and articles retained for screening. In addition to the two-step process of the search, all Booleans that were applied, and the results yielded from each block.

Date Conducted		February 6 2023	
Included Databases		Web of Science Core Collection, KCI-Korean Journal Database, MEDLINE, Preprint Citation Index, SciELO Citation Index	
Search	Topic	Search Terms	Results

S1	Crime Type	“sexual homicid*” OR “sexual kill*” OR “sexual murder*”	380
S2	Population of Interest	S1 AND “female offend*” OR “women offend*” OR “woman offen*” OR “female perpetr*” OR “women perpetr*” OR “woman preperat*” OR “female criminal*” OR “woman criminal” OR “women criminal*”	9
Articles retained for screening			9

Table B6. Second search conducted on the Web of Science Database, encompassing Web of Science Core Collection, KCI-Korean Journal Database, MEDLINE, Preprint Citation Index, and SciELO Citation Index. Outlines the date the search was conducted, and articles retained for screening. In addition to the two-step process of the search, all Booleans that were applied, and the results yielded from each block.

Date Conducted		February 6 2023	
Included Databases		Wiley Online Library	
Search	Topic	Search Terms	Results
S1	Crime Type	“sexual homicid*” OR “sexual kill*” OR “sexual murder*”	142
S2	Population of Interest	S1 AND “female offend*” OR “women offend*” OR “woman offen*” OR “female perpetr*” OR “women perpetr*” OR “woman preperat*” OR “female criminal*” OR “woman criminal” OR “women criminal*”	1
Articles retained for screening			1

Table B7. Second search conducted on the Wiley Online Library Database. Outlines the date the search was conducted, and articles retained for screening. In addition to the two-step process of the search, all Booleans that were applied, and the results yielded from each block.

Appendix C

Data Extractions

Name of Extractor	Hannah Rose MacCallum	
Date of Extraction	March 3 2023	
General Information		
Author (Year)	Heng Choon (Oliver) Chan (2021)	
Title	Sex worker homicides and sexual homicides: A comparative study of offender, victim, and offense characteristics.	
Country	United States	
Study Characteristics		
Period	1976-2012	
Design	Comparative	
Aim of Study	To identify similarities and differences in cases of sex worker homicide when compared to cases of sexual homicide	
Data Source	US Supplementary Homicide Reports	
Sample Size	134	
Offender Demographic Characteristics		
Age (N=132)		
	< 18	17
	18-39	100
	40-60	13
	60+	2
Race (N=133)		
	White	58
	Nonwhite	75
	Unknown	1

Victim Demographic Characteristics		
Age (N=134)		
	< 18	4
	18-39	74
	40-60	42
	60+	14
Race (N=134)		
	White	52
	Nonwhite	82
Gender		
	Male	
	Female	
Group Type of Murder Weapon (N=133)		
	Personal or Contact	7
	Edged or Firearm	126
Victim-Offender Relationship (N=129)		
	Stranger	24
	Known	105

Table C1. Data extracted from Chan, 2021. Outlines general information on the article, the study's characteristics, and findings, including offender and victim demographics, the victim-offender relationship, and if the weapon used was grouped as personal/contact or edged/firearm. The gender of the victims was not disclosed in this study.

Name of Extractor	Hannah Rose MacCallum	
Date of Extraction	March 3 2023	
General Information		
Author (Year)	Heng Choon (Oliver) Chan & Autumn Frei	
Title	Female Sexual Homicide Offenders: An Examination of an Underresearched Offender Population.	
Country	United States	
Study Characteristics		
Period	1976-2007	
Design	Exploratory	
Aim of Study	To examine the epidemiology, victimology, victim-offender relationship, and weapon-use patterns of female sexual murderers	
Data Source	US Supplementary Homicide Reports	
Sample Size	204	
Offender Demographic Characteristics		
Age (N=204)		
	< 18	27
	18-39	
	40-60	
	60+	
	N/A	177 ('adult')
Race (N=199)		
	White	105
	Nonwhite	94
Victim Demographic Characteristics		
Age (N=202)		

	< 18	25
	18-39	
	40-60	
	60+	20
	N/A	157 ('adult')
Race (N=201)		
	White	101
	Nonwhite	100
Gender (N=204)		
	Male	151
	Female	53
Group Type of Murder Weapon (N=200)		
	Personal or Contact	45
	Edged or Firearm	155
Victim-Offender Relationship (N=192)		
	Stranger	37
	Known	155

Table C2. Data extracted from Chan & Frei, 2013. Outlines general information on the article, the study's characteristics and findings, including offender and victim demographics, the victim-offender relationship, and if the weapon used was grouped as personal/contact or edged/firearm. The ages of both offender and victim were given as groupings of juvenile or adult (<18 and >18 respectively).

Name of Extractor	Hannah Rose MacCallum	
Date of Extraction	March 8 2023	
General Information		
Author (Year)	Heng Choon (Oliver) Chan, Kathleen Heide, & Eric Beauregard (2019)	
Title	Male and Female Single-Victim Sexual Homicide Offenders	
Country	United States	
Study Characteristics		
Period	1976-2012	
Design	Exploratory	
Aim of Study	To examine biological sex differences in the types of murder weapons used by sexual murderers	
Data Source	US Supplementary Homicide Reports	
Sample Size	151	
Offender Demographic Characteristics		
Age (N=149)		
	< 18	17
	18-39	113
	40-60	
	60+	
	N/A	19 ('40-60+')
Race (N=150)		
	White	66
	Nonwhite	84
Victim Demographic Characteristics		
Age (N=149)		
	< 18	8

	18-39	79
	40-60	45
	60+	17
Race (N=151)		
	White	59
	Nonwhite	92
Gender (N=151)		
	Male	134
	Female	17
Group Type of Murder Weapon		
	Personal or Contact	16
	Edged or Firearm	134
	Unknown	1
Victim-Offender Relationship		
	Stranger	N/A
	Known	N/A

Table C3. Data extracted from Chan, Heide, & Beauregard, 2019. Outlines general information on the article, the study's characteristics and findings, including offender and victim demographics, and if the weapon used was grouped as personal/contact or edged/firearm. This study did not outline the victim-offender relationship of those in the sample.

Name of Extractor	Hannah Rose MacCallum	
Date of Extraction	March 8 2023	
General Information		
Author (Year)	Heng Choon (Oliver) Chan, Autumn Frei, & Wade Myers (2013)	
Title	To identify similarities and differences in female sexual murderers of different races	
Country	United States	
Study Characteristics		
Period	1976-2007	
Design	Comparison	
Aim of Study	To identify similarities and differences in cases of sex worker homicide when compared to cases of sexual homicide	
Data Source	Uniform Crime Report & US Supplementary Homicide Reports	
Sample Size	204	
Offender Demographic Characteristics		
Age (N=199)		
	< 18	27
	18-39	161
	40-60	14
	60+	2
Race (N=199)		
	White	105
	Nonwhite	94
Victim Demographic Characteristics		
Age		
	< 18	

	18-39	
	40-60	
	60+	
Race		
	White	
	Nonwhite	
Gender (N=199)		
	Male	147
	Female	52
Group Type of Murder Weapon (N= 195)		
	Personal or Contact	45
	Edged or Firearm	150
Victim-Offender Relationship (N=188)		
	Stranger	36
	Known	152

Table C4. Data extracted from Chan, Frei, & Myers, 2013. Outlines general information on the article, the study's characteristics and findings, including offender demographics, the victim-offender relationship, and if the weapon used was grouped as personal/contact or edged/firearm.

Victim demographics outside of gender were not disclosed.