IFAS REPORT — SEPTEMBER 2026

Strangulation in Stranger Sexual Offences and Stranger Sexual Homicides

Authors: Harriet Smailes, Dr Zoe Callon & Lotte Young Andrade, IFAS

Published: September 2026

ifas.org.uk | contact@ifas.org.uk

Institute For Addressing Strangulation

© 2026 Institute For Addressing Strangulation. All rights reserved.

Contents

1. Introduction **1**
1.1 Research aims and questions 2
1.2 Terminology/notes 3

2. Methodology **4**
2.1 Data selection criteria 4
2.2 Stranger sexual offences dataset 4
2.3 Stranger sexual homicides dataset 5
2.4 Data analysis 6

3. Results **7**
3.1 Stranger sexual offences **7**
3.1.1 Prevalence of strangulation in stranger sexual offences 7
3.1.2 How has the incidence of strangulation in stranger sexual offences changed overtime? 7
3.1.3 Demographics and characteristics of strangulation present stranger sexual offences 8

3.2 Stranger sexual homicides 10
3.2.1 Prevalence of strangulation in stranger sexual homicides 10
3.2.2 How has the incidence of strangulation in stranger sexual homicides changed overtime? 10
3.2.3 Demographics and characteristics of strangulation present stranger sexual homicides 11

4. Discussion **12**
4.1 Prevalence of strangulation in stranger sexual offences and stranger sexual homicides 12
4.2 How has the incidence of strangulation in stranger sexual offences and stranger sexual homicides changed over time? 13
4.3 Demographics and characteristics of strangulation present in stranger sexual offences and stranger sexual homicides 13
4.3.1 Demographics 13
4.3.2 Characteristics 14
4.4 Limitations 15
4.5 Recommendations for future research and practice 16
4.6 Conclusion 16

Acknowledgements **16**

References **17**

1. Introduction

The Institute for Addressing Strangulation (IFAS) is funded by the Home Office and aims to further the UK evidence base on strangulation, to inform and improve responses to those subjected to strangulation, and to develop prevention efforts. This requires an in-depth understanding of where, when, and how strangulation features across multiple contexts, and the varied impacts it can have. In doing so, we also aim to highlight existing gaps in research and understanding regarding the various contexts in which strangulation may occur.

Over the last decade, there has been a growing body of research exploring the prevalence of strangulation across various contexts. This has resulted in a much greater understanding of some of the potential physical and mental health impacts on those subjected to strangulation. These include – in the immediate term – loss of consciousness and death, and – over longer periods of time – seizures, motor and speech disorders, stroke, and brain injury (Bichard et al., 2021; MacDonald et al., 2021; Sarkar et al., 2025; Valera et al., 2022). Psychologically, impacts include post-traumatic stress disorder and suicidal ideation (McGowan et al., 2025; Munro & Dangar, 2025). Additionally, Glass et al. (2008) reported a seven-fold increase in the risk of subsequent homicide following an act of non-fatal strangulation (NFS) in domestic abuse contexts. Finally, an analysis of Domestic Abuse Related Death Reviews (previously called Domestic Homicide Reviews) (McGowan, 2024) highlights how 43% of victims who were eventually killed by strangulation were also subjected to NFS by the homicide perpetrator prior to their death. The rising trend in research is also driven by legislative changes across different jurisdictions leading to an increase in monitoring of how strangulation is being addressed across the criminal justice, healthcare and education sectors (Thomas & Ball, 2023; Douglas et al., 2024; Bows & Herring, 2024; Douglas & Fitzgerald, 2025; Derico de Assis et al., 2025; McCormick et al., 2026). Since the introduction of strangulation as a standalone offence under section 70 of the Domestic Abuse Act 2021 in England and Wales, IFAS has monitored police-recorded offences, as well as prosecution and sentencing data relating to strangulation (Callon, 2026; Smailes & McGowan, 2024).

That is not to say that the criminal justice system has not been monitoring cases involving strangulation before the introduction of the legislation. The National Crime Agency (NCA), a United Kingdom national law enforcement agency focused on serious and organised crime, has been recording cases of serious sexual offences and homicides since 1998. This is for the purpose of the Serious Crime Analysis Section (SCAS) team to assist police forces in potentially identifying suspects or linking suspects to multiple crimes. England and Wales police forces are mandated to submit cases to SCAS, where a crime indexer will code information onto the SCAS database, the Violent Crime Linkage Analysis System (ViCLAS). The information coded includes behavioural elements of offences, including whether strangulation was used/present during the offence (see www.nationalcrimeagency.gov.uk). Using this data, the aim of this report is to address a gap in research by exploring the prevalence of strangulation in cases of stranger sexual offences and stranger sexual homicides. Whilst other studies (Chan et al., 2019; Chauhan et al., 2017; Chiu & Leclerc, 2021; Greenall & Richardson, 2015; Greenall & West, 2007; Greenall & Wright, 2020; Grubin & Grubin, 1990; Moller et al., 2012; Rossouw et al., 2025; Zilkens et al., 2017) have explored the prevalence, demographics, and characteristics of stranger sexual offences and stranger sexual homicide cases, this study presents the first known research specifically focusing on the prevalence of strangulation within these contexts.

1. Introduction (cont.)

Addressing this research gap is particularly important regarding sexual offences, as data on strangulation during sexual offences predominantly comes from sexual assault referral centres (SARCs; or international equivalents). These findings show a trend towards strangulation being used more frequently during sexual violence perpetrated by an intimate partner, accounting for around 20% of sexual assaults recorded both in a UK and international context (White et al., 2021; Zilkens et al., 2016). In comparison, the limited literature focusing on stranger sexual offences reports a variation in the presence of strangulation within these offences; varying between 3% and 18%. (Chiu & Leclerc, 2021; Greenall & West, 2007; Moller et al., 2012; Zilkens et al., 2017). Regarding stranger sexual homicides, described as an extreme and distinctive form of sexual violence (Greenall & Richardson, 2015), this is not only more commonly discussed in the literature, but strangulation is also more consistently featured. This is because of the consensus throughout decades of literature that strangulation is a common cause of killing within stranger sexual homicides, with prevalence ranging from 45% to 58% (Chan et al., 2019; Chauhan et al., 2017; Greenall & Richardson, 2015; Greenall & Wright, 2020; Grubin & Grubin, 1990; Rossouw et al., 2025). However, within studies focused specifically on stranger offences, whether that be stranger sexual offences or stranger sexual homicides, strangulation is more likely to be featured as a variable rather than the focus of investigation. Therefore, while the previous literature can provide reference to the presence of strangulation in these offences, there is a lack of nuance into the demographics and characteristics of offences involving strangulation, including whether strangulation is present in stranger sexual offences and stranger sexual homicides, or whether the prevalence of these crime types has changed over time. To be able to understand these nuances, and to investigate whether strangulation present offences differ from strangulation absent offences, a specific focus on strangulation presence in stranger sexual offences and stranger sexual homicides is required.

Finally, it is important to emphasise at the outset of this report that stranger sexual violence accounts for one of the smallest proportions of recorded sexual offences. The Office of National Statistics (2025) outline that between 2020 and 2025, 16.3% of recorded sexual assaults in the UK were committed by a stranger, compared to 43.2% committed by a partner or ex-partner. Therefore, when researching and reporting on stranger sexual violence, it is important to avoid contributing to the stereotype of the 'violent stranger' that is often sensationalised in the media (End Violence Against Women Coalition; EVAW, 2024). This is particularly important in the context of the rise of far right and anti-migrant rhetoric fuelling misinformation and moral panic surrounding the incidences of stranger sexual violence committed by foreign nationals in the UK (EVAW, 2023). However, the presence of strangulation in high-profile stranger sexual violence cases, such as the murder of Sarah Everard in 2021 and the murder of Zara Aleena in 2022 (BBC, 2026; Ng et al., 2024), highlights the importance of also understanding whether strangulation-present offences are a distinct form of stranger sexual offences and stranger sexual homicides.

1.1 Research aims and questions

The overall aim of this research is to identify the prevalence and temporal, demographic, and characteristics trends regarding the use of strangulation during stranger sexual offences and stranger sexual homicides recorded on the NCA ViCLAS database over a 20-year period.

The research questions are as follows:

1. What is the prevalence of strangulation in stranger sexual offences, and stranger sexual homicides?
2. How has the incidence of strangulation in stranger sexual offences, and stranger sexual homicides, changed over time?
3. What are the demographics and characteristics of stranger sexual offences, and stranger sexual homicides, that include the use of strangulation?

1.2 Terminology/Notes

The terms 'victim' and 'offender' have been used throughout this report to reflect the wording provided by the NCA.

The NCA defined a 'stranger' relationship as one where the victim and offender have had no legitimate contact prior to the offence. Examples of legitimate contact that the NCA includes under this definition are circumstances where there was limited contact prior to the offence, such as social media contact, and/or where victims were approached as a result of their work (e.g. sex work). The NCA would exclude cases where the offender used the prior contact to facilitate the offence or had given a false name (e.g. as part of a con unrelated to the offence).

The dataset is made up of submissions from police forces across England & Wales, PSNI and Police Scotland. It is important to note that submission of this information to the NCA has only been mandated for England and Wales. The NCA also do not have a way of checking how compliant each police force across England & Wales have been when submitting the data, so the dataset cannot be said to be completely comprehensive of every offence that meets the NCA criteria for stranger sexual offences and stranger sexual homicides.

It is important to note that some cases involved multiple victims/offenders. Therefore, the numbers within the demographic and characteristic tables may exceed the overall number of offence/homicide incidences reported.

The NCA categorises initial approaches that offenders use into 'con approach' (e.g. engaging with the victim by asking for the time), 'surprise approach' (e.g. hiding or sneaking up on the victim), and 'blitz approach' (e.g. immediate use of violence).

The NCA categorises "precautions" such as wearing gloves or a condom to prevent transfer of fingerprints or DNA, or blindfolding the victim, to reduce possibility of identification of the offender.

The NCA have standard definitions for the level of injury to ensure coding consistency. This level of injury is coded into four categories from minimal to extreme (including death).

2. Methodology

2.1 Data selection criteria

IFAS approached the NCA in June 2025 to request data held on the ViCLAS system regarding stranger sexual offences and stranger sexual homicides. A request was made for a random sample of cases, including both stranger sexual offences and stranger sexual homicides that involved strangulation, and those that did not. However, this random sample needed to quota-sample:

- The proportion of stranger sexual offence cases compared with stranger sexual homicide cases held on the ViCLAS system (which the NCA reported was approximately 90% sexual offences and 10% sexual homicides)
- The number of both crime types recorded on the system over 20 years (2005-2024 – the timeline of mandatory England and Wales police force reporting to the NCA)

This led to a sample of 5000 cases overall. The proportion of stranger sexual offences was 98% (n=4909), and stranger sexual homicides was 2% (n=91).

2.2 Stranger sexual offences dataset

The crime types within stranger sexual offences were rape (n=4204), attempted rape (n=407), and indecent or sexual assault (n=298). The demographics and characteristics of the stranger sexual offences dataset (n=4909) are presented in Tables 1 and 2.

Table 1: Percentages and frequencies of case demographics across all stranger sexual offences

Demographic		All Stranger Sexual Offences (N=4909)
Number of victims	Single	97%, n=4761
	Multiple	3%, n=148
Number of offenders	Single	78%, n=3836
	Multiple	21%, n=1040
Sex of victim	Female	94%, n=4590
	Male	7%, n=336
Sex of offender	Female	2%, n=96
	Male	98%, n=4834
Average age of victims		25
Mode age group of offenders		25-29
Relationship	Stranger	91%, n=4477
	Client of sex worker	4%, n=173
	Relationship not known	<1%, n=29
Prior internet contact recorded	Yes	10%, n=505
	No	90%, n=4404

2. Methodology (cont.)

Table 2: Percentages and frequencies of case characteristics across all stranger sexual offences

Characteristic		All Stranger Sexual Offences (N=4909)
Location	Indoors	55%, n=2700
	Outdoors	52%, n=2575
Three most common locations		Outdoor areas; Offender Residence; Transport
Precaution used?		51%, n=2516
Injury and force	No known physical injury	71%, n=3482
	Minimal or moderate injury/force	28%, n=1317
	Severe/ extreme force	2%, n=101
Initial approach	Con approach	67%, n=3289
	Surprise approach	25%, n=1236
	Blitz approach	1%, n=69
Weapons	Not present or used	82%, n=4025
	Present but not used	11%, n=556
	Used	5%, n=250
Type of speech	Threatening/Abusive/Cruel	29%, n=1408
	Recorded as no speech	7%, n=335

2.2 Stranger sexual homicides dataset

The crime types within stranger sexual homicides were murder (n=59), and attempted murder (n=32). The demographics and characteristics of the stranger sexual homicides dataset (n=91) are presented in Tables 3 and 4. It is important to note that due to the nature of homicides, the details of what happened (e.g. how many offenders were present, or how the offender approached the victim) are not always known. This needs to be acknowledged when interpreting the data, as percentages do not always add up to 100%.

Table 3: Percentages and frequencies of case demographics across all stranger sexual homicides

Demographic		All Sexual Homicides (N=91)
Number of victims	Single	95%, n=86
	Multiple	5%, n=5
Number of offenders	Single	85%, n=77
	Multiple	7%, n=6
Sex of victim	Female	73%, n=66
	Male	30%, n=27
Sex of offender	Female	5%, n=5
	Male	40%, n=36
Average age of victims		45
Mode age group of offenders		30-34
Relationship	Stranger	29%, n=26
	Client of sex worker	8%, n=7
	Relationship not known	55%, n=50
Prior internet contact recorded	Yes	9%, n=8
	No	91%, n=83

2. Methodology (cont.)

Table 4: Percentages and frequencies of case characteristics across all stranger sexual homicides

Characteristic		All Stranger Sexual Homicides (N=91)
Location	Indoors	48%, n=44
	Outdoors	55%, n=50
Three most common locations		Outdoor areas; Victim Residence; Offender Residence
Precaution used?		42%, n=38
Injury and force	No injury	1%, n=1
	Minimal or moderate injury/force	7%, n=6
	Severe/ extreme force	92%, n=84
Initial approach	Con approach	32%, n=29
	Surprise approach	12%, n=11
	Blitz approach	13%, n=12
Weapons	Not present or used	9%, n=8
	Present but not used	4%, n=4
	Used	70%, n=64
Type of speech	Cruel/ threatening/ abusive	14%, n=13
	Recorded as no speech	5%, n=5

2.4 Data analysis

The data shared by the NCA have been collated into strangulation present and absent cases, to understand the overall prevalence of strangulation cases, and whether these incidences have changed over the 20-year period. The data was also collated across multiple variables. The demographic variables were: number of victims/offenders, sex of victim(s)/offender(s), age of victim(s)/offender(s), victim-offender relationship, and prior internet contact. The characteristic variables were; offence location, most common locations, use of precaution, injury and force, initial approach, weapon use, and type of speech. These variables allowed both descriptive and inferential statistical analysis to be conducted, to understand whether offence demographics and characteristics differed between strangulation present and absent cases.

3. Results

The analyses are conducted on the stranger sexual offences dataset (n=4909) and the stranger sexual homicides dataset (n=91) separately, with comparisons made where appropriate.

3.1 Stranger sexual offences

3.1.1 Prevalence of strangulation in stranger sexual offences

In the stranger sexual offences dataset (n=4909), strangulation and suffocation was recorded as present in 14% (708) of cases, and absent in 86% (4201) of cases. Of the 708 cases where strangulation and suffocation were recorded as present, the following circumstances were reported:

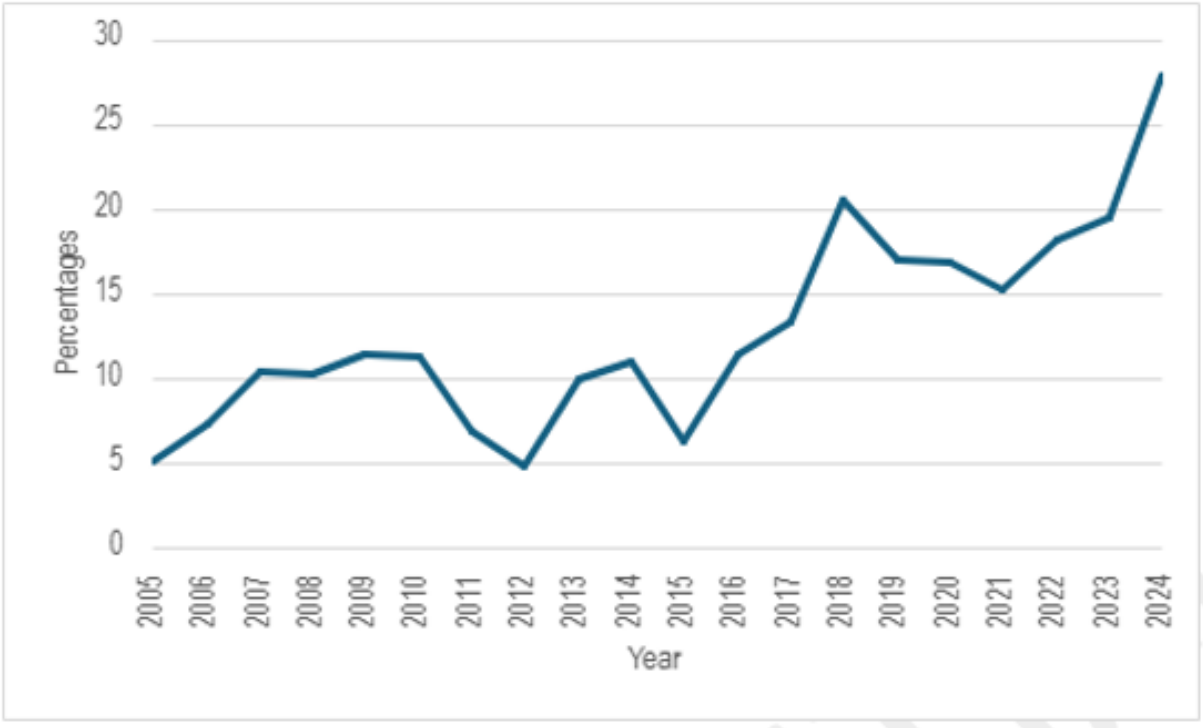
- 594 cases where strangulation was recorded (including manual and ligature strangulation)[1]
- 114 cases where suffocation and drowning (or likely suffocation, based on indications and injury (n=2)) were recorded
- Strangulation and suffocation were recorded as absent in 4201 cases

Therefore, the 594 strangulation cases equate to 12% of all stranger sexual offences (n=4909). The actual figure could be higher, if considering where data may not have been gathered or captured by law enforcement, and where subjections of strangulation may not have been disclosed/reported or even remembered by victim/survivors.

3.1.2 How has the incidence of strangulation in stranger sexual offences changes over time?

To compare the frequency of strangulation-present stranger sexual offences cases to the frequency of all stranger sexual offences cases over the 20-year dataset, the percentage of strangulation present offences in each year are mapped as a percentage of total stranger sexual offences of that same year. This approach was taken to allow the data to be more representative and offset potential mitigating factors (e.g. less capacity for indexing crime offences in particular years). These percentages, per year, are provided for strangulation-present stranger sexual offences (n=594).

Graph 1: Strangulation present stranger sexual offences per year, as a percentage of all stranger sexual offences in that same year.



[1] This includes 2 cases where strangulation was undetermined but injuries or other information were consistent with an act of strangulation.

3. Results (cont.)

3.1.2 How has the incidence of strangulation in stranger sexual offences changes over time? (cont.)

The average for stranger sexual offences that involved strangulation was 12%. The frequency of strangulation present stranger sexual offences has remained relatively stable within the first 10 years of the dataset (2005-2014), ranging between 5-12% across the dataset, before increasing in the second (2015-2024). In all but one year within the second half of the dataset (2015) there was not a year where the percentage of stranger sexual offences that involved strangulation was below the average.

3.1.3 Demographics and characteristics of strangulation present stranger sexual offences

In Tables 5 and 6 below, the demographics and characteristics of strangulation-present cases are compared with those of three comparator groups. The explanations of the groups are as follows:

A. **Strangulation-Present** cases are those that record strangulation as present.

B. **Suffocation – Present** cases are those that did not include any record of strangulation but do include cases that involved suffocation. If a case recorded both strangulation and suffocation, it is included within the strangulation-present group (Group A) only.

C. **Strangulation and Suffocation-Absent** cases are those with no record of either strangulation or suffocation (e.g. where these behaviours were recorded as absent).

D. **All Stranger Sexual Offences** cases include all of the above (same statistics as in Tables 1 and 2).

Table 5: Percentages and frequencies of case demographics across stranger sexual offences, separated by strangulation comparison groups.

Demographic		Sexual Offences – Strangulation-Present (n=594)	Sexual Offences – Suffocation - Present (n=114)	Sexual Offences – Strangulation and Suffocation - Absent (n=4201)	All Stranger Sexual Offences (n=4909)
Number of victims	Single	97%, n=575	98%, n=112	97%, n=4074	97%, n=4761
	Multiple	3%, n = 19	2%, n=2	3%, n=127	3%, n=148
Number of offenders	Single	86%, n=509	82%, n=93	77%, n=3234	78%, n=3836
	Multiple	14%, n=85	18%, n=21	22%, n=934	21%, n=1040
Sex of victim	Female	95%, n=565	96%, n=109	93%, n=3916	94%, n=4590
	Male	6%, n=33	5%, n=6	7%, n=297	7%, n=336
Sex of offender	Female	2%, n=12	0%, n=0	2%, n=84	2%, n=96
	Male	100%, n=592	100%, n=114	98%, n=4128	98%, n=4834
Average age of victims		26	27	26	25
Mode age group of offenders		25-29	25-29	25-29	25-29
Relationship	Stranger	90%, n=535	86%, n=98	92%, n=3844	91%, n=4477
	Client of sex worker	7%, n=40	11%, n=13	3%, n=120	4%, n=173
Prior internet contact recorded	Yes	16%, n=95	10%, n=11	9%, n=399	10%, n=505
	No	84%, n=499	90%, n=103	91%, n=3802	90%, n=4404

3. Results (cont.)

3.1.3 Demographics and characteristics of strangulation present stranger sexual offences (cont.)

Table 6: Percentages and frequencies of case characteristics across stranger sexual offences, separated by strangulation comparison groups.

Characteristic		Sexual Offences – Strangulation-Present (n=594)	Sexual Offences – Suffocation - Present (n=114)	Sexual Offences – Strangulation and Suffocation-Absent (n=4201)	All Stranger Sexual Offences (N=4909)
Location	Indoors	56%, n=332	54%, n=62	55%, n=2306	55%, n=2700
	Outdoors	55%, n=324	54%, n=61	52%, n=2190	52%, n=2575
Three most common locations		Outdoor areas; Offender Residence; Victim Residence	Outdoor areas; Offender Residence; Transport	Outdoor areas; Offender Residence; Transport	Outdoor areas; Offender Residence; Transport
Precaution used?		63%, n=377	90%, n=103	48%, n=2036	51%, n=2516
Injury and force	No known physical injury	28%, n=165	25%, n=28	78%, n=3289	71%, n=3482
	Minimal or moderate injury/force	70%, n=418	77%, n=88	19%, n=811	28%, n=1317
	Severe/ extreme force	9%, n=52	5%, n=6	1%, n=43	2%, n=101
Initial approach	Con approach	67%, n=400	63%, n=72	67%, n=2817	67%, n=3289
	Surprise approach	30%, n=178	35%, n=40	24%, n=1018	25%, n=1236
	Blitz approach	3%, n=20	1%, n=1	1%, n=48	1%, n=69
Weapons	Not present or used	74%, n=440	76%, n=87	83%, n=3498	82%, n=4025
	Present but not used	17%, n=99	14%, n=16	10%, n=441	11%, n=556
	Used	13%, n=75	14%, n=16	4%, n=159	5%, n=250
Type of speech	Threatening/Abusive/Cruel	49%, n=291	40%, n=46	25%, n=1071	29%, n=1408
	Recorded as no speech	6%, n=33	4%, n=5	7%, n=297	7%, n=335

Tables 5 and 6 highlighted that there were large differences reported between the strangulation present stranger sexual offences and strangulation absent stranger sexual offences, in the variables of number of offenders, prior internet contact, and precautions. Multiple chi-square tests of independence were performed to examine the relation between strangulation presence on these variables.

The relation between the number of offenders and strangulation presence in sexual offences was significant, $\chi^2(1, N = 1777) = 24.73$, $p < .001$, $\varphi = .12$, indicating a weak association. When there were multiple offenders, there were significantly more cases that did not involve strangulation ($z = 2.6$) and significantly fewer cases that involved strangulation ($z = -3.6$).

The relation between prior internet contact and strangulation presence in sexual offences was significant, $\chi^2(1, N = 1782) = 18.16$, $p < .001$, $\varphi = .10$, indicating a weak association. When there was prior internet contact, there were significantly more cases that did involve strangulation ($z = 3.3$) and significantly fewer cases that did not involve strangulation ($z = -2.3$).

The relation between whether precautions were used and strangulation presence in sexual offences was significant, $\chi^2(1, N = 1782) = 9.36$, $p < .002$, $\varphi = .07$, indicating a negligible association.

3. Results (cont.)

3.2 Stranger sexual homicides

3.2.1 Prevalence of strangulation in stranger sexual homicides

Of the stranger sexual homicides (n=91), strangulation or suffocation information was recorded as present in 45% (41) of cases, and absent in 58% (53) of cases. Of the 41 cases where strangulation and suffocation were recorded as present, the following circumstances were reported:

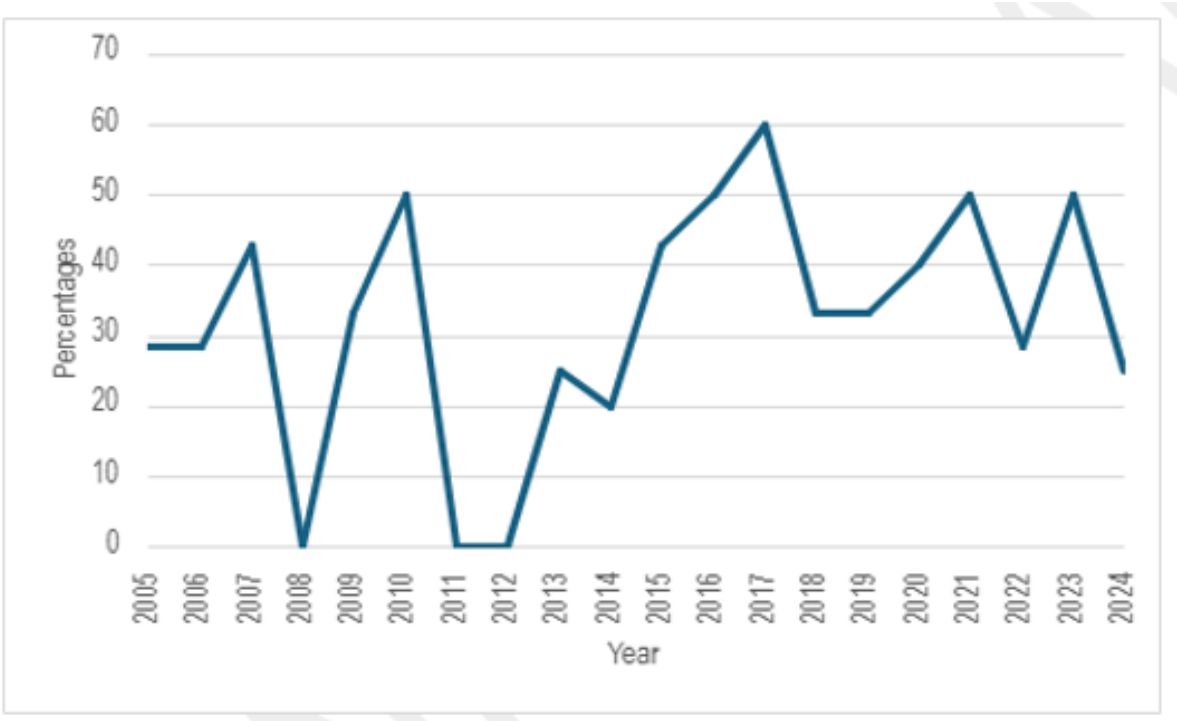
- 32 cases where strangulation was recorded (including manual and ligature strangulation)[2] – these cases included where strangulation was present but not necessarily the method of the homicide.
- 9 cases where suffocation and drowning were recorded (including 7 cases where details were unknown but there were indications of suffocation).
- 53 cases where strangulation was recorded as absent.

Therefore, of all stranger sexual homicides, strangulation was recorded as present in 36% (n=32) of stranger sexual homicide cases. The true figure is likely to be higher, as there may be some circumstances where strangulation would not be observable in victims remains (e.g. in cases of dismemberment).

3.2.2 How has the incidence of strangulation in stranger sexual homicides changed over time?

To compare the frequency of strangulation-present stranger sexual homicide cases to the frequency of all stranger sexual homicide cases over the 20-year dataset, the percentage of strangulation present offences in each year are mapped as a percentage of total stranger sexual homicides in that same year. These percentages, per year, are provided for strangulation-present stranger sexual homicides (n=32).

Graph 2: Strangulation present stranger sexual homicides per year, as a percentage of all stranger sexual homicides in that same year.



[2] This includes 7 cases where strangulation was undetermined but injuries or other information were consistent with an act of strangulation.

3. Results (cont.)

3.2.2 How has the incidence of strangulation in stranger sexual homicides changed over time? (cont.)

The average for strangulation present stranger sexual homicides was 35%. Compared to the strangulation present stranger sexual offences (see graph 1) which had a broadly increasing trajectory, the frequency of the stranger sexual homicides that included strangulation was not as linear. This is likely because of the small number of cases within the data and means that the data needs to be taken with caution.

3.2.3 Demographics and characteristics of strangulation present in stranger sexual homicides

In Tables 7 and 8 below, the demographics and characteristics of strangulation-present and strangulation-absent cases are compared side by side. The comparator groups are outlined in Section 3.1.3. However, one comparator group (B) is missing due to a low total number of cases. This is also the reason why no inferential statistical analysis were conducted on the sexual homicide data.

Table 7: Percentages and frequencies of case demographics across stranger sexual homicides, separated by strangulation comparison groups.

Demographic		Sexual Homicides – Strangulation-Present (N=32)	Sexual Homicides – Strangulation and Suffocation-Absent (N=54)	All Stranger Sexual Homicides (N=91)
Number of victims	Single	97%, n=31	93%, n=50	95%, n=86
	Multiple	3%, n=1	7%, n=4	5%, n=5
Number of offenders	Single	88%, n=28	85%, n=46	85%, n=77
	Multiple	6%, n=2	7%, n=4	7%, n=6
Sex of victim	Female	88%, n=28	65%, n=35	73%, n=66
	Male	13%, n=4	39%, n=21	30%, n=27
Sex of offender	Female	3%, n=1	8%, n=4	5%, n=5
	Male	41%, n=13	42%, n=22	40%, n=36
Average age of victims		38	50	45
Mode age group of offenders		25-29	35-39	30-34
Relationship	Stranger	22%, n=7	34%, n=18	29%, n=26
	Client of sex worker	13%, n=4	6%, n=3	8%, n=7
Prior internet contact recorded	Yes	6%, n=2	9%, n=5	9%, n=8
	No	94%, n=30	91%, n=48	91%, n=83

3. Results (cont.)

3.2.3 Demographics and characteristics of strangulation present in stranger sexual homicides (cont.)

Table 8: Percentages and frequencies of case characteristics across stranger sexual homicides, separated by strangulation comparison groups.

Characteristic		Sexual Homicides – Strangulation-Present (N=32)	Sexual Homicides – Strangulation and Suffocation-Absent (N=53)	All Stranger Sexual Homicides (N=91)
Location	Indoors	53%, n=17	47%, n=25	48%, n=44
	Outdoors	53%, n=17	57%, n=30	55%, n=50
Three most common locations		Outdoor areas; Victim Residence; Offender Residence	Outdoor areas; Victim Residence[3]	Outdoor areas; Victim Residence; Offender Residence
Precaution used?		50%, n=16	33%, n=18	42%, n=38
Injury and force	No known physical injury	3%, n=1	0	1%, n=1
	Minimal or moderate injury/force	9%, n=3	6%, n=3	7%, n=6
	Severe/ extreme force	88%, n=28	96%, n=51	92%, n=84
Initial approach	Con approach	41%, n=13	30%, n=16	32%, n=29
	Surprise approach	13%, n=4	11%, n=6	12%, n=11
	Blitz approach	9%, n=3	17%, n=9	13%, n=12
Weapons	Not present or used	13%, n=4	8%, n=4	9%, n=8
	Present but not used	9%, n=3	2%, n=1	4%, n=4
	Used	72%, n=23	72%, n=38	70%, n=64
Type of speech	Threatening/Abusive/Cruel	25%, n=8	9%, n=5	14%, n=13
	Recorded as no speech	6%, n=2	4%, n=2	5%, n=5

4. Discussion

The purpose of this research was to address the gap in the existing literature concerning the presence of strangulation in stranger sexual offences and stranger sexual homicides. This research extends the evidence base by specifically examining strangulation presence within stranger sexual offences and stranger sexual homicides, rather than classing strangulation as one behaviour of many within the stranger offences.

4.1 Prevalence of strangulation in stranger sexual offences and stranger sexual homicides

This research study has found strangulation to be present in 12% of stranger sexual offences. This is in keeping with the previous research on strangulation presence within stranger sexual offences, which was reported between 3% and 18% (Chiu & Leclerc, 2021; Greenall & West, 2007; Moller et al., 2012; Zilkens et al., 2017). However, the actual prevalence is likely to be higher due to disclosure and record keeping practices.

Regarding stranger sexual homicides, 36% of cases included strangulation presence. This finding is slightly lower than the prevalence for strangulation presence in stranger sexual homicides reported in previous literature, which was between 45% and 58% (Greenall & Richardson, 2015; Greenall & Wright, 2020; Rossouw et al., 2025). However, this study's findings on strangulation presence in stranger sexual homicides need to be taken with caution, due to the small sample size used within the analysis. Future research focusing solely on stranger sexual homicides would help to overcome this issue.

4. Discussion (cont.)

4.2 How has the incidence of strangulation in stranger sexual offences and stranger sexual homicides changed over time?

Regarding stranger sexual offences, the presence of strangulation has seemingly increased throughout the 20-year period. The percentage of stranger sexual offences that involved strangulation was 12% on average over the 20-year period. The first decade (2005-2024) consistently being below the 12% average, and in all but one year in the second decade (2015-2024) being above the average. Furthermore, within the 2020s, the lowest percentages of strangulation presence were in 2020 and 2021, which may have been skewed by the Covid-19 pandemic, as lockdown restrictions likely impacted the ability of stranger perpetrators to commit offences (Woodhams et al., 2025).

There was not a distinct pattern of stranger sexual homicides involving strangulation. Although the average frequency amounted to 35%, it is important to contextualise the percentages in this small dataset. In the year with the highest percentage of strangulation presence within stranger sexual homicides (2017), the 60% equates to three cases of strangulation presence within seven stranger sexual homicides overall. Therefore, this data needs to be taken with caution.

Comparisons cannot be drawn to the previous literature, as although the studies outlined the time spans of cases within their datasets (which ranged from 1970 to 2018), researchers did not analyse the data based on the frequencies of cases per year.

4.3 Demographics and characteristics of strangulation present in stranger sexual offences and stranger sexual homicides

This research study has found that the majority of case demographics and characteristics of both stranger sexual offences and stranger sexual homicides were similar regardless of whether strangulation was present or absent. Inferential statistics were performed on the case demographics and characteristics of stranger sexual offences where there were differing percentages between strangulation present and absent offences. This resulted in a weak association that highlighted when there were multiple offenders, there were fewer cases that involved strangulation. There was a weak association that highlighted when there was prior internet contact, there were more cases that involved strangulation. Finally, there was a negligible association between precautions used and presence of strangulation in sexual offences.

4.3.1 Demographics

Regarding offence demographics, only victim sex, and offender and victim ages were reported in the literature.

Victim sex was only discussed regarding stranger sexual homicides in previous literature. Our findings of 88% female victims of stranger sexual homicides matches the percentage reported by Rossouw et al. (2024) and aligns with Hakkanen-Nyholm et al.'s (2009) suggestion that stranger sexual homicide were more likely to have women victims. This suggests that women being more likely victims of stranger sexual homicide remains the same regardless of whether the offence involved strangulation.

This conclusion remains the same for offender age in both stranger sexual offences and stranger sexual homicides.

With the similar age group of 25-29 being reported in the previous literature (Chan, 2024; Chiu & Leclerc, 2021; Greenall & West, 2007; Moller et al., 2012), it highlights consistency in offender age regardless of whether strangulation is present.

This similarity continues for victim age in stranger sexual offences, with the mean age of 26 reported in this study also being discussed in previous literature (Chiu & Leclerc, 2021; Greenall & West, 2007; Moller et al., 2012). However, there is a disparity between the mean victim age in stranger sexual homicide in our study, reported at 38, and in previous research which reported 32 (Chan, 2024). This suggests that when strangulation is present in stranger sexual homicide, the age of the victim is likely to be higher.

4. Discussion (cont.)

4.3 Demographics and characteristics of strangulation present in stranger sexual offences and stranger sexual homicides (cont.)

4.3.2 Characteristics

In comparison to demographics, all offence characteristics used in the present study were documented within the previous research.

Regarding location, within the current study, both the stranger sexual offences and the stranger sexual homicide data resulted in just over 50% of cases occurring outdoors (55% in strangulation present stranger sexual offences and 53% in strangulation present stranger sexual homicides). This aligns with the majority of previous studies where the location variable was documented (Chan, 2024; Chiu & Leclerc, 2021; Greenall & West, 2007; Greenall & Richardson, 2015; Lovell et al., 2022). That being said, due to the nearly even split between outdoor and indoor offence locations, the most common locations within our dataset are both indoor locations; victim residence being most common in stranger sexual homicides, which aligns with previous literature (Greenall & Richardson, 2015). This study's finding show that offender residence is the most common location in stranger sexual offences, which does not align with previous research. In comparison, Greenall and West (2007) report victim residence as being the most common location. This may mark a distinction in strangulation present stranger sexual offences, but additional research is needed to investigate this further.

Regarding using precautions, 63% of cases were recorded within this study's strangulation present stranger sexual offences dataset, which was higher than the two previous studies (Lovell et al., 2022; Chiu & Leclerc, 2021). Similarly, previous studies reported lower precautions used in stranger sexual homicides (Greenall & Richardson, 2015) than was found in the current study (50%). When considering the context of stranger sexual homicides, it is also important to note that the only way for precautions used to be documented would be for offenders to have left evidence of this at the scene.

Regarding injury/force within stranger sexual offences, the previous literature used consistent labelling to the current study (either labelling the offence as no injury, minor/moderate/mild, or severe/extreme).

The comparisons were inconsistent, with the current findings aligning with one study (Zilkens et al., 2017), with around a quarter being labelled as 'no injury', the largest percentage being minor/moderate/mild, and around 10% severe/extreme. The other study to report injury/force with stranger sexual offences (Chiu & Leclerc, 2021) reported 50% as no injury, and a lower percentage of minor/moderate injury. This suggests it is unclear as to whether strangulation presence is more likely to involve higher levels of injury/force than other stranger sexual offences. When discussing stranger sexual homicide, previous research (Greenall & Richardson, 2015) only stated levels of severe/extreme injury, of which they reported higher levels than in our study. However, these results need to be taken with caution, as the interpretations of injury/force are likely to be subjective. This subjectivity could have occurred at various stages; at the crime scene itself, in the victim's recollection or retelling of the offence, during the victim post-mortem in cases of stranger sexual homicides, and/or when the NCA SCAS crime indexer is coding the offence onto the ViCLAS database using all available case material supplied by the police. Examples of this subjectivity are likely found within this dataset.

Our results regarding the type of approach used by the offender differed from previous research in stranger sexual offences. The current study's findings were that there was a higher percentage of the con approach used than in previous literature (Chiu & Leclerc, 2021; Greenall & West, 2007; Greenall, 2024), suggesting that the con approach may be more common in strangulation present offences. When comparing the strangulation presence in this study's stranger sexual homicide, the percentages of the con approach aligned with one study (Chan, 2024) and were lower than another (Rossouw et al., 2024). However, further research needs to be conducted into the different approach styles, as previous research combined the surprise and blitz approaches, or simply labelled anything other than the con approach as 'other', which limited the comparison.

4. Discussion (cont.)

4.3 Demographics and characteristics of strangulation present in stranger sexual offences and stranger sexual homicides (cont.)

4.3.2 Characteristics (cont.)

The use of a weapon in strangulation present stranger sexual offences aligned with one previous study (Chiu & Leclerc, 2021) where the majority of offences did not involve a weapon, though the current study's percentages were higher for the 'present but not used' label in comparison. Alternatively, the percentage of weapon presence in strangulation present stranger sexual offences was much lower (30%) than in another previous study (75% in Greenall & West, 2007). When looking at weapon use in strangulation present stranger sexual homicides, the current study's findings were higher than in previous research (Greenall & Richardson., 2015; Rossouw et al., 2024). The finding that strangulation presence in stranger sexual homicides means a higher likelihood of another weapon is interesting, since a weapon is not necessarily required when the hands are primarily used in offences (Petreca et al., 2025). That being said, the current study did not specify on the type of weapon use, so further examination is needed.

Type of speech was only detailed in one previous study looking at stranger sexual offences (Greenall & West, 2007). Our current study found higher percentages of verbal threats then was stated in the previous research, suggesting that strangulation present stranger sexual offences may elicit more verbal threats than other stranger sexual offences. However, it again needs to be noted that due to the nature of homicides, it is difficult to ascertain what was said during the homicide.

Finally, it is important to reiterate that the previous literature focused on stranger sexual offences and stranger sexual homicides overall, with strangulation presence merely being one variable in the analysis. This means that any comparisons to our interpretation of strangulation presence within stranger sexual offences and stranger sexual homicides need to be taken with caution.

4.4 Limitations

The relatively small number of sexual homicide cases makes inferences and comparisons more difficult. This is also the reason no inferential statistics have been conducted on this sample.

Finally, additional variables would be requested if replicating this work in the future. For example, previous literature asked about the timings of offences. This would have provided a further point for comparison if this current study had also asked for this information. Furthermore, this current study did not report on the specific type of weapons present/used in offences, as the data provided by the NCA was coded at a higher level than the specific type of weapon. With previous literature citing ligatures as the most common weapon, asking about specific weapons could have provided more indication of strangulation presence.

4. Discussion (cont.)

4.5 Recommendations for future research and practice

- Further research where strangulation present stranger sexual offences and stranger sexual homicide are the focus of investigation will assist in understanding whether this is a distinct form of these crimes

- Future research should also document prevalence over time, so comparison can be made, in order to explore any potential changes in the prevalence and characteristics of strangulation in stranger sexual violence and homicide cases throughout history

- Further research is also needed into whether strangulation may be correlated, or more closely related, to an increased chance of previous contact or non-contact sexual violence, and other criminality, by the same offender

- Working in close partnership with law enforcement and supporting agencies that specialise in stranger sexual offences and stranger sexual homicides, will assist in creating impactful future research that can start to fill the research gaps identified in the current study

- Law enforcement and supporting agencies may want to consider this addition to the current evidence base in the UK to ensure:
  - Strangulation data are captured as consistently as possible across all offence types
  - Risk assessments are informed by what is known about the use of strangulation
  - Specific training needs to be designed and tested to account for the complex nature of strangulation presence in any context it occurs

4.6 Conclusion

The prevalence of strangulation presence within stranger sexual offences and stranger sexual homicides were a small percentage of stranger sexual offences and stranger sexual homicides overall (12% and 36% respectively). However, there were distinctions in the strangulation present dataset from the overall dataset and previous literature that warrant further investigation on this specific type of stranger sexual offence and stranger sexual homicide. The differences between strangulation present stranger sexual offences over time may reflect the increase in the normalisation of strangulation during sex amongst young people (Smailes et al., 2025) which may lead to an increase of strangulation present stranger sexual offences in the future. Furthermore, the demographics and characteristics findings were mixed in comparison to previous literature, who did not have a focus on strangulation presence in the context of stranger sexual offences and stranger sexual homicides. By continuing to conduct research into this specific crime type, where strangulation is present, it will allow us to understand whether strangulation-present offences are a distinct form of stranger sexual offences and stranger sexual homicides.

Acknowledgements

The authors would like to thank the team at the Institute for Addressing Strangulation in their support and guidance during the development of this report. Thank you to Bernie Ryan, Professor Cath White, Emily Owen, Laura Brown & Nika Noakes.

Thank you to the National Crime Agency for access to their data and collaboration during this project. Special thanks goes to Meriel Kurton and Sarah Galambos for their ongoing support.

Finally, IFAS acknowledges that behind every statistic is a person who has friends, family, thoughts, feelings, dreams and hopes. We hope that all readers accessing our report will recognise the individual impact associated with the statistics we present.

References

BBC. (2026, 20 April). Man racially abused woman during rape, court hears. https://www.bbc.co.uk/news/articles/cd0rx8kdegeo

Bichard, H., Byrne, C., Saville, C. W. N., & Coetzer, R. (2021). The neuropsychological outcomes of non-fatal strangulation in domestic and sexual violence: A systematic review. Neuropsychological Rehabilitation, 32(6), 1–29. https://doi.org/10.1080/09602011.2020.1868537

Bows, H., & Herring, J. (2024). Non-Fatal Strangulation: An Empirical Review of the New Offence in England and Wales. The Journal of Criminal Law, 88(5–6), 332–346. https://doi.org/10.1177/00220183241277005

Callon, Z. (2026). Strangulation and suffocation offences: June 2024-June 2025 (Year 3), Report 1: An analysis of police report data. https://ifas.org.uk/wp-content/uploads/2026/04/Strangulation-and-Suffocation-Offences-June-2024-June-2025-Report-1.pdf

Chan, H, C. (2024). Nonstranger and stranger sexual homicides in mainland China: Comparing the modus operandi of male sexual murderers. Sexual Abuse, 36(5), 603-629. https://doi.org/10.1177/10790632231190079

Chan, H, C. Li, F., Liu, S., Lu, X., & Jia, H. (2019). Sexual homicides in China: Exploring the offender, victim, and offense characteristics. International Journal of Offender Therapy and Comparative Criminology, 63(9), 1517-1537. https://doi.org/10.1177/0306624X17746293

Chauhan, M., Pradhan, M., Behera, C., Aggrawal, A., Naagar, S., & Dogra, T, D. (2017). Homicide concealed strangulation after bobbing reins in sexually sadistic homicide. Medico-Legal Journal, 86(1), 55-57. https://doi.org/10.1177/0025817217734091

Chiu, Y,-N., & Leclerc, B. (2021). Scripting stranger sexual offenses against women. Sexual Abuse, 33(2), 223-249. https://doi.org/10.1177/1079063219889055

Derico de Assis, Arpita Ghosh, Sonia Orrefice, & Climent Quintana-Domeque. (2025). Non-Fatal Strangulation Laws and Intimate Partner Homicides. https://www.jstor.org/stable/pdf/resrep71415.pdf

Douglas, H., & Fitzgerald, R. (2025). Prosecuting strangulation offences: understanding complainant withdrawal using a social entrapment lens. Current Issues in Criminal Justice, 37(1), 1-18. https://doi.org/10.1080/10345329.2024.2336717

Douglas, H., Sharman, L., & Fitzgerald, R. (2024). Domestic Violence, Sex, Strangulation and the 'Blurry' Question of Consent. The Journal of Criminal Law, 88(1), 48–66. https://doi.org/10.1177/00220183241233455

End Violence Against Women Coalition. (2024). Reporting on rape: Changing the narrative. https://www.endviolenceagainstwomen.org.uk/wp-content/uploads/2024/09/FINAL-RESOURCE-REPORTING-ON-RAPE.pdf

End Violence Against Women Coalition. (2023). New guide to challenging the far-right's weaponisation of gender-based violence. https://www.endviolenceagainstwomen.org.uk/new-guide-to-challenging-the-far-rights-weaponisation-of-gender-based-violence/

Glass, N., Laughon, K., Campbell, J., Block, C. R., Hanson, G., Sharps, P. W., & Taliaferro, E. (2008). Non-fatal Strangulation is an Important Risk Factor for Homicide of Women. The Journal of Emergency Medicine, 35(3), 329–335. https://doi.org/10.1016/j.jemermed.2007.02.065

Greenall, P, V. (2024). Sexual offending by strangers. Routledge. https://doi.org/10.4324/9781003217763

Greenall, P, V., & Richardson, C. (2015). Adult male-on-female stranger sexual homicide: A descriptive (baseline) study from Great Britain. Homicide Studies, 19(3), 237-256. https://doi.org/10.1177/1088767914530555

Greenall., P, V., & West, A, G. (2007). A study of stranger rapists from the English high security hospitals. Journal of Sexual Aggression, 13(2), 151-167. https://doi.org/10.1080/13552600701661540

References

Greenall, P, V., & Wright, M. (2020). Stranger sexual homicide: An exploratory behavioural analysis of offender crime scene actions. Journal of Sexual Aggression, 26(2), 163-177. https://doi.org/10.1080/13552600.2019.1606948

Grubin, D. (1994). Sexual sadism. Criminal Behaviour and Mental Health, 4(1), 3-9. https://doi.org/10.1002/cbm.1994.4.1.3

Hakkanen-Nyholm, H., Repo-Tiihonen, E., Lindberg, N., Salenius, S., & Weizmann-Henelius, G. (2009). Finnish sexual homicides: Offence and offender characteristics. Forensic Science International, 188(1-3), 125-130. https://doi.org/10.1016/j.forsciint.2009.03.030

Lovell, R, E., Sabo, D., & Dissell, R. (2022). Understanding the geography of rape through the integration of data: Case study of a prolific, mobile serial stranger rapist identified through rape kits. International Journal of Environmental Research and Public Health, 19(11), 1-24. https://doi.org/10.3390/ijerph19116810

MacDonald, Z., Eagles, D., Yadav, K., Muldoon, K., & Sampsel, K. (2021). Surviving strangulation: evaluation of non-fatal strangulation in patients presenting to a tertiary care sexual assault and partner abuse care program. CJEM, 23(6), 762-766. DOI: 10.1007/s43678-021-00176-x

McCormick, A., Sran, A., Atwal, K., & Cohen, I. (2026). Comparing police officers with and without strangulation training on perceptions of strangulation as a risk for intimate partner violence and the importance of medical-forensic exams. Policing: An International Journal, 1–16. https://doi.org/10.1108/PIJPSM-06-2025-0096

McGowan, M. (2024). An analysis of Domestic Homicide Reviews with fatal strangulation. Institute for Addressing Strangulation. https://ifas.org.uk/wp-content/uploads/2024/08/Domestic-Homicide-Review-Analysis-Fatal-Strangulation-_final-August-2024.pdf

McGowan, M., Callon, Z., & Smailes, H. (2025). "You look fine": A qualitative study exploring the impact of strangulation on psychological wellbeing, memory, and the lived experience of developing ways to cope. Institute for Addressing Strangulation. https://ifas.org.uk/wp-content/uploads/2025/11/You-Look-Fine-Survivor-Project-Report-November-2025-FINAL.pdf

Möller, A. S., Bäckström, T., Söndergaard, H. P., & Helström, L. (2012). Patterns of injury and reported violence depending on relationship to assailant in female Swedish sexual assault victims. Journal of Interpersonal Violence, 27(16), 3131-3148. https://doi.org/10.1177/0886260512441261

Munro, V, E., & Dangar, S. (2025). Strangulation, domestic abuse and suicide: Learning in and through domestic abuse-related death reviews in England and Wales. International Review of Victimology, 32(1), 188-210. https://doi.org/10.1177/02697580251341915

National Crime Agency (n.d.). Serious Crime Analysis Section. https://www.nationalcrimeagency.gov.uk/what-we-do/how-we-work/providing-specialist-capabilities-for-law-enforcement/serious-crime-analysis

Ng, K., Hancock, S., & Osbourne, S. (2024, 29 February). What happened to Sarah Everard? Timeline of 33-year-old's disappearance as Wayne Couzens report published. The Independent. https://www.independent.co.uk/news/uk/crime/sarah-everard-what-happened-wayne-couzens-report-b2504551.html

Office of National Statistics. (2025). Nature of sexual assault by rape or penetration, England and Wales: year ending March 2025. https://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice/articles/natureofsexualassaultbyrapeorpenetrationenglandandwales/yearendingmarch2025

Petreca, V, G., Tzani-Pepelasis, K., Ioannou, M., Siggery, A., McBridge, L., Barros, E., & Burgess, A, W. (2025). The grip of crime: Analyzing strangulation and asphyxiation typologies in homicide cases. Journal of Forensic Sciences, 70, 1094-1104. https://doi.org/10.1111/1556-4029.70021#

References

Rossouw, Z., Beauregard, E., & Chopin, J. (2025). Stranger danger: Analyzing offender behaviors based on victim approach tactics in sexual homicide. Behavioral Sciences and the Law, 43(2), 203-216. https://doi.org/10.1002/bsl.2708

Sarkar, R., Moller, M., & Bugeja, L. (2025). A cross sectional study of case and injury characteristics in domestic and family violence patients reporting nonfatal strangulation to forensic practitioners in Victoria, Australia. Forensic Science International, 374, 1-10. https://doi.org/10.1016/j.forsciint.2025.112533

Smailes, H., & McGowan, M. (2024). Prosecution and sentencing of strangulation and suffocation offences. An analysis of data from Ministry of Justice June 2022-June 2023. Institute for Addressing Strangulation. https://ifas.org.uk/wp-content/uploads/2024/04/Prosecution-and-Sentencing-of-Strangulation-and-Suffocation-Offences-_Final_-April-2024.pdf

Smailes, H., Munro, V, E., & Tonkin, M. (2025). Strangulation during sex in the UK: A report on the prevalence and experiences of strangulation during sex amongst 16-34-year-olds across the UK. Institute for Addressing Strangulation. https://ifas.org.uk/wp-content/uploads/2025/11/Strangulation-During-Sex-in-the-UK-Full-Report-November-2025.pdf

Thomas, M., & Ball, J. J. (2023). Intentional Strangulation: The Proper Approach to Sentencing in the Absence of a Sentencing Guideline: R v Cook [2023] EWCA Crim 452. The Journal of Criminal Law, 87(4), 281–289. https://doi.org/10.1177/00220183231190072

Valera, E, V., Daugherty, J, C., Scott, O, C., & Berenbaum, H. (2022). Strangulation as an acquired brain injury in intimate-partner violence and its relationship to cognitive and psychological functioning: A preliminary study. Journal of Head Trauma Rehabilitation, 37(1), 15-23. DOI:10.1097/HTR.0000000000000755

White, C., Martin, G., Schofield, A. M., & Majeed-Ariss, R. (2021). "I thought he was going to kill me": Analysis of 204 case files of adults reporting non-fatal strangulation as part of a sexual assault over a 3 year period. Journal of Forensic and Legal Medicine, 79, 1-10. https://doi.org/10.1016/j.jflm.2021.102128

Woodhams, J., Keetch, B., Shah, P., Brett, M., Davies, K., Flowe, H., Duran, F., Galambos, S., & Gregory, P. (2025). The incidence and characteristics of U.K. stranger sex offenses fluctuated with public health measures during the COVID-19 pandemic. Psychology of Violence, 15(4), 502–514. https://doi.org/10.1037/vio0000574

Zilkens, R. R., Phillips, M. A., Kelly, M. C., Mukhtar, S. A., Semmens, J. B., & Smith, D. A. (2016). Non-fatal strangulation in sexual assault: A study of clinical and assault characteristics highlighting the role of intimate partner violence. Journal of Forensic and Legal Medicine, 43, 1–7. https://doi.org/10.1016/j.jflm.2016.06.005