

Understanding the complexities of non-familial child abductions: a systematic literature review on the behavioural characteristics of acquaintance and stranger abductors

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Abstract

Purpose – Reports from 2016 to 2017 suggest that approximately 870 cases of non-familial child abduction (NFA) are recorded in England and Wales per year. Yet, empirical knowledge of the victims, offenders and offence characteristics is limited in comparison to other forms of child victimisation. Furthermore, much of the available knowledge is constrained by a lack of clarity around the differences between acquaintance and stranger abductors. This systematic literature review aims to develop a comprehensive overview of acquaintance and stranger child abductions, focussing on the similarities and differences in offending behaviours.

Design/methodology/approach – Research databases (PsycArticles, Google Scholar, Science Direct, PsycINFO, Criminal Justice Abstracts, MEDLINE and ERIC) and the Grey Literature (ETHOS and EBSCO) were screened for peer-reviewed research published between 1995 and 2021. Sixteen articles met the inclusion criteria and were critically appraised using a modified version of the Joanna Briggs Institute Checklist for Case Reports.

Findings – Six key areas within NFA offences and their characteristics were identified as offering potential for differentiating acquaintance and stranger abductors: victim–offender relationship, number of victims and offenders, motives, modus operandi, victim injury, sexual assault and mechanism of death (in fatal cases). The results of this review are discussed with consideration given to investigative implications, limitations and directions for future study.

Originality/value – To the best of the authors' knowledge, this paper is the first to systematically review the current NFA literature, from which pragmatic recommendations for practice and future academic enquiry are drawn.

Keywords Child abduction, Offence characteristics, Kidnapping, Child sexual abuse, Child homicide

Paper type Literature review

1. Introduction

Child abductions present a social issue that commands considerable public interest; they are one of the most distressing events a parent can experience (Spilman, 2006), often eliciting heightened anxiety, rage and helplessness (Hegar and Greif, 1991). The outcomes are even more adverse for the victims. Of those that are located and returned home, many display long-term symptoms of fright, rage, depression and post-traumatic stress disorder (Finkelhor *et al.*, 2017), which can manifest into behavioural and emotional problems in adulthood (Greif, 2000).

While most familial abductions (FAs) are perpetrated by an aggrieved family member within the context of a custodial dispute (though sexually motivated cases of FA do exist; [Finkelhor et al., 2002](#)), non-familial child abductions (NFAs) encompass a wider array of criminal motives inclusive of sexual assault and homicide ([Ioannou and Hammond, 2015](#); [Newiss and Traynor, 2013](#)), with most of these offences being sexually motivated ([Warren et al., 2021](#)). The complex and harrowing nature of NFAs has led to greater empirical concern about the motivations, actions and investigative responses to such forms of abduction.

In terms of prevalence, the National Incidence Studies of Missing, Abducted, Runaway and Thrownaway Children-2 (NISMA2) estimated that 58,200 incidences of NFA occurred in the USA between 1997 and 1999 ([Shutt et al., 2007](#)). UK incidence rates are comparatively lower. UK police records suggest that NFA rates are gradually rising with 870 cases recorded between 2016 and 2017 ([Newiss, 2018](#)). These general statistics, however, do not include attempts and do not reflect the unknown number of cases that go unreported, primarily as a result of shame or self-blame exhibited by the victim and their family ([Gallagher et al., 2008](#)). Furthermore, the rigid crime classification procedures used by investigators ([Home Office Classification Index, 2020](#)) fail to distinctively quantify NFA offences that co-occur with other crimes. That is, child abduction offences involving severe and fatal outcomes are classified by the most serious offence (such as sexual assault and/or murder), and as a result are often missed in prevalence research. Therefore, it is argued that the available statistics do not truly represent the complexity of NFA.

NFA offences can be committed by offenders who are either strangers or acquaintances of the victim (or victim's family); however, investigative records often fail to differentiate these offences by victim-offender relationship type. This can be problematic for both investigators and academics who may rely on the data for research, as a growing body of research suggests that stranger and acquaintance child abductions may represent distinct differences in offending behaviours and motivation ([Colbert, 2011](#); [Collie and Greene, 2017](#); [Finkelhor and Ormrod, 2000](#); [Miller et al., 2008](#)). To date, however, no research has comprehensively considered existing research on NFA, with a view to determine the characteristics pertinent to acquaintance and stranger abductors.

1.1 Child abduction murder

When cases of NFA are committed, murder is often the main concern of the abductee's parents ([Finkelhor et al., 1992](#)). This fear, however, appears to be disproportionate to the risk. Although there are no definitive statistics on the number of NFA cases that result in murder, academics have stated that child abduction murders (CAMs) are extremely rare ([Finkelhor and Ormrod, 2000](#); [Hanfland et al., 1997](#)), representing approximately 8% of short-term NFA ([Finkelhor et al., 1990](#)). Some academics, however, suggest that such CAM figures do not accurately reflect the true rates. This is because when children are recovered deceased, the murder investigation takes precedence over the abduction, and missing child reports are unlikely to be completed retrospectively ([Beasley et al., 2009](#); [Warren et al., 2021](#)).

The pressure upon investigating forces to recover an abducted child before any harm befalls them is often overlooked publicly and empirically. This pressure is further amplified by findings which suggest that in fatal cases, 90% of victims are killed within 24 h ([Hanfland et al., 1997](#)); even for those who are eventually found, research has shown that longer periods of abduction equate to greater emotional trauma and more difficulties with recovery ([Plass et al., 1996](#)). Thus, as [Warren et al. \(2021\)](#) posit, one of the most important questions that arises following a child abduction is whether the victim will be found alive or (presumed) deceased. As the outcome of child abductions is likely to be shrouded in uncertainty, this gives investigating officers a limited window of opportunity to potentially recover the victim alive. Therefore, the elicitation of offence and offender characteristics predictive of homicidal risk in child abductions could be impactful for investigative practice.

Unfortunately, the existing literature on NFA and CAM is limited, and factors that may assist investigating forces in lines of enquiry such as factors differentiating acquaintance and stranger abductors, as well as fatal and non-fatal cases, are further limited. A systematic review on the limited empirical knowledge around NFA offence characteristics is warranted to identify salient offence attributes that may be of importance for the elicitation of an offender's characteristics, motives and intentions.

1.2 Current study

The primary aim of this review was to synthesise the existing literature on NFA and, specifically, to explore the offending behaviours and characteristics of acquaintance and stranger abductors. Systematic literature reviews offer a comprehensive and critical overview of available evidence and have been used to provide pragmatic recommendations towards policy and practice (Hudspith *et al.*, 2021; Debowska *et al.*, 2017; Mojtahedi *et al.*, 2022). Our aim was operationalised into three objectives. Firstly, to identify what similarities and differences exist in the offence characteristics of the two sub-types (acquaintance and stranger abductors). It was also anticipated that characteristics of CAM may be evident in some of the existing literature; therefore, the second objective was to highlight the similarities and differences in the offence characteristics of non-fatal and fatal abductions. Notwithstanding variations in the legal frameworks within the USA, as well as between the UK and the USA, as most of the literature uses US data samples, the third objective was to highlight consistencies and inconsistencies between the US and UK literature, and any other countries identified in the literature search. This review therefore discusses studies of NFA, including CAM, and offence characteristics in general.

2. Method

2.1 Search strategy

This review was conducted in accordance with the PRISMA guidelines (Moher *et al.*, 2009) and pre-registered with PROSPERO (Registration Number CRD42019149768) on 18 September 2019. Electronic searches of the Cochrane Database of Systematic Reviews and the Campbell Collaboration library yielded no systematic reviews of the characteristics of acquaintance and stranger abductors. The following online full-text databases were searched: PsycArticles, Science Direct, PsycINFO, Criminal Justice Abstracts, MEDLINE and ERIC. A search of the Grey Literature was also conducted through ETHOS and EBSCO.

The following search string was constructed to capture relevant studies: "(child* OR teen* OR adolescent OR minor) AND (kidnap* OR abduct*) AND (stranger OR acquaintance OR nonfamily* OR nonfamilial* OR nonparental* OR homicide OR murder)". The first search term was applied to article titles, whereas the second and third search terms were applied to any domain of the article. In addition, search parameters for publication date were set from 1 January 1994 to 11 January 2023. This time frame was used because the child abduction literature began emerging in the early 1980s following a string of child disappearances and CAM cases in the USA (see the case of Etan Patz). Early studies mainly focussed on incidence (Finkelhor *et al.*, 1992) rather than the characteristics of the offence and offenders. Some studies identifying NFA characteristics, however, do date back to 1995 (Asdigian *et al.*, 1995).

2.2 Inclusion and exclusion criteria

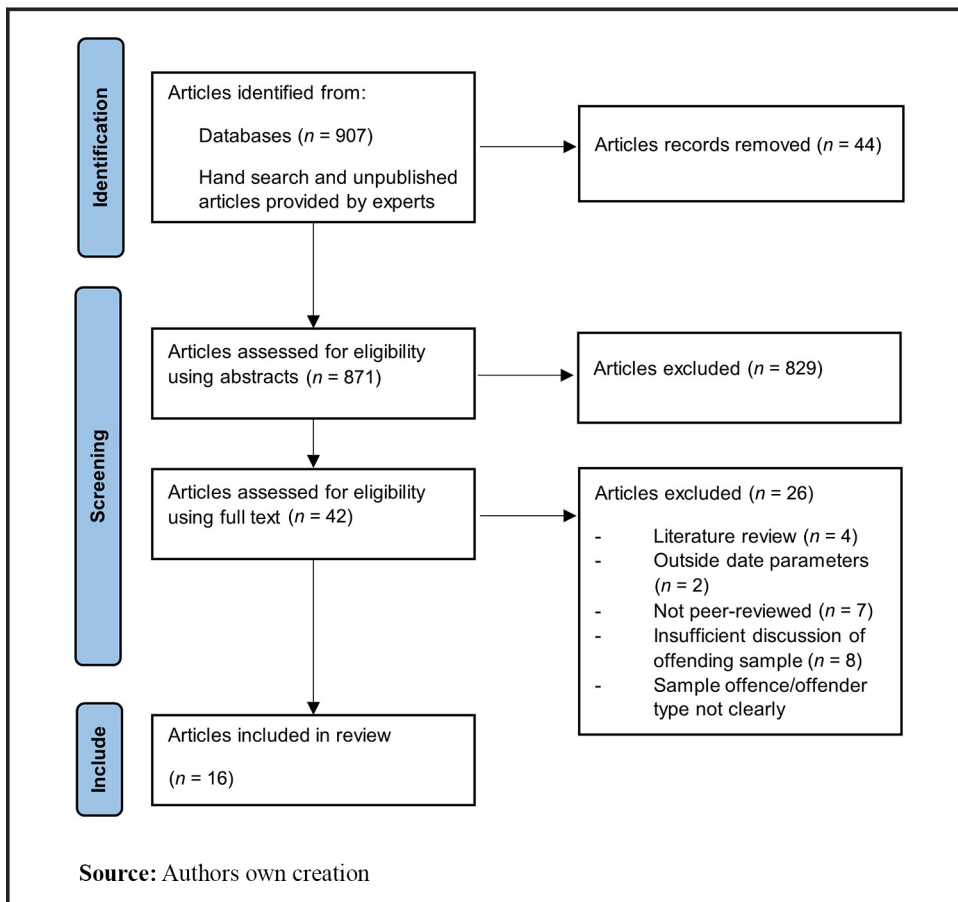
Studies were eligible for inclusion if they were either peer-reviewed and empirical in nature, or a case study published in English, dated between 1994 and 2023, which included details of an NFA offences. Studies were also required to present discussions of offending populations who committed NFA offences and/or the CAM of a victim aged

between 2 and 18. Studies involving children aged younger than two years were excluded, as existing research suggests that this age group of victims represent a distinct type of abduction motivated by maternal desire (Ankrom and Lent, 1995; Burgess and Lanning, 1995; Erikson and Friendship, 2002; Shelton *et al.*, 2016; Warren *et al.*, 2016). Studies were also excluded if they focussed on the abduction of children in the context of war and armed conflict. The reference lists of included articles were also hand searched to identify any literature not identified within database searches. A search of bibliographic databases was conducted in January 2023. Searches resulted in the identification of 907 articles. Two reviewers independently pre-selected the relevant articles from the titles and abstracts based on the selection criteria. In case of discrepancies between the two reviewers, the reference was held for deeper evaluation in the next phase (using full text). Any remaining discrepancies were discussed and resolved. There was an 88.9% agreement rate between the reviewers, and 16 articles were included for review (marked with an asterisk in the references). The process of selection is depicted in Figure 1.

2.3 Quality appraisal and data extraction

A quality assessment of the 16 remaining studies was conducted by two researchers using the Joanna Briggs Institute (2017) Checklist for Case Reports. The items in the Checklist for case reports were modified to meet the aims of this review. The quality of included studies was assessed across eight domains:

Figure 1 Process of sample selection



1. clear definitions of acquaintance and stranger offenders;
2. clear descriptions of offender and victim characteristics;
3. discussion of victimisation or offending histories;
4. discussion of the offenders *modus operandi* (MO)
5. clear description of comparison groups;
6. clear description of statistical analyses;
7. clear description of offence characteristics; and
8. clear description of the provision of emerging acquaintance and stranger profiles.

There was an 82.35% inter-rater agreement in quality appraisal, and all discrepancies were discussed and resolved by the research team. For the purpose of our review, data specific to the following areas was extracted: victim–offender relationship, and detail of offence characteristics and offence outcome. Results were presented and discussed in accordance to checklist items set out within Moher *et al.*'s (2009) PRISMA statement. Any limitations or risks of bias (within individual studies and across the articles) that were identified are acknowledged within the results.

3. Results

3.1 Sample metadata and quality appraisal

The 16 studies were published between 1995 and 2021 in 12 different journals (see Table 1). Table 2 presents the methodological characteristics of the included studies. The majority of

Table 1 Bibliometric properties of the articles included in the systematic review

Descriptive variable	f	%
Year of publication		
1995	1	6.2
1999	1	6.2
2002	1	6.2
2003	1	6.2
2008	2	12.5
2009	1	6.2
2012	1	6.2
2015	1	6.2
2016	3	18.8
2017	1	6.2
2019	2	12.5
2021	1	6.2
Journal		
<i>Aggression and Violent Behaviour</i>	3	18.8
<i>Journal of Forensic Science</i>	2	12.5
<i>Child Abuse and Neglect</i>	2	12.5
<i>Legal and Criminological Society</i>	1	6.2
<i>Behavioral Science & the Law</i>	1	6.2
<i>Criminal Justice Studies</i>	1	6.2
<i>Justice Quarterly</i>	1	6.2
<i>Investigative Psychology and Offender Profiling</i>	1	6.2
<i>Interpersonal Violence</i>	1	6.2
<i>Law and Psychiatry</i>	1	6.2
<i>Criminal Justice</i>	1	6.2
<i>Criminal Justice and Behaviour</i>	1	6.2

Source: Authors' own creation

Table 2 Methodological characteristics of the articles included in the systematic review (*N* = 16)

Author	Sample country	Sample N	Victim age range	Victim gender (female %)	Offender gender (male %)	Date parameters	Data source
Asdigian <i>et al.</i> (1995)*	USA	396	<12 and >12	71/81	95/53	1987–1988	LE reporting
Boudreaux <i>et al.</i> (1999)	USA	540	<1–17	70%	87	1985–1999	FBI's NCAVC, ViCAP and the Child Abduction and Serial Killer Unit (CASKU), telephone interviews with the lead investigators
Erikson and Friendship (2002)	UK	149	NA	62	NA	1993–1995	Offenders index, Police Records at New Scotland Yard
Beyer and Beasley (2003)	USA	25	NA	NA	100	NA	A review of state and prison records, interviews with offenders identified through ViCAP, anecdotal reports from LE, a review of case documents including criminal, medical and psychological reports
Gallagher <i>et al.</i> (2008)	UK	2,420	9–16	71	88	1996–1997	Children in schools across NW England
Miller <i>et al.</i> (2008)	USA	671	0–17	60	80	1991–1996	LE case files in the Uniform Crime Reporting (UCR) system
Beasley <i>et al.</i> (2009)	USA	750	NA	77	94	NA	FBI's ViCAP, KASA and the National Crime Information Centre (NCIC)
Tillyer <i>et al.</i> (2015)	USA	9920	0–92	75	84	2011	NIBRS
Shelton <i>et al.</i> (2016)	USA	32	<1–17	88	92	1981–2012	Behavioural Analysis Unit III – Crimes Against Children unpublished study, FBI's internal case management database, and local and state law enforcement agencies
Warren <i>et al.</i> (2016)	USA	463	0–17	80	94	NA	FBI's National Centre for Violent Crime Analysis (NCAVC), Violent Criminal Apprehension Program (ViCAP), Kidnapping Abduction Statistical Program (KASA)
Walsh <i>et al.</i> (2016)	USA	29,293	<5–17	61	72	1995–2013	National Incidence-Based Reporting System (NIBRS)
Collie and Greene (2017, 2019)	UK	78	0–17	54	100	1988–2014	Open-source media articles and court transcripts (Westlaw and Lexis legal databases)
Warren <i>et al.</i> (2021)	USA	556	0–17	80	94	NA	ViCAP, KASA and NCIC
Park and Cho (2019)	South Korea	144	<10 and >10	65	68	1997–2008	Korean Social Science Data Archive (A1-2009-0114)
Brown and Keppel (2012)	USA	733	NA	NA	NA	1968–2002	US Office for Juvenile Justice and Delinquency Prevention

Note: *Victim/offender gender presented for stereotypical/non-stereotypical cases (respectively); NA: not available

Source: Authors' own creation

the studies ($n = 11$) were based on US cases, four studies used UK cases and one study analysed data from South Korea. The date parameters for the data used spanned from 1968 to 2014 but were unidentifiable in four studies (Beasley *et al.*, 2009; Beyer and Beasley, 2003; Warren *et al.*, 2016, 2021). The number of cases varied (range 32–29,293) with most studies analysing between 50 and 800 cases. The total sample size of all included studies could not be calculated due to the use of different methodologies and potential duplications of cases across the studies.

The methodological quality of the studies was generally high, aims were clearly presented and the data analysis and results were clearly described in all 16 studies. Apart from one study (Erikson and Friendship, 2002), all sources provided detailed descriptions of offender and victim demographics; however, the offence/victimisation history of the offenders and victims were only considered in nine studies. Although most studies provided some information about offence characteristics, only seven studies considered these findings in relation to offender characteristics and the MO of offenders was only explored in four studies, though this could be somewhat expected given that the MO of offenders may not be apparent to investigators and thus, not recorded. Only six studies clearly defined and differentiated between stranger and acquaintance abductors within their investigations, and no study was able to provide detailed offender characteristic differences between stranger and acquaintance offenders (i.e. profiles), signalling a clear gap within the literature. A full breakdown of the quality appraisals can be found in the Supplementary Materials.

3.2 Empirical findings

Through the analysis of the 16 articles, three overarching empirical themes were identified: Offender–victim dynamic (relationship between the offenders and victims in NFA research, as well as the number of offenders and victims involved in offences), motive (consideration towards the varying motives behind NFA, namely, sexual assault and homicide) and offender actions (explorations of methods used by offenders to carry out their offences, including sexual assault behaviours and causes of death in cases of CAM).

3.2.1 Victim–offender dynamic

3.2.1.1 Victim–offender relationships. Inconsistency regarding the operationalisation of NFA victim–offender relation types was observed across the selected studies. While three studies examined NFA collectively (e.g. Erikson and Friendship, 2002; Gallagher *et al.*, 2008; Park and Cho, 2019) and two studies solely examined stranger abductions (Collie and Greene, 2017, 2019), the remaining articles differentiated NFA cases based on relationship type. Most of these studies did so using a stranger/acquaintance (or stereotypical/legal definition, see Asdigian *et al.*, 1995) dichotomy (Boudreaux *et al.*, 1999; Brown and Keppel, 2012; Miller *et al.*, 2008; Tillyer *et al.*, 2015). Some of these studies included additional categories as well, such as current or former intimate partner (Shelton *et al.*, 2016; Walsh *et al.*, 2016; Warren *et al.*, 2016), and victim or family friend (Shelton *et al.*, 2015). Two of the studies did not differentiate between relationship types at all (Beasley *et al.*, 2009; Beyer and Beasley, 2003).

Findings from studies which compared familial to non-familial cases suggest that most child abduction offences are committed by non-familial offenders. This was observed among UK (82% NFA, Erikson and Friendship, 2002), Korean (73.6% NFA, Park and Cho, 2019) and US (47.3% strangers and 42% acquaintances, Warren *et al.*, 2021) samples. However, Walsh *et al.* (2016) produced conflicting findings, which indicated that most child abductions in the USA are committed by family members (48%), followed by acquaintances (27%), strangers (16%) and the victim's boyfriend/girlfriend (9%). The disparity between studies indicates that findings derived from child abduction research are heavily dependent on the database sources used; thus, inter-study comparisons should be made cautiously.

3.2.1.2 Number of victims and offenders. The number of victims involved in NFA offences appeared to vary by whether the offence was attempted or completed. The literature suggests that most attempted child abductions are carried out against an individual victim (Warren *et al.*, 2021), who is not in the company of other children or adults (Collie and Greene, 2017). An exception to this is a US study of residential child abduction (Shelton *et al.*, 2016) and UK cases which also involved sexual assault where more than two-thirds of offences occurred when the victim was with other children (Gallagher *et al.*, 2008). US research elaborates on these findings further suggesting that offences against multiple child victims were not predictive of non-fatal or fatal outcomes (Beasley *et al.*, 2009). However, Beasley and colleagues found that the abduction of both a child and an adult made it more likely they would be found alive.

The literature is also inconsistent regarding the number of offenders. Research by Gallagher *et al.* (2008) and Warren *et al.* (2021) suggest that most NFA offences involve a lone offender; however, Walsh *et al.* (2016) found that all abduction types were more likely to involve multiple offenders. Walsh *et al.*'s findings also accord with offenders in CAM cases (Asdigian *et al.*, 1995; Beasley *et al.*, 2009). Gallagher and colleagues noted that in cases involving multiple offenders, just over half involving a female offender (52.5%), also involved a male offender. Comparatively, only 6.6% of offences involving a male offender also involved a female offender. When attempting to differentiate by category of offending groups (adult, young people and children), no significant differences regarding number of offenders were observed.

3.2.2 Motive. NFA motivations included maternal desire (Boudreaux *et al.*, 1999; Erikson and Friendship, 2002; Shelton *et al.*, 2016; Warren *et al.*, 2016), sexual gratification/assault (Asdigian *et al.*, 1995; Boudreaux *et al.*, 1999; Miller *et al.*, 2008), financial gain/extortion (Asdigian *et al.*, 1995; Boudreaux *et al.*, 1999; Miller *et al.*, 2008) and revenge/retribution (Asdigian *et al.*, 1995), which all appear to be differentiated by victim gender and age. While female offenders make up a small percentage of child abductors (5.7%; Warren *et al.*, 2021), many of them are motivated by maternal desires, typically targeting infants with the intent of keeping the child permanently (Boudreaux *et al.*, 1999). Such findings fit with Warren *et al.*'s (2021) observation that children under the age of six were more likely to be abducted for longer than 8 h compared to older children, although this could be attributed to other motives, given that the sample involved mostly male offenders. Motives consistent with retribution and financial gain are considerably rare in modern society (Asdigian *et al.*, 1995; Boudreaux *et al.*, 1999) and usually occur within the context of acquisitive criminality. These cases often involve older teenage victims, with both the offender and victim often being male (Asdigian *et al.*, 1995; Boudreaux *et al.*, 1999; Miller *et al.*, 2008).

The majority of NFA, however, appears to be sexual motivated. US and UK findings suggest that sexually motivated abductions account for approximately two-thirds of NFA (Boudreaux *et al.*, 1999; Erikson and Friendship, 2002) and are even more prevalent (92%) when focussing on female victims (Warren *et al.*, 2021). Most studies identify girls aged 14–18 years of age as the most common targets of sexual motivated abductions (Boudreaux *et al.*, 1999; Miller *et al.*, 2008; Warren *et al.*, 2021); however, one study on UK abductions failed to replicate this gender association (Erikson and Friendship, 2002). Warren *et al.* (2021) also asserted that sexually motivated abductions were more likely to involve a fatal outcome in comparison to non-sexually motivated abductions.

There is a contrast between acquaintance and stranger abductors with regard to offence motivations. Most sexually motivated offenders appeared to be male (60%; Boudreaux *et al.*, 1999) and acquaintances of the victim (Boudreaux *et al.*, 1999; Erikson and Friendship, 2002; Miller *et al.*, 2008).

In cases of NFA, the greatest concern for most parents is murder. Evidence from Warren *et al.* (2021) suggests that CAM is less likely in cases where the child is held longer than 8 h, suggesting that abductors who intend on murdering their victims are more likely to do so shortly after the abduction. There is some evidence to suggest that fatality risks in

abductions could be predicted based on offence characteristics. Both [Boudreaux et al. \(1999\)](#) and [Warren et al. \(2021\)](#) found that CAM victims were more frequently school aged (i.e. 6–13) and Caucasian; however, while Boudreaux and colleagues reported greater fatality risks for girls, Warren et al. did not find any significant differences between victim gender. The studies also produced conflicting findings when comparing fatality rates by offender–victim relationship. Within [Boudreaux et al.'s \(1999\)](#) data, most CAMs were perpetrated by strangers followed by acquaintances; however, evidence from [Warren et al. \(2021\)](#) suggests that NFA were significantly less likely to end with a fatal outcome compared to FAs. Irrespective of relationship type, Warren and colleagues found that abductions perpetrated by male offenders under the age of 29 were most likely to result in fatal outcomes. This coincides with research showing an over representation of men in violent interpersonal crimes ([Hoskin and Liftawi, 2022](#)). The authors did not find any associations between fatality outcomes and the offenders' ethnicity or arrest history.

3.2.3 Offender actions

3.2.3.1 Aggressive versus manipulative MO. [Collie and Greene \(2017\)](#) identified two categories of MO within UK cases of stranger abductions: aggressive and manipulative. An aggressive MO was defined by the presence of physical and verbal aggression (77.3%). More specifically, these offences were more likely to involve threats, assault and show clear evidence of a sexual motive. The use of a “one liner” (offending speaking one line before initiating the attack) was also correlated with aggressive behaviours, suggesting that this could be a precursor to the offender physically assaulting the victim. Linked to aggression, [Warren et al. \(2016\)](#) did not find any gender differences regarding threats of lethality made to the victim (approximately 40% for both male and female victims). [Collie and Greene \(2017\)](#) also found that aggressive behaviours (64.71%) were more associated with completed cases (cases are determined as completed when an offender is successful in taking control of a victim) than manipulative approaches (37.04%). Collie and Greene also identified a shift in some offenders' MO. Most cases with an evident shift (such as a manipulative approach transitioning into an aggressive approach which featured in 94.2% of cases) were associated with completed cases (70.5%). The inverse (an aggressive approach transitioning to a manipulative approach) was less common (5.8%).

3.2.3.2 Weapon use. [Walsh et al. \(2016\)](#) cite that 44% of all child abductions involved no weapon. UK research suggests that stranger abductors adopting an aggressive MO are more likely to bring weapons (such as a knife) to the crime scene, whereas those using a manipulative MO are more likely to use personal weapons (e.g. hands and feet) ([Collie and Greene, 2019](#)). US data also suggest that non-familial abductors generally bring a knife or a gun to the offence ([Asdigian et al., 1995; Walsh et al., 2016](#)); however, in cases of non-fatal abductions perpetrated by acquaintances, these are more likely to involve personal weapons ([Miller et al., 2008; Walsh et al., 2016](#)). Together, the findings suggest that physical weapons are less likely to be used by acquaintance offenders or offenders adopting a manipulative MO. Importantly, [Tillyer et al. \(2015\)](#) acknowledge that the presence of a weapon does not necessarily equate to weapon use. For instance, a weapon may be used to force compliance rather than to injure the victim.

3.2.3.3 Vehicle use. [Shelton et al. \(2016\)](#) found that 55.6% of offenders in residential abductions immediately placed their victim in a vehicle and drove off (55.6%). In these cases, 60% of vehicles were owned by the offender or were available to them through routine access. Building on this research, [Collie and Greene \(2019\)](#) identified that vehicle use was specifically associated with offenders who adopted a manipulative MO.

3.2.3.4 Sexual assault behaviours. A manipulative approach, the use of physical force and the presence of a weapon have all been cited in the US literature as common variables in offences which involve sexual assault ([Asdigian et al., 1995](#)). The types of sexual assault identified during an abduction include sexual maltreatment, photographing of the victim for sexual purposes and genital molestation ([Walsh et al., 2016](#)). According to [Walsh et al. \(2016\)](#), sexual assault during abductions is relatively rare (13%); however, sexual assault

appears to be more prevalent in CAM cases (23.4%) based on physical evidence recovered from CAM victims (Brown and Keppel, 2012).

Gallagher *et al.* (2008) found clear gender differences in sexual victimisation rates in UK cases of stranger-abduction, with female victimisation for indecent exposure and touching, being five times higher and two times higher, respectively. However, no significant gender differences were observed when multiple sexual acts were committed.

In US kidnapping offences (i.e. abduction of victims aged 0–92), although sexual assault was not typical in stranger kidnappings (10%), the odds of sexual victimisation were twice as likely in stranger kidnappings (20%) compared to acquaintance kidnappings (10.5%) and considerably more than in familial kidnapping cases (3.7%) (Tillyer *et al.*, 2015). In addition, the authors found that kidnappings involving knives, multiple offenders, older offenders, male offenders, both male and female offenders, and black offenders were more likely to include sexual victimisation. However, it should be acknowledged that the study included cases of adult abduction.

3.2.3.5 Victim injuries. Walsh *et al.* (2016) report that injury in child abduction cases is infrequent, with most victims not sustaining any injuries (85.3%) and only 0.1% ($n = 28$) of abductions having a fatal outcome. These statistics, however, included cases of FA as well. The type and rate of injury was variable by victim–offender relationship with minor injuries more likely to occur in cases of boyfriend/girlfriend and FAs in comparison to acquaintance and stranger abductions. However, major injuries (such as severe lacerations, broken bones and unconsciousness) were more likely to occur in acquaintance abductions (24%) rather than FAs (4%; Walsh *et al.*, 2016). Furthermore, Tillyer *et al.* (2015) found that injuries were more common among acquaintance abductors (52.5%) in comparison to familial (39.1%) and stranger abductors (27.6%). This risk of injury was associated with victims or offenders being older, the offender's use of alcohol or drugs and offences occurring in the daytime in semi-public locations. The study found no significant differences in risk depending on gender (victim or offender) or whether the offender operated alone or with an accomplice.

3.2.3.6 Mechanism of death. For murders in general, Brown and Keppel's (2012) US research discusses how the most common evidence form originates from a weapon (39%); however, in cases of CAM, evidence from weapons was less frequent (10.9%). Accordingly, in most of the fatal abduction cases, the presence of asphyxiation was observed across both victim genders (28% male and 42% female; 47.5%, Warren *et al.*, 2020), with no significant association between gender and cause of death. Strangulation appears to be more common than suffocation and other unspecified forms, particularly among Caucasian male offenders (Boudreaux *et al.*, 1999). Female offenders, particularly of African American descent, murdered both genders using blunt force trauma (46%) or firearms (Boudreaux *et al.*, 1999). Caucasian offenders, however, tend to suffocate or strangle their victims (Beasley *et al.*, 2009; Boudreaux *et al.*, 1999; Shelton *et al.*, 2016). Suffocation specifically was more prevalent among younger victims with rates decreasing as the victim gets older. As with other causes of death evidenced in sexual murder, the trends in the general mechanism of death suggest that asphyxiation is the preferred method, followed by blunt force trauma, stabbing and the use of firearms to kill victims (Beasley *et al.*, 2009; Boudreaux *et al.*, 1999; Shelton *et al.*, 2016; Warren *et al.*, 2016).

4. Discussion

Key findings from the review are given in the below list. The current review was able to identify patterns and differences in offence characteristics across acquaintance and stranger abductors. However, our examination did highlight constraints which should be considered in the context of the findings, some of which may be the result of existing policy and therefore unavoidable. These constraints were evident in three key areas. Firstly, the

reviewed literature was mostly derived from US data sources. Child abductions are, however, a global issue, and further research should therefore focus on child abductions in other countries, inclusive of the UK. Secondly, the number of data sources, data collection methods and methods of analysis exceed the number of articles reviewed. This is due to most research using mixed methodologies to collect and analyse data. Some studies collated data from multiple complimentary sources (e.g. police case files and interviews with investigating officers). However, due to the nature of how police data is recorded, the results should be interpreted with caution. For example, it is unclear how systematic the recording procedures are within databases such as the US NIBRS. Furthermore, when abductions occur alongside other offences, in the UK, it is the most serious offence that is recorded in accordance with crime recording procedures. Finally, it is noteworthy that most data examined within this review is likely derived from high-profile cases which attracted significant police and public interest, particularly in cases of CAM. The external validity of findings is therefore arguably not representative of child abductions in general. It should also be noted that although other studies of child abduction exist within the literature (e.g. [Newiss and Traynor, 2013](#)), they did not meet the criteria for this review (see [Figure 1](#) for reasons for exclusion).

Key findings:

- There is a gap of research comparing stranger and acquaintance abductor characteristics. Such research could provide valuable insight for initial investigative inquiries.
- Findings suggest that non-familial abductors are not a homogenous group of offenders (e.g. risk of violence and use of weapons) and should be studied independently (i.e. relationship type).
- Majority of child abductions are perpetrated by men and sexually motivated. Female abductors are highly likely to co-offend with a male accomplice, though some do engage in lone abductions, often motivated by maternal desire.
- Evidence of some differences between US and UK offences (e.g. prevalence of relationship types, lone vs multiple offenders and whether the victim is abducted in the presence of others). Yet, there is a paucity of empirical investigation outside of the US, highlighting a need for further cross-cultural research.
- Abductions perpetrated by multiple offenders are more likely to involve sexual assault and/or CAM. However, the role and level of involvement each offender plays are not considered within the existing literature.
- The risk of murder is greater in cases involving children aged 6–13 and perpetrators aged under 29. There is conflicting evidence regarding other risk factors (e.g. gender and relationship type). Furthermore, there is limited research on the motivations behind CAM, as well as examinations of CAM cases outside of the USA, signalling a need for further research on CAM (Source: Authors' own creation).

4.1 Acquaintance and stranger abductors

Several motives of child abduction were identified; however, as [Newiss and Fairbrother \(2004\)](#) cite, motives are often difficult to determine. To illustrate this difficulty, sexual gratification was a dominant motive among offences perpetrated by acquaintances but not strangers ([Boudreaux et al., 1999](#); [Erikson and Friendship, 2002](#); [Tillyer et al., 2015](#)). However, a sexual motive might not be apparent in cases where an offender has touched a victim or forced a victim to touch them. These offending actions may yield limited forensic evidence which the police could otherwise use to infer a motive. Furthermore, in non-fatal cases or cases where the victim was known by the offender, it is not uncommon for details

of sexual assaults to be withheld from the police. The victim's decision to not disclose such details may be due to fear of not being believed or apportioning blame to themselves (Beckett and Warrington, 2014).

It is noteworthy that while the demographic characteristics of victims were not the subject of this review, findings related to victim age do appear broadly supportive of Finkelhor and Leatherman's (1994) dependency continuum. Finkelhor and Leatherman suggest that the level of supervision and care required for infants and pre-school children reduces the opportunity for acquaintance or stranger abductors to victimise infants and pre-school children. Rather, these offenders abduct older victims who, by virtue of their age, are afforded more freedom and therefore present greater opportunities for non-familial offenders.

Strangers were identified as being more likely to bring a weapon (knife or firearm) to the crime scene, and to use it in order to facilitate the offence, commit sexual assault (although sexual assault was not typical of stranger offenders) and/or to murder their victims (Tillyer *et al.*, 2015). However, these findings relate to kidnapping offences only; therefore, comparative research across non-fatal NFA and CAM cases is required to validate the external validity of these findings. In addition, it was not possible to differentiate findings related to child abduction from those related to kidnapping (>16) in Tillyer *et al.*'s (2015) study. This non-differentiation of offence types is problematic when interpreting the findings; however, the findings do highlight similarities with the child abduction specific literature. To illustrate, the taking of a weapon to the crime scene by strangers was an interesting finding, as this may suggest a degree of intent or premeditation which are likely to have judicial implications. Not surprisingly, weapon use also appeared to occur in parallel with the level of injury inflicted on victims. Kidnappings perpetrated by strangers for example were more likely to result in major injuries on their victims in comparison to strangers who commit abduction (Tillyer *et al.*, 2015). These findings accord with Collie and Greene's (2019) findings which examined the offender's approach or MO (aggressive–manipulative dichotomy). Building on these findings, strangers may use more aggressive tactics from the onset of the offence, which includes the use of a weapon. As Tillyer *et al.* (2015) note, however, the presence of a weapon does not necessarily equate to weapon use. The use of a weapon might be used to amplify threats to gain the compliance of the victim. It should also be noted that Collie and Greene's (2019) study only examined stranger abductors; therefore, further research on UK cases comparing acquaintance and stranger offenders is therefore required.

In comparison to strangers who use a physical object as a weapon, acquaintances who murdered their victims were more likely to use their hands or feet as weapons (Miller *et al.*, 2008; Walsh *et al.*, 2016). The absence of weapons used in acquaintance abductions derived from US samples might be due to them not requiring a weapon to commit the offence. Offence completion and compliance is likely to be facilitated by the level of familiarity between the victim and the offender or some other interpersonal element. Therefore, the offender's ability to manipulate the victim using tactics such as luring them into a vehicle does not necessarily require the use of a weapon. Interestingly, however, Walsh *et al.* (2016) describe how victims of acquaintance abduction are also likely to suffer severe injuries. If acquaintances are more likely to use manipulative approaches and not use weapons, the severity of victim injuries may be supportive of a shift in MO as noted by Collie and Greene (2019). In comparison to a stranger who may use violence and force from the onset of the offence or shift their MO at the site where the victim and offender initially come into contact, or the abduction site (if different), the shift observed in acquaintance abductions may be more likely to occur once the victim has been isolated. By this time, any chance or means by which the victim could escape are likely to be limited.

Consideration and identification of a likely victim–offender relationship is likely to carry investigative implications. For example, in comparison to acquaintance abductors who may

be known not only to the victim, but by the victim's family or friends also, stranger abductors are likely to present significant investigative difficulties, particularly in developing lines of enquiry as they are likely to be an unknown entity. In cases of acquaintance abduction, lines of enquiry may be comparatively easier to develop. From an academic perspective, however, it must be acknowledged that the victim–offender relationship may not always be known, or recorded in police data, particularly in cases of CAM where this information is likely to be unknown, or reliant on the veracity of an offender's statement. Collectively, the findings related to acquaintance and stranger abductors support the position of [Asdigian et al. \(1995\)](#) who suggest that non-familial abductors are not a homogenous group of offenders and should be studied independently. Therefore, research differentiating the two types should continue to build on the existing literature with a deeper focus on the relationships between offending actions, type of victim injury, victim–offender interaction and offender demographics.

4.2 Similarities and differences between non-fatal cases and child abduction murder

Findings suggest that multiple offenders were more likely to be involved in cases of CAM and cases of stereotypical kidnapping than in non-fatal cases. Operationalisation of the term “multiple offenders”, however, is somewhat ambiguous. This could relate to a second offender responsible for assisting in the disposal of a body or a second offender involved in the process of abducting and murdering the victim. Differentiation of multiple offender crimes is therefore likely to require an examination of “degree of involvement” and subsequent differentiation based on their own offending actions. Notwithstanding this gap in the literature, however, the presence of multiple offenders was also associated with sexual assault, and sexual assault was present across both non-fatal kidnappings ([Tillyer et al., 2015](#)) and cases of CAM ([Brown and Keppel, 2012](#)). Where forensic evidence supporting a sexual motive was evident in cases of CAM, investigative questions remain. Specifically, it would be difficult to determine whether the intent to harm or murder the victim was the primary motive (offender gaining sexual gratification from the act of killing) or whether the offender murdered the victim to dispose of a witness fearing exposure and apprehension. Therefore, abduction outcome is an area in need of further empirical study, as it is still unclear under what circumstances a victim may be returned home unharmed, and what offending actions may be predictive of fatal outcomes. Regarding weapon use, weapon evidence was also more common than non-weapon evidence in cases of CAM ([Brown and Keppel, 2012](#)). Given that strangers are more likely to murder their victims, take weapons to the offence and use more aggressive tactics, this was expected. From an operational perspective, the likelihood of acquiring forensic evidence from murders, in general, might cause subsequent dependency on it to solve CAM cases in which weapon evidence is reportedly lower. In cases where evidence is limited or non-recoverable, this creates a significant issue. This is exemplified in cases whereby investigators may have identified a weapon at crime scene but are unable to extract forensic evidence. As [Tillyer et al. \(2015\)](#) suggest, this may be the result of a weapon used to threaten or force the victim into compliance rather than to inflict injury. It is also noteworthy that literature relating to CAM cases is limited in comparison to the general child abduction literature and has emerged exclusively from the USA. Research on UK specific CAM cases is therefore required to advance knowledge in this area and to determine the external validity of US findings.

4.3 Consistencies and inconsistencies in UK and US research

The prevalence of victim–offender relationship type is an area of inconsistency in the UK and US literature. Statistics suggest that NFA is the most prevalent abduction type in the UK, and US statistics suggest that FA is more prevalent. This difference may in part be due

to under-reporting of FAs in the UK due to the perceived seriousness of the offences. Perceptions may result in a preference to resolve cases in a civil court rather than a criminal court. Consistencies across the UK and US literature are, however, identifiable regarding variables such as sexual motivation and weapon use. However, characteristics such as the number of victims and offenders involved have been inconsistent. In the USA, it appears that most child abductions were committed when the child was alone. The only notable exception is cases of residential child abduction (Shelton *et al.*, 2016). Contrasting UK research, however, suggests that child abductions perpetrated in the presence of another child occurred in two-thirds of cases (Gallagher *et al.*, 2008). However, these findings were more likely the result of a research focus on both sexual assault and child abductions rather than child abductions exclusively. These differences may also be due to geography. In comparison to the geographical dispersion in some areas of the USA, which may result in children being driven to school or using school transportation, in UK urban areas, most children are likely to live in closer proximity and walk to school with friends. Furthermore, UK findings also suggest that most NFAs involve a lone offender, whereas US findings suggested that NFA and CAM were often perpetrated by multiple offenders. It is unclear as to why this difference exists and therefore requires further empirical exploration. Despite inconsistencies, however, researchers examining child abduction cases in the UK and USA have adopted similar approaches in their proposed typologies based on factors such as offender motivation and victim–offender relationship. It should be noted that these typologies require updating as they do not consider the use of social media to facilitate abduction offences, an area which is unexplored and completely absent in the existing child abduction literature. Definitions of victim–offender relationship were also problematic. The term acquaintance, for example, has been inconsistently defined across the UK and US literature, and acquaintance and stranger offenders have occasionally been categorised under the broader category of NFA. It is the authors' position that standardisation of terms is key in developing understanding and consistency across studies in this field. It is, however, acknowledged that in crime recording procedures, this data may be missing or unknown. Finally, the majority of the literature on NFA has emerged from the USA, specifically in CAM cases where research is exclusive to the USA. Neglecting to investigate CAM cases from a from other countries arguably limits the understanding of child abduction offences from a cross-cultural perspective. Therefore, further interest and empirical examination is required.

4.4 Limitations of reviewed studies

There are several limitations in the way studies have operationalised NFA and the numerous variables they have been examined. One of the main issues surrounds non-random sampling methods; however, given the complexity of child abduction cases, this is somewhat unavoidable. Even with samples derived from official sources, attention is drawn to the issue of missing data relating to variables such as victim gender. This issue of missing data was evident in 23% of cases in Erikson and Friendship's (2002) UK study. Some studies also have an over-representation of female victims (Gallagher *et al.*, 2008). As some abductions such as attempts or completed cases involving sexual assault may go unreported, recorded abductions are arguably not representative of all cases. Some researchers have also limited the scope of their study to include cases with a sexual motive only. Restricting the sample to sexual violence and sexual offending only limits the external validity of findings, particularly in relation to other motives involved in child abduction offences. However, the findings related to sexual motives are still useful in highlighting the links between the literature on sexual offending and child abduction.

4.5 Limitations of current review

The current review constitutes a significant contribution to the knowledge of NFA. However, there were some limitations. Firstly, the search was limited to research that had been written

in English, which could have resulted in useful evidence being left out of the review. Second, the review only included evidence from articles that were either peer-reviewed (including examined grey literature). This was done to ensure that all recommendations put forward in the discussion were devised from reliable research. However, this ultimately led to a reduction in potentially useful evidence and an increased risk of publication bias within the results (Perestelo-Pérez, 2013).

4.6 Future directions

Due to the limited literature on NFA and CAM cases outside of the USA, this is an area in need of cross-cultural research. To assist police forces in identifying the likely victim–offender relationship with the aim of facilitating refined lines of enquiry, researchers should consider what information operationally is likely to be available to the police at the onset of an NFA case. This may include a limited number of victim characteristics such as age, gender and ethnicity. Further exploration of how these victim characteristics relate to the victim–offender relationship is warranted. If, for example, an acquaintance is identified as the likely offender, a refined investigative strategy centred on collecting information from the victim's family and social associates, rather than door to door canvassing of a specific geographic location, might facilitate the identification of potential suspects, or refine a pre-existing suspect pool. Conversely, consideration should be given to research which adopts an inverse approach, that is, when the deceased body of an abducted child is found.

Research examining types and extent of victim injury, and other observable characteristics at a crime scene (including geo-spatial patterns, see Willmott *et al.*, 2021), should also be examined to determine if they have applicability in determining the victim–offender relationship. Research on the latter may also prove useful in developing themes of offending and the determination of other offender characteristics (Mann *et al.*, 2020). Furthermore, to identify risk factors of fatal outcomes, attention should be focussed on differentiating non-fatal and fatal victim, offender and offence characteristics while controlling for the victim–offender relationship.

Regarding fatal cases, the terms acquaintance and stranger need to be standardised to maintain clarity in the interpretation of findings from any subsequent studies. As well as advancing the UK knowledge base in this area, this research would serve several purposes. Firstly, it would be the first research of its kind to examine cases of CAM from an UK perspective. Secondly, it would indicate whether the existing US findings could be applied to international cases, and thirdly, it would build on the existing US literature. As discussed, victim selection also presents a gap in the literature; however, research in this area would require access to a clinical or forensic sample. Such research may be achieved by using a qualitative approach (Filkin *et al.*, 2022) from which themes in victim acquisition can be explored. Finally, to gain further insight into the motives and psychological antecedents child abductions, clinical research should study the role of dark traits (e.g. psychopathy) and criminal cognitions (DeBlasio and Mojtahedi, 2023; Lilley *et al.*, 2023) within NFA samples.

5. Conclusions

This review is the first to synthesise research related to the behavioural characteristics associated with acquaintance and stranger abduction in general, and CAM cases. In conducting this review, clear gaps in the knowledge base were identified, as well as potential improvements for policy and practice which, if improved, could lead to more meaningful empirical investigation. The broad spectrum of offences that occur in the context of CAM cases, and the effect these have on the victim's family and investigating forces, support the rationale for continued empirical study in this area.

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Supplementary material

The supplementary material for this article can be found online.

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