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# Family and professional responses to children who have displayed sibling harmful sexual behaviours: A systematic review

Spencer Bailey

A thesis submitted to the University of Huddersfield in fulfilment of the requirements for the degree of Master's by Research (MSc) Social Work and Social Policy

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# **Abstract**

Sexual abuse by sibling children has received relatively little research attention, and yet is believed to be at least as common and as harmful as other forms of child sexual abuse. Most previous research on children and young people who have harmful sexual behaviours with their siblings has focused on individual and family characteristics. There are significant gaps in the knowledge base on sibling sexual abuse, including family responses that support the child who harmed, professional decision-making, legal and therapeutic interventions, and the effectiveness of these, and longer-term outcomes for children who have received treatment.

A systematic literature review was undertaken to comprehensively and exhaustively locate and synthesise empirical research literature on family and professional responses to those children who had displayed sibling-harmful sexual behaviours.

This study used a systematic mixed studies review design, identify, critically appraise, and qualitatively synthesise findings from empirical research data. A mixed studies approach was used to ensure that data was selected from a diverse range of quantitative, qualitative, and mixed study designs. A total of 28 studies were identified for inclusion across 3 electronic databases and from manual searches.

Findings from the included studies were thematically analysed and discussed within the context of broader research and practice literature. Implications for policy, practice, and future research are considered.

## **Keywords:**

<u>Harmful sexual behaviour, juvenile sex offender, siblings, incest, intrafamilial sexual</u> abuse, child sexual abuse, professional intervention, family

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Lastly, and importantly, my family:

Basu and baby bump,

Dad and Amelia,

Mam, in loving memory, I wish you could be here to share the joy of this accomplishment.

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# **Abbreviations**

ATSA Association for the Treatment of Sexual Abusers

BASW British Association of Social Workers

CAC Child advocacy centre CAT Critical appraisal tool

CCE Children's Commissioner for England CJJI Criminal Justice Joint Inspection

CJ Criminal justice
CP Child protection
CSA Child sexual abuse

CYP Children and young people / child and young person

ECHR European Convention on Human Rights

EFCSA Extra-familial child sexual abuse

ERASOR Estimate of Adolescent Sexual Offense Recidivism EUAF European Union Agency for Fundamental Rights

FGC Family group conferencing
FME Forensic medical examination
GMC General Medical Council
HSB Harmful sexual behaviour(s)
IFCSA Intra-familial child sexual abuse

M Mean

MDT Multi-disciplinary team

MMAT Mixed Methods Appraisal Tool

Mo Mode

MSR Mixed studies review
MST Multi-systemic therapy

MST-PSB Multi-systemic therapy for problem sexual behaviour

NMC Nursing and Midwifery Council

PICO Population, intervention, comparison, outcome

PRISMA Preferred Reporting Items for Systematic reviews and Meta-Analyses

PSB Problematic sexual behaviour(s) RCT Randomised controlled trial

RJ Restorative justice

SCIE Social Care Institute for Excellence

SES Socio-economic status

SHSB Sibling harmful sexual behaviour(s)
SMSR Systematic Mixed Studies Review

SR(s) Systematic review(s)
SSB Sibling sexual behaviours
SWE Social Work England

UNICEF United Nations Children's Fund

UK United Kingdom of Great Britain and Northern Ireland

US United States of America VRJ Vicarious restorative justice

YLS/CMI Youth Level of Service/Case Management Inventory

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# Introduction

# The research problem and rationale

Sexual abuse by siblings is an under-researched and under-reported phenomenon (Bertele & Talmon, 2021; Yates & Allardyce, 2021). There is a general presumption that sibling relationships are, by and large, healthy and supportive (Sanders, 2004; Rothschild & Pollock, 2013). Sibling relations can have a positive impact on children's behavioural, social, and emotional development and adjustment (McHale, 2012). Additional to sharing their heritage and common memories, siblinghood is likely to be the most enduring of all lifetime relationships (Sanders, 2004). However, and despite this significance, the influence of sibling relationships on children's development is not given sufficient prominence in research and practice (Sanders, 2004).

There are inherent methodological challenges with accurately measuring the scale of CSA in general (Parke & Karsna, 2019), with a particular absence of conclusive data on the extent to which sexual abuse involves siblings (Yates & Allardyce, 2021). Some researchers suggest that sibling sexual abuse is the most common form of intra-familial sexual abuse (Krienert and Walsh, 2011). However, and as with CSA generally (Priebe & Svedin, 2008), most children who have been sexually harmed do not seek help and therefore a large proportion remains hidden or undetected (Cyr et al., 2002).

Meta-analyses estimate that somewhere between 12-20% of girls and 5-8% of boys have been sexually abused before the age of 18 years (Karsna & Kelly, 2021). A significant proportion of sexual abuse is committed by children and young people, accounting for around one third of all cases known to child welfare and criminal justice systems in the UK and US (Almond et al., 2006; Erooga and Masson, 2006; Finkelhor et al. 2009). Research suggests that between one-quarter to one-half of all harmful sexual behaviour by children and young people involves a brother or sister (Shaw, 1999; Beckett, 2006; Finkelhor et al., 2009; Hackett et al., 2013; Jensen et al., 2020; Yates & Allardyce, 2021).

Despite this scale, compared to adult-initiated familial abuse, sibling sexual abuse has received relatively little attention in research (Warrington et al., 2017). Nonetheless, a small, but growing body of research is emerging, with a number of previous literature reviews summarising research and practice knowledge on sibling sexual abuse (Bass et al., 2006; Phillips-Green, 2002; Salazar et al., 2005; Tidefors et al., 2010; Yates and Allardyce, 2021). These, however, have been non-systematic reviews, a method of reviewing that has been criticised as selective and partial overviews of research literature. (Rutter et al., 2010).

Promisingly, however, some methodologically rigorous studies have been published in recent years. A meta-analysis compared intra-familial and extra-familial victims who had been sexually abused by juveniles (Martijn et al., 2020). Although this analysis extended beyond sibling relationships – with the inclusion of extended family members – it nevertheless provides a systematised approach to reviewing the literature with a statistical re-analysis of data from the studies that met the inclusion criteria (Aveyard et al., 2016). Martijn et al. (2020), however, limited its analysis to the individual, family, and offence characteristics in adolescents' backgrounds. One of the gaps highlighted in previous SHSB studies has been an absence of data beyond socio-demographic characteristics of the individual children involved (Krienert and Walsh, 2011) and their families (Hackett et al., 2014). Furthermore, a systematic review by Bertele & Talmon (2021) synthesised findings from empirical data on sibling sexual abuse victimisation, and it highlighted the deleterious impact of this harm, which included later-life anxiety and depression, and problems with self-esteem and sexual functioning (Bertele & Talmon, 2021). However, there has been no similar analysis of data on the implications and later-life impact of involvement in sibling sexual abuse on children accused of harm.

The research on SHSB has highlighted further knowledge gaps, including a lack of empirical attention to professional decision-making (Tener & Katz, 2018), legal and therapeutic interventions (Ballantine, 2012; Worling and Langton, 2012) and the effectiveness of these (Caffaro, 2020), and longer-term outcomes for children who have received these interventions (Yates & Allardyce, 2021). For many children and young

people who have displayed HSB, especially those over the age of criminal responsibility, professional support lies between the interface of child welfare and criminal justice systems (Masson & Hackett, 2003), presenting a particular challenge in meeting the complex needs of children who have harmed others, but who also require support and protection themselves (Baidawi & Sheehan, 2019; Cranbourne-Rosser et al., 2020). Professionals have reported lacking confidence, and having insufficient knowledge and skills, to appropriately respond to HSB (Clements et al., 2017), especially when it involves siblings (Yates & Allardyce, 2021). Very little is known, however, about how professionals and services respond specifically to SHSB and its implications on practice.

It is widely accepted that families play a critical role ensuring the stability and safety of CYP who have displayed HSB (Hackett, 2011; 2016). NICE guidelines (2016) underline the importance of involving families in responses to HSB, and this is especially important when the HSB has involved a sibling. Although a recent systematic review has provided findings on children and families' views of HSB interventions (Campbell et al., 2020), family experiences of, and responses to, SHSB have received far less research attention (Allardyce & Yates, 2018; Tidefors et al., 2010).

Systematic reviews provide an important summary of the state of knowledge to inform practice and policy decisions, and the direction of future research (Aveyard et al., 2016). By integrating findings on a specified topic, systematic reviews generate new knowledge through the identification of inconsistencies or anomalies in findings, appraisal of designs and methods of studies and the potential for bias, and by highlighting the limitations in the current body of knowledge (Drisko, 2020; Gopalakrishnan, & Ganeshkumar, 2013).

This systematic review examined knowledge about family and professional responses to SHSB from empirical research only. Social work requires an extensive knowledge base to inform decisions and as the rationale for interventions, and this encompasses theoretical and research knowledge (Trevithick, 2008). It is incumbent upon social workers, as it is other practitioners, to ensure that research knowledge informing these critical decisions

about, and responses to, sibling HSB are based on robust research data to ensure confidence and reliability in the findings (Long & Wodarski, 2010).

### Research aims

The present study was designed to identify, evaluate, and summarise the empirical research findings of all relevant individual studies on family and professionals' responses specifically to the CYP who have displayed SHSB. This study aimed to contribute to the evidence base on sibling HSB to guide practice decisions and future research, and to ultimately provide a more effective response for children and families.

# Research questions

- What is known from empirical research literature on family responses to children and young people who have displayed sibling harmful sexual behaviours?
- What is known from empirical research literature on professional responses to children and young people who have displayed sibling harmful sexual behaviours?
- What are the implications for practice and future research from this knowledge?

# Research objectives

A systematic literature review was undertaken to comprehensively and exhaustively locate and synthesise empirical research literature on family and professional responses to CYP who have displayed SHSB.

The purpose of this systematic review was to examine the key findings and any disparities with particular attention to:

 What are the key issues for families and professionals responding to children and young people who have displayed SHSB?

- What does the research data describe as family reactions to children who have displayed sibling HSB? What do families find that helps them, and what does not, when their child has sexually harmed a sibling?
- What are the professional and service responses, including child welfare and
  police investigations, following allegations of sibling sexual abuse, legal and
  therapeutic processes that follow, and outcomes for children accused of harm?
- What can be determined from the research findings about best practice in assessment and interventions as a response to sibling HSB?
- What gaps exist in the knowledge base to help guide future research on this topic?

Explicit and reproducible methods were used to systematically search, critically appraise, and synthesise findings from empirical research data. This systematic review intended to synthesise the research knowledge on sibling HSB, rather than carry out an effectiveness study of interventions, and therefore a mixed studies approach was used to ensure that data was derived from a diverse range of quantitative and qualitative study designs.

The current review of research on SHSB is specifically focused on findings in relation to children and young people *who sexually harmed their siblings*, rather than sibling victims *who had been harmed*.

# **Definitions and key terms**

Terminology used to describe sexual behaviour problems in children and young people varies across academic and practice disciplines, and countries. The terms used include 'juvenile sex offenders', 'sexually abusive youth', and 'sexually harmful adolescents.' Varying, imprecise and inaccurate terminology can create difficulties in appropriately identifying and responding to these concerns, in addition to complicating research approaches (Hackett et al., 2019), it is therefore important to explore these various terms and reach a definition for utilisation in this study.

The Children's Commissioner for England defines intra-familial sexual abuse, making reference to siblings as potential 'perpetrators', yet it is an all-encompassing definition which includes both adult-child and child-child abuse:

... sexual abuse perpetrated or facilitated in or out of the home, against a child under the age of 18, by a family member, or someone otherwise linked to the family context or environment, whether or not they are a family member. Within this definition, perpetrators may be close to the victim (e.g. father, uncle, stepfather), or less familiar (e.g. family friend, babysitter). (CCE 2015, p.6).

In research literature, various terms are used to refer to SHSB, including: 'sibling incest', 'intra-familial adolescent sex offenders', and 'sibling sexual harm.' There is no common definition, and this is likely to be because research in this area remains under-developed. Allardyce & Yates (2018) recognise the importance of attention to language, and recommend that child-centred language should be used to avoid pathologising children with stigmatising labels. In addition, these terms can be imprecise and misleading. 'Sex offender' is a misnomer if CYP have not become involved in the CJ system or are below the age of criminal responsibility. Similarly, 'incest' has traditionally referred to sexual intercourse with family members (Manchester, 1979), excluding a wide range of sexual touch and non-touch behaviours. 'Harmful sexual behaviour' is a far more inclusive and encompassing term that describes the behaviour of concern rather than any assumptions about the child and their intent.

This study has used sibling harmful sexual behaviour (SHSB) as a sub-category of the wider British umbrella term described above. Although there is no statutory definition of harmful sexual behaviour in the UK (Clements et al., 2017), a number of recent policy and practice guidance documents have drawn some degree of consensus on terminology and acceptance of the term 'harmful sexual behaviour' (Hackett, 2011). For the purpose of this research, the definition adopted by Research in Practice and the NSPCC's Operational Framework for HSB, was utilised:

sexual behaviours expressed by children and young people under the age of 18 years old that are developmentally inappropriate, may be harmful towards self or others, or be abusive towards another child, young person or adult. (Hackett et al., 2019, p.13).

However, this definition remains somewhat vague, and there is no established operational definition of SHSB (Caffaro, 2014). A Canadian study made an attempt to provide a working definition to set out its research parameters: "sexual acts initiated by one sibling towards another without the other's consent, by use of force or coercion, or where there is a power differential between the siblings" (Collin-Vézina et al., 2014, p.93). Some authors have suggested an age difference of two-to-five years between siblings as necessary to consider when differentiating between normative and harmful sexual behaviours between siblings (Russell, 1983; DeJong, 1989; Cyr et al., 2002). However, it is more typically accepted that age difference is not a good indicator of sibling sexual abuse (McVeigh, 2003) and that age difference is much lower in many substantiated cases of sibling abuse (Carlson et al., 2006).

Practitioners in the UK are advised to use a continuum of sexual behaviours as guidance (Yates & Allardyce, 2021). Some sexual behaviours (SSB) between siblings may be within developmental norms, and include exploratory play and harmless interactions. Other sexual behaviours may be more problematic (PSB) and potentially disruptive to a child's development. These include behaviours that are not appropriate for the social context and they usually refer to behaviours involving pre-pubescent children of similar ages. Although this study will predominately refer to sibling HSB, the use of the terms SSB and PSB will be included to make these specific distinctions

A further complicating factor is the definitional inconsistency of a 'sibling.' In previous studies, siblings have variously been defined as children who have one or both parents in common (Smith and Israel, 1987), whereas others include step-siblings with full siblings (Krienert et al., 2011; Collin-Vézina et al., 2014). O'Brein (1991) uses the definition of 'sibling' to include step-siblings, half-siblings and adoptive siblings, as does Griffee et al.

(2016). In deciding upon the scope of the definition of a sibling for the purpose of this research, these aforementioned studies are considered in addition to data on family composition from population studies. In the UK, 29% of children (aged 0-16) were not living with both birth parents between 2013-14, with that figure rising to 52% for children in families from the low-incomes households (Arzilli and Pierce, 2016). International comparisons indicate slightly lower proportions with US Census data reporting that 69% of children live with both parents and 16% live in (Kreider & Ellis, 2009). In Australia, 71% of children under 15 years old lived with two biological or adoptive parent in 2011 (Baxter, 2016). Consequently, as a sizeable proportion of children live in blended or reconstituted families, it would be unrepresentative to exclude these children from the definition of a 'sibling' within this study. Accordingly, this study includes the following within the definition of 'sibling':

- Full-siblings
- Half-siblings (one common biological parent)
- Step-siblings (a sibling as a result of a parent marrying/co-habiting with the other child's parent not blood-related)
- Adoptive siblings (including those biologically related and those related upon adoption)
- Siblings by kinship arrangement, if referenced (cousins, unrelated but co-habiting for a significant part of their lives)

### Structure of the thesis

The background chapter provides an overview of SHSB as a sub-set of HSB in CYP, with reference to relevant theories, prior research, and current practice knowledge on family and professional responses to SHSB. The methodology chapter provides justification for a systematic review design, and describes the approach taken to searching, screening, appraising, and synthesising data. The findings and their implications are summarised and discussed in the context of the wider research literature. Limitations of this study are outlined, followed by key recommendations for policy, practice, and research.

# Research background

# Child sexual abuse: overview

Child sexual abuse (CSA) is a global issue, affecting children across cultures and communities (UNICEF, 2017). The extent of CSA is such that it is increasingly recognised as a public health issue (Mathews and Collin-Vézina, 2016). Public and media awareness and interest in CSA has also accelerated across the last decade, largely influenced by high profile 'celebrity' scandals (Döring and Walterm 2020), however this coverage tends to sensationalise and misrepresent the nature and scale of child sexual abuse (Weatherred, 2015).

One of the major difficulties when estimating the extent of child sexual abuse is that there is not a universally agreed definition of this phenomenon (Mathews and Collin-Vézina, 2019). Definitions can, for example encompass a wide range of sexual acts and varying ages for victims (Collin-Vézina et al., 2013). Data collection methods are also problematic. The majority of studies that have assessed the scale of child sexual abuse have relied on data from self-reports or from data recorded by authorities (Mills et al., 2016). However, administrative data underestimate the scale of CSA because of inconsistent definitions and recording practices, and it can only measure CSA that has been reported to authorities (Kelly & Karsna, 2017). Child sexual abuse is often shrouded in secrecy and not brought to the attention of professionals or agencies (Parke and Karsna 2019). Relying on these data alone does not fully represent the extent of child sexual abuse victimisation.

Notwithstanding these complexities, there is a general consensus that child sexual abuse is a widespread problem (Collin-Vézina et al., 2013). A number of meta-analyses on prevalence studies have estimated that at least 15-20 percent of girls and 7-8 percent of

<sup>1</sup> Operational key terms and definitions for this systematic review are summarised in the preceding chapter.

boys have been subjected to some form of sexual abuse in their childhoods (Kelly and Karsna, 2017).

Popular discourses on CSA, primarily, but not exclusively, promoted by the media (Cowburn and Dominelli, 2001), have had a disproportionate focus on 'stranger danger' and 'predatory' adults (McAllinden, 2006). In reality, a significant proportion of child sexual abuse is by other children and adolescents, including family members (Warner and Bartels, 2015; Allardyce and Yates, 2018).

### Harmful sexual behaviours

'Harmful sexual behaviour' (HSB) is a term used to describe a broad range of inappropriate sexual behaviours by children and young people under the age of 18 years; from those that are problematic or disruptive, to those that are violent and abusive behaviours (Hackett, 2011; McNeish and Scott, 2018a). Children who have displayed HSB are a diverse group (McNeish and Scott, 2018a). There is, however, generally a demarcation is made by researchers and practitioners between pre-pubescent children, under 12 years old, and adolescents 12 years and over old, on the basis that these ages representing distinctly different stages of development (Chaffin et al., 2008; Hackett, 2011; Hackett et al., 2019). Problem sexual behaviours in pre-pubescent children are not necessarily sexually motivated (Hackett, 2019). Younger children's PSB may be a reactive response to trauma or neglect (Gray et al., 2009), or connected to difficulties with adjustment and development (Elkovitch et al., 2009). Although PSB may be inappropriate or potentially harmful to the child and those around him or her, they are usually far less damaging than some of the more violent and abusive behaviours displayed by adolescents (Chaffin et al., 2008). For these reasons, 'problematic sexual behaviour' (PSB) is the preferred term in referring to this phenomenon in younger children (Hackett, 2011).

As with sexual abuse in general, it is difficult to accurately estimate the extent of HSBs in CYP (McNeish and Scott, 2018a). However, it is widely accepted that significant

proportion of sexual harm against children is committed by other CYP (Erooga and Masson, 2006; Allardyce and Yates, 2018). Young people account for more than a third of child sexual abuse reported to authorities in the United States (Finkelhor, Ormrod & Chaffin, 2009), with similar findings in the United Kingdom (Erooga and Masson, 2006; Hackett et al., 2013). Victimisation studies suggest that the proportion of children who are sexually harmed by other CYP is far higher than those identified in official records, accounting for up to two-thirds (Radford et al., 2011), to three-quarters of all CSA (Gewirtz-Meydan and Finkelhor, 2020).

HSBs peak around mid to late adolescence, 14-16 years old, representing over half of referrals to specialist services (Hackett, 2011; Hackett et al., 2013). Allardyce and Yates (2018) observe the methodological limitations of relying on data from the criminal justice system for younger children displaying PSB who are likely to be below the age of criminal responsibility. CYP who have displayed HSB are predominately boys, with as few as 3-7% of HSB by girls (Finkelhor et al., 2009; Hackett et al., 2013). Girls who display HSB tend to be younger, most under 12 years old (Chaffin et al., 2008), have higher levels of sexual victimisation, and are less likely than boys to be charged with an offence (Hickey et al., 2008; McNeish and Scott, 2018).

The large majority of victims of young people who display harmful sexual behaviour are female, accounting for over three-quarters of victims in the sample by Finkelhor et al. (2009) and half in a British sample by Hackett et al. (2013). A much smaller proportion, around a fifth, of HSB involves same-sex victims, with even fewer young people harming both male and female victims (Allardyce and Yates, 2018). Victims of CYP who have displayed HSB are mostly peers or marginally younger children, with a mean age difference of around 4 years; although when HSB occur between pre-pubescent children, this age difference is smaller. Overall, more than half of victims were under 12 years old in a US incidence study (Finkelhor et al., 2009), and an average victim age of 8 years old was found in a British study (Taylor, 2003).

Sexual touching or 'fondling' is the most commonly reported HSB (Taylor, 2003; Finkelhor et al., 2009; Hackett et al. 2013). Penetration or attempted penetration was alleged in almost half of all cases examined by Hackett and colleagues (2013). When figures are compared to adult sexual offending, sodomy was reported at higher rates in CYP HSB than in adult HSB, however allegations of rape were moderately lower in CYP than adults (Finkelhor et al., 2009).

Only a small proportion of CSA victims disclose in childhood. Research by Gewirtz-Meydan & Finkelhor (2020) found only half of children they studied reported CSA to parents and less than a fifth to police. When HSB comes to the attention of the police, younger children who have carried out these acts are considerably less likely to be arrested than older adolescents (Finkelhor et al., 2009). Sexual recidivism rates for CYP who have been convicted of sexual offences are low, with a meta-analysis finding less than 5% across a follow-up period of almost five years (Caldwell, 2016).

Typologies of HSB can be useful to assist with the identification, risk assessment and supervision needs of these CYP (Allardyce and Yates, 2018). Almond and colleagues (2006) examined the backgrounds of more than 300 children who had displayed HSB and identified three dominant characteristic and background themes: young people who were impaired (29 percent), abused (28 percent), and delinquent (14 percent). 'Impaired' CYP included those with learning disabilities, ASD, ADHD, and emotional and behavioural problems (Almond et al., 2006). These findings are mirrored in other large-scale studies, which consistently found an over-representation of CYP with learning difficulties (Seto and Lalumière, 2010; Hackett et al., 2013). CYP in the 'abused' category had been subjected to frequent physical and sexual abuse, and HSB was considered to be part of a response to this abuse. The delinquent category comprised young people whose sexual offending was one part a pattern of multiple other non-sexual anti-social and criminal behaviours.

Dysfunctional and disruptive childhoods appear to be common in the childhood backgrounds of these CYP. Younger children displaying PSB commonly lived with high levels of family violence and had been subjected to abuse, predominately sexual abuse (Gray et al., 1999). More broadly, over two thirds of children and adolescents of all age groups had experienced at least one form of maltreatment prior to the onset of HSB, which included emotional abuse, physical abuse, domestic violence, parental drug or alcohol misuse (Hackett, et al., 2013). A meta-analysis by Seto and Lalumière (2010) found that CYP who displayed HSB are five-times more likely to have been sexually abused than adolescents who offended non-sexually.

Balfe et al. (2019) urge caution against psychologically profiling young people who have displayed HSB and suggest that this behaviour may be part of a number of wider welfare concerns in the child's life. For example, high rates of social isolation and loneliness were common amongst these adolescents (Balfe et al., 2019). Allardyce and Yates (2018) similarly underscore the heterogeneity of these children and the importance of individualised responses. Childhood maltreatment cannot singly explain harmful sexual behaviours, and the wider social, emotional, and cognitive development of the child needs to be fully considered (McNeish and Scott, 2018a). A small sub-sample of young people identified by Balfe and colleagues (2019) had very positive backgrounds, and thus the authors suggest that pornography or peer influence may also be relevant factors in the development of HSB.

### Intrafamilial child sexual abuse

Most victims of CYP who displayed HSB were known to them (Hacket, 2011). These behaviours are most likely to occur inside or near children's domestic settings; with over two-thirds of children sexually abusing other children at home (Finkelhor, 2009). Between one-third and one-half of all HSB is intrafamilial (Beckett, 2006; Allardyce and Yates, 2018).

There is no single agreed definition of intrafamilial CSA, although it typically refers to sexual harm within a family environment by someone that may or may not be related to the child (McNeish and Scott, 2018b). This includes relatives, but also those living within

close proximity to the child, including step-parents, close family friends, and babysitters (Howarth, 2014). In England and Wales, incest offences<sup>2</sup> were repealed by the Sexual Offences Act (2003) which introduced familial sexual abuse with extended definitions in recognition of the broader socio-legal relationships within families, with incest laws repealed by familial child sex offences (Crown Prosecution Service, 2013).

ICSA is believed to account for two-thirds of all child sex abuse (Warrington et al., 2017). Sexual abuse in the family tends to start when victims are younger, compared to EFCSA (Fischer and McDonald, 1998), and may continue over many years (Allnock and Miller, 2013). Most abuse is not detected, and it is estimated that only one in eight victims of familial child sexual abuse report it to authorities (McNeish and Scott 2018b).

There is preponderance for research on IFCSA to focus on father-daughter abuse dynamics whilst sexual abuse between siblings remains under-examined (Caffaro, 2020).

# **Sibling HSB**

SHSBs are believed to be the most common form of IFCSA (Krienert and Walsh, 2011), with some estimates of it being at least five times more prevalent than parent-child IFCSA (Smith and Israel, 1987). CYP who display SHSB commit a higher number of abusive acts, and over longer periods of time, than those who display non-sibling HSB (Worling, 1995; Cyr et al., 2002; Daly, 2013). CYP who display SHSB have their own vulnerabilities, having experienced higher rates of dysfunctional family dynamics and sexual victimisation (O'Brien, 1991; Thornton et al., 2008; Tidefors et al., 2010).

SHSB has far-reaching impacts for the health and wellbeing of victims (Warrington et al., 2017), and is considered by some as no less harmful than when a parent or other adult is the perpetrator (Caffaro, 2017; Carlson et al., 2006; Rudd and Herzberger, 1999; Strobel et al., 2013).

<sup>&</sup>lt;sup>2</sup> Previous incest offences included Sexual Offences Act (1956): incest by a male (s.10) or female (s.11) person; and the Criminal Law Act (1977): incitement of a girl under 16 to commit incest (s.54).

Misconceptions about 'normal exploratory play' and child sexual development have previously failed to give due seriousness to the issue of SHSB (Alder and Schutz, 1995). The absence of any universally accepted definitions for sibling sexual abuse compounds this problem (Caffaro, 2014). Boundaries demarcating 'normal' sibling sexual behaviours (SSB), such as play and exploration, from behaviour that constitutes abuse, are often blurred (Yates, 2017). Prevalence data on SHSB are inconclusive (Yates & Allardyce, 2021), however rates reported by a large US study found that 13% of respondents experienced SSB in childhood, and 5% experienced SHSB (Finkelhor, 1980).

Only a small proportion of studies deal exclusively with SHSB. This has included comparisons of adolescents who sexually harm intrafamilial and extra-familial children. Recent larger studies (van Vugt and Garofalo, 2020), including a meta-analysis (Martijn et al., 2020), have developed these comparisons to further develop understanding of individual characteristics and behaviours based on victim-perpetrator relationship in terms of whether it is intra- or extrafamilial. Overall, these studies have found more similarities than differences (van Vugt and Garofalo, 2020), with a few notable exceptions. The authors describe these differences as 'common clustered factors' to avoid the inference of causality (Martijn et al., 2020).

SHSB commonly takes place within the context of other familial difficulties, with family dysfunction and maltreatment a consistent finding (Martijn et al., 2020). Studies have found that this includes higher proportions of physical, emotional, and sexual abuse amongst CYP who have displayed SHSB, in comparison to CYP who have displayed non-sibling HSB (Worling, 1995; Tidefors et al., 2010; Latzman et al., 2011). The meta-analysis by Matijn et al. also found that CYP who sexually harm intrafamilial children display greater atypical sexual interests and sexual dysregulation, and somewhat more psychopathology, than CYP who harm extra-familial children (Martijn et al., 2020). This may be a result of higher levels of family dysfunction in the backgrounds of these adolescents, which included sexualised family environments and norms and increased pornography use (Martijn et al., 2020).

Most commonly, SHSB features an older brother child harming a younger sister (Krienert and Walsh, 2011; Daly, 2013). Families tended to be larger when victims were intrafamilial compared to extrafamilial children (van Vugt and Garofalo, 2020). Some limited support is also found for the existence of relationship difficulties between family members, with intrafamilial victims reporting more strained and unequal relationships compared to non-familial victims (Martijn et al., 2020). Connectedly, 'jealous anger' has been posited as a potential distinguishing feature of adolescents who abuse siblings compared to those who abuse outside of the family (Yates et al., 2012), whereas other researchers identify power and status differentials between siblings within patriarchal family settings as being influential in the development of SHSB (Phillips-Green, 2002). Assessment of risk factors for CYP who have displayed SHSB suggest that they are at higher risk of recidivism than CYP who displayed non-sibling HSB (Rayment-McHugh & Nisbet, 2003).

# Sibling HSB: theory

Several theories on the causes of SHSB have been proposed, and these theories have implications for informing treatment responses.

Bank & Khan (1982) differentiate between two distinct types of SHSB: power- and nurture-orientated. Power-oriented SHSB is considered to be aggressive and rage-based, involving physical and sexual violence from an older sibling towards a younger, more vulnerable sibling. (Maddock & Larson, 1995). CYP who display power-based SHSB use coercion and secrecy alongside violence, and these CYP are often in a parental-like authority figure of the dependent, younger sibling (Furniss, 1991).

Contrastingly, nurture-orientated SHSB is affection-based and compensates for the siblings' unmet emotional needs in the context of neglectful or emotionally absent parenting (Bank & Khan, 1982). Furniss (1991) refers to this type of SHSB as the

'Hansel and Gretel syndrome' in which children, close in age, meet unmet emotional needs through sexualised bonding.

Less prominent theories on SHSB include reference to a 'vampire syndrome' based on the higher prevalence of sexual victimisation in the backgrounds of CYP who display SHSB, compared to other forms of HSB (Adler & Schutz, 1995; O'Brien, 1991; Worling, 1995). Psychoanalytic theorists suggest that when a younger sibling is born, the older child perceives this change as traumatic and a loss to the child's previous narcissistic view of self and omnipotence (Mitchell, 2003). SHSB is theorised as an unconscious fantasy of harm towards the younger sibling based on this earlier disruption (Mitchell, 2003).

Family systems approaches to believe that family dynamics are likely to play a significant role in the development and maintenance of SHSB, and that treatment for SHSB (Caffaro, 2014). Treatment approaches based on systems theory aim to correct dysfunctional patterns of behaviours, such as violence rejection, and poor communication, that are believed to underly SHSB (Caffaro, 2014).

# Sibling HSB: responses

When siblings sexually abuse within their family homes it presents unique challenges and dilemmas for families and professionals (Tapara, 2012; Keane et al., 2013; Yates, 2018). Little has been written about treatment or interventions in response to SHSB. Approaches that are family-oriented and restorative have been suggested as essential (Allardyce and Yates, 2018).

Practice guidance places importance on victim 'clarification' to restore sibling and family relationships (Hodges, 2002; Thomas and Viar, 2005). Clarification, with roots in restorative justice, aims to provide the victim with a form of restitution (Lipovsky, et al., 1998). A clarification session involves the child who harmed meeting with the victim child to accept acknowledge and accept responsibility for harm caused, to hear directly

about the impact of SHSB, and to provide an opportunity to for the child who harmed to make amends, preferably with an apology (Rich, 2011).

Professionals responding to sibling sexual abuse are faced with complex decisions about contact between siblings and their living arrangements, including out of home placements, and if, or when, future reunification should be considered (Allardyce and Yates, 2018; Caffaro, 2020). There is a presumption in child welfare policy and practice that it is in siblings' 'best interests' to be kept together, and this is believed to confound professionals' responses even when there is potential risk from one sibling to another (Rothschild and Pollack, 2013).

A small number of articles from academics and clinicians provide interesting opinions and reflections about these placement decisions and dilemmas (Rayment and Owen, 1999; Tapara, 2012; Keane et al., 2013), however these are often contradictory and there remains a dearth of empirical research in this area to guide practice decisions. Several commentators recommend that the CYP who displayed SHSB is removed from the family home to ensure the safety of the victim child, and until further assessment of risks and needs of both children (Ballantine, 2012; Tapara, 2012; Yates & Allardyce, 2021). In contrast, Keane et al. (2013) contend that separating the CYP accused of harm from the family home is a diminution of children's rights, and instead propose that the family's protectiveness is promoted through family and systemic approaches (Keane et al., 2013).

Practitioners responding to SHSB must contend with the opposing needs of the victim, offender, and family; and safety issues are magnified when both the sibling who harmed and the victim share a home (Skau et al., 2008). Research on professionals' responses to SHSB indicate that professionals may minimise or inadequately consider the impact of harm on the victim child in cases of SHSB. (McVeigh, 2003; Yates, 2018), Assessments of risk and the potential for reunification following SHSB are based on the broader juvenile sexual abuse knowledge base, and do not consider the unique nature of sibling sexual abuse (Allardyce and Yates, 2013). Family-based assessments are recommended to support these critical decisions (Caffaro, 2020). Interventions that aim to improve

family functioning, enhance the safety of the family environment, and the protective capacity of parents, are suggested as the main treatment goals for SHSB (Caffaro, 2014; 2020). The role of parents in responding to SHSB is therefore seen as crucial.

# Methodology

# Overview of research approach

This study used a qualitative evidence synthesis methodology, utilising established principles of systematic reviewing. Systematic reviews are a rigorous and transparent approach to synthesising the available evidence on a specified topic (Teater et al., 2017). Critically appraising the synthesised data reduces bias and enhances the reliability and strength of the findings, and any conclusions that can be drawn (Newman et al., 2005). Researchers, policymakers, and practitioners consider systematic reviews to be valuable sources of information to support evidence-based decision-making, and to direct future research (Gopalakrishnan, & Ganeshkumar, 2013).

# **Epistemological and ontological perspectives**

Systematic reviews are gaining increasingly prominence as a research design within social work research (Strandberg and Simpson, 2020), however they have not been impervious to the broader epistemological debates about research methods.

Systematic reviews originated within medicine and the health sciences to help with decisions about treatment effectiveness (Macdonald and Popay, 2010; Alston and Bowles, 2013). The scope of these reviews was initially focused on synthesising findings from single research designs – predominately, randomised control trails in which bias can be reduced by controlling through randomisation and blinding (Aveyard et al. 2016; Grant & Booth, 2009; Newman et al., 2005). Hierarchies for the best source of research evidence were proposed whereby research designs were ranked according to their potential for reducing particular forms of bias, with a privileging of studies with positivist orientations (Aveyard, 2016). Literature reviews have since developed to encompass a much wider range of research designs (Grant and Booth, 2009; Gough et al., 2012), although studies built on positivist assumptions of ontology and epistemology remain dominant (Suri, 2013; Teater et al., 2017). Indeed, it has been argued by some (Suri,

2013) that the processes and strategies of searching and reporting, fundamental to systematic reviewing, are intrinsic features of its positivist paradigm.

Historically, particular research methods were wedded to certain paradigms, with their own separate philosophical stance and assumptions (Greene and Caracelli, 2003). Two original and opposing paradigms were at the centre of epistemological debates: logical positivism, a deductive approach favouring a single objective reality was typically associated with quantitative methods; and constructivism, an inductive approach which views multiple, socially constructed realities, usually linked to qualitative methods (Pluye and Hong, 2014). Mixed methods research developed as a third, alternative approach to these contrasting epistemological traditions (Teddlie and Tashakkori, 2009).

As an approach to research, mixed methods are described as both a methodology and a philosophical framework (Teddie and Tashakkori, 2009). It is unencumbered by adherence to either objective or subjective stances, and instead social reality is viewed as multi-ontological (Greene and Caracelli, 2003; Shaw and Frost, 2015). Quantitative and qualitative methods are integrated to address the research question and better understand the complexities of phenomena through multiple and diverse paradigms (Greene and Caracelli, 2003; Braye and Preston-Shoot, 2007). In a mixed methods approach, research is led by practical decisions about the inquiry rather than epistemological allegiances (Teddlie and Tashakkori, 2009). It is through this practical approach to research that mixed methods has come to be associated predominantly with the philosophy of pragmatism (Cresswell, 2015). Pragmatism recognises the limits of single epistemologies and offers a flexible and pluralistic approach to understanding human behaviour (Greene and Caracelli, 2003). Notwithstanding distinctions that have been drawn between pragmatism and pluralism, they share many consistencies (Aikin and Talisse, 2016). An integrative approach to research militates against reductionism by providing a holistic and in-depth understanding of complex social phenomena through divergent but mutually informing perspectives (Shaw and Frost, 2015).

The pragmatic approach of combining methods in research is seen by some as philosophically incongruent (Timans et al., 2019). Nevertheless, the exponential growth of mixed methods research, in social sciences especially, has gained a wider acceptance (Bryman, 2016). This has extended to systematic reviewing in which traditional quantitative reviews have evolved to incorporate a more diverse range of methods, including mixed methods (Hong et al., 2017).

## **Epistemology and social work**

These epistemological issues are also of relevance to social work research. There are, however, distinct differences in the types and credibility of social work knowledge claims that set social work apart from other professions and disciplines (Parton, 2000). Social work knowledge is methodologically diverse, and it has developed eclectically with influences from the disciplines of psychology, sociology and social policy (Marthinsen, 2011). Theory and practice are, moreover, interwoven in social work, and the context in which practice occurs is complex and varied (Parton, 2000; Gray et al., 2013; Hardy, 2016).

Epistemological divides between positivism and constructivism shape the various views about the nature of knowledge and theory in social work practice (Payne, 2005). Social constructionism, as an interpretivist theory, emphasises the ambiguity and complexity inherent in social work practice (Payne, 2005). It values the importance of individuals' own interpretation and understanding of their needs, and considers the operational context of practice (Parton, 2000).

Social work exists in a socio-political context of competing ideologies, political agendas, policy influences and resource pressures (Frost, 2002). Social work practice combines the views and individual needs of those receiving services alongside influences from various other stakeholders – organisations, researchers, and policy makers (Hardy, 2016). Social work decision-making is a far more complex process than applying knowledge of 'what works' or best evidence to practice settings (Shlonsky et al., 2011). Evidence-based

decisions in social work practice assume rationality; disregarding values, heuristics and inferential judgements that are inextricably tied to decision-making processes (Webb, 2001). In contrast to other professions, social work practice occurs in natural settings, people's homes and communities, rather than clinics (Parton, 2000). Negotiation, partnership and empowerment are core values guiding practice (British Association of Social Workers, 2014), and therefore the best evidence may be at odds with an individual client's preferences (Parton, 2000; Frost, 2002). As such, social work is local and contextual (Webb, 2001), limiting the transferability of evidence from one setting to another (Frost, 2002).

Positivism in social work has been attributed to the promotion of evidence-based practice (Payne, 2005). Proponents of evidence-based approaches believe that it is ethically incumbent upon social workers to ensure that practice is informed by the best available evidence (Gibbs and Gambrill, 2002). Evidence-based social work aims to question knowledge claims through critical appraisal (Newman et al., 2005). According to advocates of evidence-based social work, interventions are more likely to create favourable outcomes for individuals if they are based on evidence of effectiveness (Newman et al., 2005).

Social workers need to be able to make use of reliable evidence to inform practice (Otto et al., 2009; Webber and Carr, 2015). This is recognised as an integral component of professional proficiency and regulatory standards; in England as demonstrated, for example, in the Practice Capabilities Framework (British Association of Social Workers, 2018) and Social Work England (2019). What counts as 'good' evidence, however, remains contested and political (Trinder, 1996; Nutley et al., 2019). Social work knowledge is diverse, combining research evidence, opinions, and beliefs from multifarious sources (Pawson et al., 2003)

The limitations of applying evidence in social work practice have been recognised (Gray et al., 2013), leading to a more realistic and less deterministic view of its contribution (Nutley et al., 2019). Traditional hierarchies of evidence do not sufficiently consider the

variety and complexities of knowledge in social work and a more nuanced approach to evidence is necessitated (Taylor et al., 2007). Instead of ranking knowledge types, evidence is considered as complementary (Taylor et al., 2007; Webber and Carr, 2015) alongside other influences, including ideologies, opinions, choices and beliefs (Nutley et al., 2019). Research evidence is valuable, but it is not sufficient on its own to be prescriptive in social work decision-making (Munro and Hardie, 2019), and therefore evidence-*informed* practice may be a more befitting descriptor to encapsulate these limitations (Shlonskey at al., 2011; Nutley et al., 2019).

Similar to mixed methods research, pragmatism has been posited as an integrative and inclusive paradigm that sympathetically aligns with the practical utility required of social work research (Hardy, 2016; Hothersall, 2016).

Pragmatism focuses attention on experience and context as the basis for inquiry, and this takes precedence over ontological and epistemological issues (Trinder, 1996; Hardy, 2016). Along with practicality, pluralism is a core principle of pragmatism (Hothersall, 2019). Single methodologies are insufficiently capable of addressing the varied and complex issues in social work research (Hardy, 2016), and instead knowledge is produced through a plurality of viewpoints and methods (Kaushik and Walsh, 2019). This diversity and difference, as espoused by pragmatism, is noticeably congruent with some core social work values (British Association of Social Workers, 2014).

# **Systematic reviews**

Literature reviews are a core element of the research process in social sciences (Bryman, 2016). These reviews serve as the foundations of a study by summarising an existing body of research and concepts in a particular area, identifying gaps and drawing conclusions that link to the research aims and questions, and how these can make an important contribution to knowledge (Aveyard, 2016).

Systematic literature reviews differ vastly from traditional, non-systematic reviews (Rutter et al., 2010). A systematic review is a specific methodology in itself (Alston and Bowles, 2013; Siddaway et al., 2019). Non-systematic reviews have been criticised for lacking transparency and taking a selective approach to presenting the literature, leading to a greater potential for bias (Macdonald and Popay, 2010; Rutter et al., 2010; Siddaway et al., 2019). Systematic reviewing, conversely, uses "explicit, rigorous and accountable methods" (Gough et al., 2017, p.6) to comprehensively locate all research relevant to the research questions (Siddaway et al., 2019).

Systematic reviews comprise three constituent parts: *identifying* the relevant research, usually through exhaustive searching; *critically appraising* the research using explicit methods; and *synthesising* the evidence by summarising and producing new knowledge from connections between individual primary studies (Gough et al., 2017).

A distinguishing feature of systematic reviews is the explicitness of methods and decision-making to ensure transparency and replicability (Bryman, 2016). Reporting these methods transparently, enhances the quality and reliability of the review so that it "is as objective as possible, and that the nature of any influence or bias operating on the perspectives in a review is made explicit" (Rutter et al., 2010, p.19). This transparency of methods allows readers to consider the synthesised findings in terms of relevance to their own practice or research context (Suri, 2013).

Most systematic reviews involve exhaustive searching in which the review sets out to provide a broad and detailed understanding of the topic by presenting all the findings relevant to the research question (Hong et al., 2017). This helps to generate robust and reliable conclusions by minimising bias and subjectivity (Rutter et al., 2010). Systematic reviews utilise explicit inclusion and inclusion criteria a priori; this ensures that the review provides a 'warts and all' synthesis of the literature on the topic without any influence from the researcher's affinity to a particular viewpoint or method (Macdonald and Popay, 2010). The comprehensiveness of this method leads to more robust evidence from a synthesis of many different and varying types of study, far more than could be

achieved from a single study design (Victor, 2008; Rutter et al., 2010). It is for these reasons that those who favour systematic reviews believe they are of a higher quality than other types of literature review (Siddaway et al., 2019).

Given the strengths of systematic reviews, they have been seen as making a contribution to enhancing the social work knowledge base (Strandberg and Simpson, 2020). Nonetheless, social work has tended to view systematic reviews with dubiety (Crisp, 2015), stereotyping them as valuing experimental research, usually randomised control trials (RCTs), above other types of knowledge (Braye and Preston-Shoot, 2007; Hardy, 2016). Social work traditionally has an interpretivist proclivity, with a diverse concept of validity and an indisposition to numerical data as a means to understand people's lives (Sheppard, 2016). are relatively uncommon in social work research (Sheppard, 2016) and therefore cannot be relied on as a sole source of evidence (Macdonald and Popay, 2010).

Systematic reviews in social work need to take into account and reflect the complexity of social problems to assuage these criticisms and to make a more impactful contribution to improving the quality of social work knowledge (Braye and Preston-Shoot, 2007; Crisp, 2015. A general criticism of systematic reviews is the assumption they favour positivist research designs (Bryman 2016; Gough et al., 2017). However, methodological approaches to systematic reviews have evolved and a wide range of quantitative and qualitative methods have been incorporated into systematic reviews to accept more comprehensive and diverse synthesis of evidence (Macdonald and Popay, 201; Shlonsky et al., 2011; Bryman, 2016).

Systematic mixed study reviews (SMSR) have been developed as a methodologically inclusive approach to a diverse range of study designs (Hong et al., 2017; Lizarondo et al.; 2017). SMSRs capture and synthesise data from studies that use quantitative, qualitative, and mixed methods research to better understand complex phenomena (Pluye and Hong, 2014). Instead of restricting questions to effectiveness "a typical mixed studies review question is, 'What does the qualitative and quantitative evidence tell us

about...?" (Pluye and Hong, 2014, p.36). Interchangeable terms are used to describe this review design, including; integrative review, mixed methods review, and mixed research synthesis (Hong, 2017). Pluye and Hong (2014) suggest that 'mixed studies review' is the preferential term because it is a clearer and more precise description of mixing studies of diverse designs in the systematic review, as opposed to integrative reviews that include theoretical studies (Lizarondo, 2017), or a systematic review of only mixed methods designs (Pluye and Hong, 2014).

The present study used a systematic mixed studies design to provide a broad and deep knowledge synthesis on sibling harmful sexual behaviour through the strengths of combining quantitative, qualitative, and mixed methods primary research data. This was intended to provide a more holistic understanding of the phenomenon, and how it is experienced by children, families and professionals, than could be achieved by single method reviews alone. This review utilised the range of guidance on the planning, and conduct (Pluye and Hong, 2014), synthesis (Hong et al., 2017) and appraisal, (Pluye et al., 2009) developed specifically for systematic mixed studies review designs.

# Review and synthesis protocol

This systematic mixed studies review was conducted and reported in accordance with the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) checklist (Moher et al., 2009). PRISMA recommends a pre-defined protocol before undertaking the systematic review (Moher et al., 2009).

# Developing the review questions and search strategy

The first step of the review comprised a preliminary scope of the literature. This was carried out to develop the research questions and search strategy (Siddaway et al., 2019). The purpose of this step was, more specifically, to establish if a systematic review had been completed already; to consider the breadth of, and define the boundaries for, the proposed review, for an overview on the nature of the extant literature; and to achieve a general sense of, and familiarisation with, the literature (Siddaway et al., 2019). No

existing systematic reviews were identified and previous reviews of literature on SHSB were non-systematic (Phillips-Green, 2002; Tidefors et al., 2010; Yates & Allardyce, 2021).

# Eligibility criteria

The review questions were operationalised by using the eligibility criteria to ensure only relevant work was included in the systematic review (Rutter et al., 2010; Siddaway et al., 2019). Pilot searching of a small number of studies tested the inclusion and exclusion criteria to refine and maximise reliability (Fink, 2020). The eligibility criteria were not used to exclude studies based on the quality of methods they used (Bryman, 2016), recognising the importance of taking an inclusive approach to research in social work (Rutter et al., 2010). Methodological bias was assessed by quality appraisal of included studies, further described below.

 Table 3.1

 Inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
<ul> <li>Papers published in English language</li> <li>Empirical research literature only</li> <li>Studies with a significant focus on the CYP who is alleged to have displayed SHSB</li> <li>CYP under 18 years of age</li> <li>Male and female CYP (who sexually harmed)</li> <li>Definition of sibling to include: birth siblings, half-siblings, stepsiblings, adoptive siblings, foster siblings co-habiting cousins.</li> </ul>	<ul> <li>Papers published in languages other than English (L)</li> <li>Non-empirical literature (e.g. discussion or theoretical papers, non-research papers) (M)</li> <li>Policy or procedure documents (M)</li> <li>Small case studies (&lt;10 participants): descriptive of clinical case examples (M)</li> <li>Studies in which focus is on perspective of victim(s) CYP without rich data in relation to child who harmed (S)</li> <li>Studies exploring sibling physical and/or emotional abuse (S)</li> <li>Studies of effects of SHSB on later-life/adult functioning (S)</li> <li>Evolutionary/behavioural studies of inbreeding avoidance/aversion (S)</li> <li>Studies of siblings of CYP sexually abused by an adult family member (P)</li> <li>Studies of adult sibling incest involving individuals aged 18 years or older (P)</li> <li>Studies of sexual harm against extra-familial CYP (P)</li> </ul>

This systematic review was focused on knowledge about sibling harmful sexual behaviours from empirical research only. Notwithstanding the epistemological debates, the purpose of this review was to provide a synthesis of empirical evidence. Empiricism is an epistemological theory that regards knowledge as observable to the senses, based on

observation, experimentation or simulation (Punch and Oancea, 2014; Hong et al., 2017). Non-empirical research includes conceptual and theory-based research, philosophical reasoning and historical reviews. Empirical research has been criticised for privileging research associated with positivism (Hardy, 2016). However, empirical research encompasses qualitative methods of non-numerical data collection and analysis for an understanding social phenomena and experience through observation, interview and experimentation (Bryman, 2016).

Guidance on systematic reviews in social care has been produced by the Social Care Institute for Excellence (Rutter at al., 2010). SCIE's position is that evidence within systematic reviews, whether quantitative or qualitative in design, should "primarily be derived from empirical research" (Rutter et al., 2010, p. 13). Taking this approach to the present systematic review does not discount other knowledge types, and the importance of these is recognised for providing the background and context to this review (Rutter et al., 2010).

Empirical studies are most likely to be published in academic journals (Siddaway et al., 2019), and database limiters and filters were used to implement this as an inclusion criterion. This is further detailed in information sources and Table 3.1, above. Similarly, peer-reviewed articles were an inclusion criterion for the purpose of ensuring some degree of critical assessment and rigour to the methods and findings. This meant, however, that grey literature was excluded. These are contestable decisions, but it was felt that this strategy contributed to the overall consistency and manageability of the final included dataset.

Non-English language studies were excluded for practical reasons because there was insufficient access to translation resources. No exclusions were made based on year of publication to ensure inclusion of all relevant findings.

Small sample sizes were excluded to ensure that the findings from included studies were not simply idiosyncratic and had some degree of generalisability. There is no consensus in the literature on determining a minimum sample size, especially in qualitative research, with suggestions ranging from samples of five to 50 participants (Dworkin, 2012). Other authorities have suggested that saturation is the most important consideration for such decisions, with saturation being reached when no further additional information or themes are found within the data (Mason, 2010). A minimum number of 10 participants has been suggested as adequate for either a homogenous sample (Sandelowski, 1995) or before further assessing for saturation (Mason, 2010). These are somewhat arbitrary figures, however, and in the absence of any clear concurrence of views, Sandelowski's recommendation was followed and samples of fewer than 10 participants were excluded.

Eligibility for inclusion included criteria on scope and population of studies, so that the only studies within the parameters of the research question were selected. For example, studies were only included if were enough details provided about: (1) SHSB in childhood (under 18 years), and (2) data on the child who harmed (even if data about the accused child was provided by the victim). A broad working definition of 'sibling' was adopted, as earlier detailed in the introduction chapter. A considerable number of the initial search results were articles relating to evolutionary theory and inbreeding avoidance in siblings, and these were excluded as outside of the scope of this systematic review.

### Information sources

Three electronic databases were searched in July 2018 and an updated search was performed in (MONTH) 2020, using date filters. Databases were selected for relevance to the subject area: PsycINFO, for behavioural and social sciences, including psychology; Scopus, for health and social sciences; and the Summon index, for a broad range of content from databases and publishers.

A tracking log was used at the initial screening stage to record search results. The available limiters and filters varied between databases, and the tracking log recorded these differences, as summarised in Table 3.2 below.

#### *Table 3.2*

### Filters and limits used in electronic databases

Database	Limits	Filters
PsycINFO	Limit to: scholarly journals & peer reviewed	-
Scopus	Limit to subject areas: Psychology, arts & Humanities, medicine, nursing, social sciences, multidisciplinary Limit to document type: article & article in press	-
Summon	Limit to: scholarly materials, including peer-reviewed	Content type: journal article Exclude: book reviews Expand results: include from outside library collection Discipline: Education, government, law, medicine, nursing, psychology, public health, social sciences, social welfare and social work, sociology and social history, women's studies

Electronic searching is considered to be the most efficient method of locating evidence (Fink, 2020). Limitations to accuracy and precision of indexing and searching in electronic databases mean that database searching is not a sufficient strategy in isolation (Aveyard et al., 2016). Additional searching techniques were used, therefore, to supplement the electronic databases and identify potentially relevant work not indexed in these databases. These techniques consisted of:

- Hand-searching the references of included papers i.e. a 'snowball' method (Greenhalgh and Peacock, 2005) to identify papers that were not included in the database results.
- Citation tracking of included papers to identify other articles that had made reference to these, usually listed alongside the original article when accessed electronically. This technique was especially useful for recently published articles.
- Author searching using key authors who had published more than one paper on
  the subject. ResearchGate was used to 'follow' these authors and to receive
  updates on current research projects. This method was used for locating papers by
  Tener and Katz (2019), Tener (2020), and Yates (2018; 2019).

Inter-library loan requests were made for seven articles where no subscription access was available; six articles were sourced but subsequently excluded, one could not be traced. Eight articles found through the electronic database searches were in languages other than English.

### Search, screening, selection, and data extraction

Systematic reviewing requires a clear strategy to guide the search with the aim of identifying and including all empirical evidence that meets the eligibility criteria (Rutter et al., 2010; Aveyard et al., 2016).

Systematic searching requires a balance between specificity - narrowly defined searches focused on identifying a limited number of papers specific to the research question - and sensitivity - an extensive approach involving broader searching resulting in greater identification of hits (Rutter et al., 2010). The present systematic search opted to maximise sensitivity over specificity, leading to a higher number of results at the expense of precision (Aveyard et al., 2016). This approach was a time-consuming process, but it was considered worthwhile so as to help ensure that relevant papers were not omitted.

The search strategy was pre-defined although subject to further refinement following pilot testing of key terms and searching. A subject specialist librarian was consulted in the early stages of planning the searches to assist with defining key terms, search terms and navigating the electronic databases.

The topic of SHSB encompasses literature published across a range of journals and disciplines, including psychology, health, law, and the social sciences. Inconsistent definitions of the phenomenon can complicate searches (Alton and Bowles, 2013). Therefore, a PICO tool was used to identify the range of key terms and synonyms relevant to this topic (Aveyard et al., 2016) and it is summarised in Table 3.3. A variation on the standard PICO (Population, Intervention, Comparison, Outcome) for use in qualitative research was adopted, with replacements of comparison with context as more appropriate terms (Aveyard et al., 2016).

### *Table 3.3*

PICO tool to assist with development of key terms and synonyms

	Population	Issue	Context	Outcomes
PICO term	Children and young people	Sexual abuse in sibling relationships	Community, secure, and residential treatment settings as responses to SHSB	Evaluation of CYP's outcomes related to family and professional responses
Alternative terms	Adolescen* Child* Young people Juvenile Youth Minor	*Sibling harmful sexual behaviour     *Sibling sex*     *Sibling rex*     *Sibling rape     Intra-familial sexual abuse     Intra-familial childhood sex*     *Brother sex*     *Brother incest     *Brother rape     *Sister sex*     *Sister rincest     *Sister rape  (truncation to capture half-/step-sibling searches)	Placement* Foster* Kinship* Residential* Substitute* Alternative* Home* Remain at home In home* Rehabilitat* Family* Biological family Extended family Remain at home Removal Separation Compar*	Functioning Intervention Treatment Therap* Restor* Reunif* Adjudicat* Clarification Support Quality of life Wellbeing Outcome Mental* Behavio* Experience

Boolean operators were used to develop the search strategies summarised in Table 3.4, together with the limiters and filters specific for each electronic database referenced above. Initial screening of titles, key words and abstracts excluded papers that did not meet the eligibility criteria. The functionality of electronic databases varied, and some additional refinement settings were implemented to assist with screening of results, and this is further detailed in the tracking logs (see: Appendices). Where the information provided in the titles and abstracts was insufficient in determining inclusion eligibility, a full-text review was completed to decide on whether a given study was eligible for inclusion.

Publications that met the inclusion criteria for initial screening were subject to full screening. This involved sourcing and reading the full text of the articles to further determine eligibility for inclusion. Duplicate articles were removed following initial and full screening.

Table 3.4
Search terms

Search term	Search term in full
no.	
1	(adolescent OR child OR "young person" OR juvenile OR youth OR minor)) AND ("sibling incest" OR "sibling sexual" OR "sibling rape" OR "intra familial sexual" OR "family sex abuse") AND (remove OR kinship OR "foster care" OR "residential care")
2	("sibling incest")
3	(adolescen*) AND (intrafam*) AND (sexual abuse)
4	(sibling OR *brother OR *sister) AND ("harmful sexual behaviour")
5	(sibling OR *brother OR *sister) AND (sexual abuse OR sexual behavio?r OR sexual harm)
6	(sibling OR *brother OR *sister) AND (intrafam* sex* abuse)
7	("sibling incest" OR "sibling sexual") AND (remove OR remain OR placement OR home OR kinship OR "foster care" OR "residential care")
8	(brother OR sister OR fraternal OR sororal) AND (incest)

Searches concluded when all search terms had been completed, rather than depending on any individual judgement. At this point, the searches yielded no further newly identified studies and all subsequent 'hits' were repetitions of previously included articles. This 'data saturation' gave the present author some degree of confidence that the searches were extensive and comprehensive (Booth, 2016).

Literature selected for the final dataset was re-read and potentially relevant information was extracted using a data extraction pro-forma (see: Appendices), which summarised the following: study characteristics (authors, year of publication, country study occurred); the study context (custodial, clinical or community settings); participant information (sociodemographic characteristics of CYP, offences, victim details, intervention received); research methods; and key findings.

## Data synthesis

Mixed studies reviews derive multiple types of data from a diverse range of study designs (Hong et al., 2017), consequently precluding the use of meta-analysis, as is typical of most reviews in social care (Rutter et al., 2010). However, mixed studies reviews do not specify a particular method of data synthesis for integrating quantitative and qualitative data (Hong et al., 2017). Two main types of synthesis design have been identified within mixed studies reviews: sequential synthesis and convergent synthesis (Hong et al., 2017). The present systematic review used a data-based convergent synthesis design to analyse the evidence on sibling harmful sexual behaviours.

Instead of analysing quantitative and qualitative data from the systematic review in separate stages, a convergent synthesis design combines and analyses data during the same phase of the research and using the same synthesis method (Hong et al., 2017). To achieve this synthesis, data transformation techniques are required (Hong et al., 2017). A qualitative approach to synthesis was used – qualitisation – in which data from quantitative studies were converted into qualitative findings (Pluye and Hong, 2014; Hong et al. 2017). In the present study, data from quantitative results were transformed and merged with qualitative results using thematic synthesis.

Thematic qualitative synthesis was chosen as the most appropriate technique for organising the data because it offered a flexible approach to synthesising diverse types of evidence and was more likely to provide new insights and knowledge (Dixon-Woods et al., 2005; Mays et al., 2005). The terms thematic synthesis and thematic analysis are sometimes used interchangeably. Kavanagh et al. (2012), however, suggest that the former refers to the synthesis method that developed from thematic analysis methods (Braun and Clarke, 2006) used within qualitative research.

Thematic synthesis is an iterative process to identify prominent, recurrent and relevant themes within the literature (Aveyard et al., 2016). Summarised results in the data extraction form were assigned to descriptive themes and sub-themes using a manual coding scheme and comparisons made based on common relationships (Pluye and Hong,

2014; Leeman et al., 2015). This process used the methods developed by Braun and Clarke (2006) for thematic analysis and involved six distinct phases: familiarisation with the data; generating initial codes to identify any indication of potential patterns; searching for themes by sorting and combining codes into overarching broader-level themes; reviewing and refining themes; defining and naming themes; and analysis and write up.

### Quality appraisal

Systematic reviews are more than summarising the research on a particular topic. These reviews also involve appraising the quality of the findings in terms of validity, reliability and generalisability of individual study' findings (Aveyard et al., 2016; Bryman, 2016). In addition to making judgements about the strengths and limitations of studies, critical appraisal considers biases in studies and the extent to which these were approached and minimised by researchers, as well as any the influence bias on each study's findings (Newman et al., 2005). It is not possible to completely eliminate bias in research, however critical appraisal provides a transparent approach to determining the weight of evidence attributed to each study in the overall analysis of combined findings (Aveyard et al., 2016). Systematic reviews in social work research have been criticised for not giving enough attention to appraising quality (Strandberg and Simpson, 2020), and although evidence in social work is less well developed than other disciplines, quality appraisal is imperative (Rutter et al., 2010).

A plethora of critical appraisal tools exist as prompts or checklists to assist with making quality appraisal judgements. There is no consensus, however, on the best tools for assessing quality in the social sciences (Aveyard et al., 2016), and especially not in the case of qualitative research (Dixon-Woods et al., 2007).

In mixed studies reviews, quality appraisal involves using either a different tool for each type of study design within the literature review, or one tool that incorporates broad appraisal criteria for all types of study design (Pluye et al. 2009). The present systematic review used the Mixed Methods Appraisal Tool (MMAT), which was developed (Pluye et al., 2009), and subsequently revised (Hong et al., 2018), specifically for appraisal of

diverse study designs within systematic mixed studies reviews. The MMAT uses a broad range of methodological criteria with variations between the five different design types, comprising quantitative, qualitative and mixed methods studies (Pluye et al., 2009). The MMAT is applicable only to empirical studies and the tool discourages the exclusion of studies based on methodological quality, instead recommending an appropriately assigned weighting to such work (Hong et al., 2018).

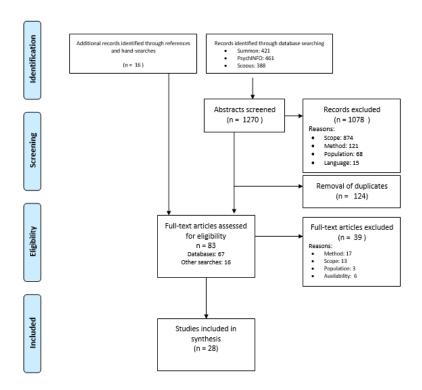
As with all critical appraisal tools, the MMAT has been used to provide a transparent structure and guidance to quality appraisal decisions, however they are not definitive and individual judgement remains necessary (Aveyard et al. 2016).

# **Findings**

# **Study selection**

A final 28 studies met the inclusion criteria for this systematic review. The systematic review process is summarised in a PRISMA flow diagram (Figure 4.1). Search terms yielded a total of 1,270 results, and these were initially screened by their titles and abstracts. Of these, 1,078 were excluded because they did not meet the inclusion criteria on the basis of study scope (n=874), study method (n=121), participants (n=68), language (n=15), or were duplicates (n=124). A further 16 articles were identified from supplementary searches, including hand-searching of references and citation tracking. This resulted in 83 articles subject to full-text assessment of eligibility for inclusion, and 28 of these were included in the final data synthesis. This number included all of the 16 additional articles identified through the manual searches, as all met the inclusion criteria.

Figure 4.1
PRISMA flow diagram



### **Excluded studies**

There were 39 articles that initially met the inclusion criteria, but which were later excluded, after reviewing the full text, because of their scope (n=13), method (n=17), and population (n=3), and availability (n=6). These excluded studies, which may plausibly be expected within the remit of this review, are summarised in the appendices with the specific reasons for exclusion, as well as any findings relevant to the aims and objectives of this systematic review.

Duplicate publications were searched for throughout the screening processes of this systematic review. In the titles and abstracts stage of screening, duplicates were cross-referenced across the results from the three separate electronic databases. The full-text screening assessed for duplicate *reporting*, a 'salami slicing' approach to publishing research where different aspects of the same study are reported across multiple papers (Aveyard et al., 2016). The study, rather than the report, is the unit of interest in systematic reviews and if studies are included more than once this can lead to substantial bias within the systematic review (Lefebvre et al., 2020). Detecting these duplicate reports is difficult and time-consuming (Aveyard et al., 2016), and involved a full text review and comparisons of the contributing authors, the location and setting of each study, and the participants involved.

Duplicate reporting was encountered in this systematic review, and decisions and justification for the article that was selected for inclusion are detailed in the exclusion table within the appendices, which further enhances the transparency and rigour of the systematic review process (Aveyard et al., 2016). As an example, Yates (2018; 2020) both report on the same sample, providing marginally different analyses, however Yates (2020) was chosen as the primary report of this study because this provided more detailed information on research methods. The articles by Grant et al. (2008), Thornton et al. (2008), and Halse et al. (2012) all reported findings from the same study, however the article by Thornton et al. (2008) was selected for inclusion as the primary report because it provided a broader range of data on both adolescents and their parents and was also

subject to peer-review. Cochrane recommends that these secondary reports from the same study should be collated as they may contain additional outcome measures and valuable information about the design of the study (Lefebvre et al., 2020). The more detailed technical report by Grant et al. (2008) provided helpful information on the study design and procedures that informed the quality appraisal.

### **Characteristics of included studies**

Descriptive characteristics of the extracted studies included in this systematic review are summarised below.

# Dates and locations of studies

The final dataset included papers published between 1986 (Becker et al., 1986) and 2020 (Tener, Tarshish, et al., 2020; Yates, 2020) and conducted in 6 countries. One crosscultural comparisons study included data from Israel and US (Tener, Newman, et al., 2020).

Figure 4.2

Publications by year

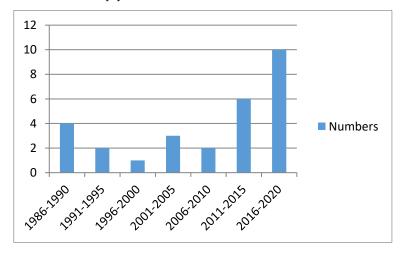
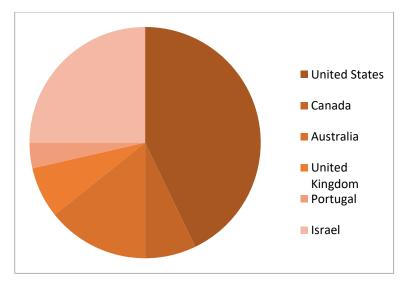


Figure 4.3
Publications by country



# Publication and authorship

Eighteen studies (64%%) were published in four international and interdisciplinary academic journals. Some articles were excluded because of duplicate reporting where the same data were included across several papers. Some authors contributed to several articles within the dataset of this research review, however in these instances *same author* papers are not duplications and instead "represent different papers on the same topics by the same author" (Shin, 2009, p.7). Same-author papers are commonplace in systematic reviews because of authors' subject specialism.

Figure 4.4

Most popular publications for included studies

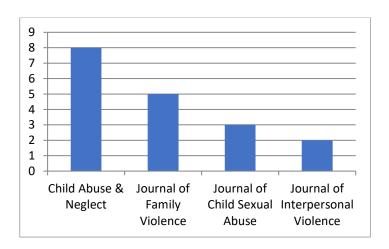
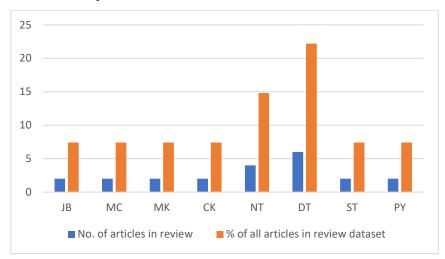


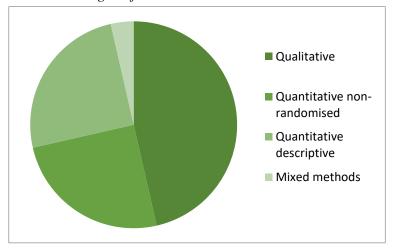
Figure 4.5
Same-author publications



### Research designs

The final dataset of literature in this systematic review included a range of quantitative (50%), qualitative (46%), and mixed methods (4%) study designs. Quantitative studies were dominant, but a sizeable proportion were qualitative. Mixed methods were relatively rare. Quantitative studies were non-randomised or descriptive designs. No RCTs were identified in the included dataset, and this was anticipated because of the difficulties in social work research associated with randomisation in complex settings and the ethical issues that would be involved if treatment was withheld from control groups (Oakley et al., 2003).

Figure 4.6
Research designs of included studies

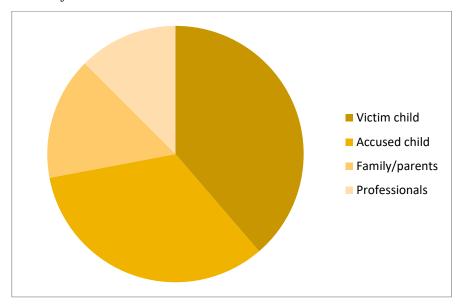


Sample sizes ranged from 12 (Adler & Schutz, 1995) to 974 (Collin-Vézina et al., 2014) participants (mean: 95.6, median: 51, range: 962). mean =. Data collection methods were most commonly through interviews (35%, n=8) and case file analysis (35%, n=8), followed by questionnaires and surveys (26%, n=6). One study (O'Brien, 1991) involved both case file data analysis and interviews with CYP. The vast majority of the studies (74%, n=17) were from clinical settings, including various types of community-based assessment and treatment services for CYP who had displayed HSB (see, for example, Flanagan & Hayman-white, 2000; Thornton et al., 2008; Hackett et al., 2014), and community-based services for victims of CSA/sibling HSB (including Laviola, 1992; Caffaro & Conn-Caffaro, 2005; Katz & Hamama, 2017). Six studies (26%) collected data from non-clinical settings, including college or university students (Hardy, 2001; Morrill, 2014; Griffee et al., 2016), child protection case records (Pierce & Pierce, 1987; Cyr et al., 2002; Collin-Vézina et al., 2014), and one study involved a community sample

# Focus of studies

The focus of each study was analysed based on its aims and objectives, and the participants and focus of data collection. In a number of studies, the focus of the research spanned multiple perspectives. These consisted of: the child who was harmed and the child accused of harming (Morrill, 2014); the victim child and family (Tener et al., 2018; Tener, Tarshish, et al., 2020); the accused child and family (Thornton et al.,2008); and the victim child, accused child, and family members (Welfare, 2008). Six studies (Caffaro & Conn-Caffaro, 2005; Griffee et al., 2016; Hardy, 2001; McDonald & Martinez, 2017) collected data from adults (victims/survivors) providing retrospective accounts of sibling HSB and one from adults' retrospective experiences of childhood sibling sexual behaviours as the victim, initiator or both (Morrill, 2014).

Figure 4.7
Focus of studies



# **Quality appraisal**

Quality appraisal decisions based on the Mixed Methods Appraisal Tool (MMAT) are summarised in the appendices. In accordance with MMAT guidance (Hong et al., 2018), no empirical studies within the final dataset were excluded based on their methodological quality. Overall scoring for the MMAT is discouraged as it does not provide sufficient detail on any problematic aspects of the study (Hong et al., 2018). Instead, the evidence synthesis (see: discussion chapter) details the quality appraisal of each study to enable them to be compared with one another. However, detailed reporting of each study's quality is incompatible with presenting an overview of the results of the MMAT, and descriptors, such as the asterisks used in, are suggested as an appropriate method for such purposes (Hong, 2020).

Within this review, the majority of studies met 60-100% of the quality criteria: 10 studies were 5\* (100% of criteria); 8 studies 4\* (80%), and 8 studies 3\* (60%). The remaining two studies were 2\* (40%) and 1\* (20%). Of the 10 studies assigned the highest ranking, 8 of these were qualitative designs. It is possible that these qualitative studies were

amongst the most methodologically robust within the final dataset, on the other hand the high ranking of these qualitative studies may instead be indicative of the problematic nature of quality appraising qualitative research, researcher inexperience, or both. The MMAT contains 3 categories of criteria for quantitative research designs and only one for qualitative studies. When completing the checklist for each study, the quantitative checklists appeared more stringent in terms of criteria requirements than the qualitative checklist. This is a personal reflection and may not be shared by those more experienced in quality appraisal techniques. However, there are a wide variety of perspectives and a lack of consensus about the role of quality appraisal tools for qualitative research (Sandelowski & Barroso, 2002; Probyn et al., 2016). Some authors contend that structured tools do not place sufficient emphasis on the design of the study and its value, contribution and impact, and instead focus on the methodological reporting or procedures (Majid & Vanstone, 2018). Other authorities believe that the existing technical checklists and tools are unsuitable for qualitative research, lacking validity or rigour for assessing design-specific methodological limitations (Barbour, 2001; Munthe-Kaas et al., 2019). These diverging views highlight the importance of descriptive quality appraisal over and above numerical scoring, where there is a focus on the individual strengths and limitations of each study within the evidence synthesis.

# Discussion

This chapter reviews and critically evaluate the findings reviewed in the previous chapter within the context of wider literature on SHSB, with reference to the research question and its aims and objectives. A brief overview of the current state of knowledge, including the identified limitations and gaps, is followed by detailed analysis of the review's findings in relation to family members' reactions and responses to SHSB. The themes within the review findings relating to professionals', agency, and system responses to SHSB are analysed, as are intervention and treatment responses.

# State of current knowledge

Research findings on SHSB are limited overall. The majority of the research in this review examined individual characteristics of CYP who have displayed SHSB, and between-group differences in comparison with CYP who have displayed non-sibling HSB. The research findings were primarily from relatively small-scale studies of CYP in treatment, in the CJ system, or both. Data are likely to be distorted by findings from those who have been involved in the most serious HSB and who have been formally sanctioned by the criminal justice system. The age of criminal responsibility varies between jurisdictions, and therefore younger children below the age of responsibility will be excluded from findings where samples are from criminal justice settings. The remaining studies are predominately from clinical samples in which CYP receive treatment in the community. Very few studies comprise non-clinical samples and therefore far less is known about CYP who do not access specialist treatment services.

The review's findings are further limited with a disproportionate number of studies from Israel by a small number of prolific researchers from this region, potentially distorting results to a particular culture and context. The remaining studies on responses to SHSB are dominated by Western countries. There are implications on the ecological validity of the overall findings because of their ethnocentric composition.

Very little research has solicited the direct views of CYP who have displayed SHSB. Research on responses to SHSB has relied on data about the child who harmed by asking for views from the victim children, in childhood or retrospectively when they are adults, or from their parents.

### Family member reactions and responses to SHSB

### Children alleged to have sexually harmed

The research literature pays very little attention to the experiences and views of children responsible for sibling HSB. There are ethical and methodological difficulties that abound in research with young people who have sexually harmed (Masson et al., 2012) and the pragmatic challenges of directly interviewing children about their experiences of IFCSA victimisation have been documented (Gekoski et al., 2016). The voices of children accused of sexually harming a sibling are, therefore, largely absent, and instead research relies on second-hand accounts from family members or professionals. There are potential issues of bias with an over-reliance on self-report data (Bankhead et al. 2019).

Although the views of children who were sexually victimised by siblings are valuable, they give only a partial view of SHSB. Findings consistently recommend that SHSB is responded to holistically by involving the entire family, however the views of all family members are not sufficiently represented in the research itself. There have also been suggestions that the dominance of feminist theory within family and sexual violence research has created an imbalance in perspectives, with the needs of the sibling victims displacing those of the siblings accused of HSB (Keane et al., 2013).

### Rates of CYP admitting SHSB

The present research review has found a small number of studies reporting on admission of sibling HSB by the accused CYP, with Cyr et al. (2002) identifying that two-thirds of brothers were likely to admit to sexually harming their sisters compared to half of fathers or step-fathers who had denied abusing daughters or step-daughters. This difference is due

possibly to discovery by others, with HSB by CYP more likely to have been witnessed than HSB by adults (McKillop et al., 2015; Shawler et al., 2020). It may also be indicative of the less sophisticated nature of sexual harm by children (ATSA, 2006), especially by those with intellectual disabilities (Timms & Goreczny, 2002), and younger children finding greater difficulties with lying and concealment (Talwar & Lee, 2002). Moreover, Daly et al. (2013) found that adolescents who sexually harmed siblings tended to be more remorseful and more likely to make an admission to police in investigative interviews than adolescents who had harmed extra-familial children.

Whilst the above studies express denial and admission as a dichotomy, other studies refer to denial and admission as types or categories, recognising denial as a multi-faceted and changeable construct (Laflen & Sturm, 1995; Calder, 1999; Schneider & Wright, 2004). Only relatively small proportions of CYP who display SHSB make a full admission (Adler & Schutz, 1995). Partial acknowledgement of SHSB appears to be the most common type of response in CYP, accounting for around one-half (Becker et al., 1986) to three-quarters (Adler & Schutz, 1995) of reported responses from accused CYP. Full admission of SHSB was made by less than one-quarter (Becker et al., 1986), and only 8% (Adler & Schutz, 1995) of CYP. Where RJ conferencing was available as a diversion from court, CYP were more likely to make an admission and at an earlier stage than CYP accused of non-sibling HSB (Daly et al., 2013). RJ approaches may therefore encourage engaging the CYP in communication between family members in cases of SHSB which they would usually be deterred from in traditional criminal justice processes (Scottish Government, 2020).

Full admission of responsibility for harm by the accused child is a pre-requisite for entry into a number of intervention programmes for sibling HSB (Hodges, 2002; Thomas & Viar, 2005). However, and as this present research review has found, most CYP accused of sibling HSB do not fully acknowledge the abuse, and this excludes a large proportion of them from receiving the required requiring support and intervention.

### Victims' and other siblings' views on the CYP accused of SHSB

Most research did not enquire about victims' views on the consequences for siblings who displayed SHSB. Where data was reported on victims' views, there was notable concern expressed for their accused siblings (Tarshish & Tener, 2020). Most victims recognised that their sibling required support, and victims were against legal punishments, instead preferring for justice to be arbitrated by their parents (Welfare, 2008).

The impact of SHSB on the relationships between the child who harmed and the victim child, received the attention of researchers. There was little sign of improvement to later life relationships between most siblings according to Hardy (2001) and McDonald & Martinez (2017). The reliability of these findings is limited because they rely on convenience samples and self-report data, omitting any perspectives from the CYP accused of harm.

Other (non-abused) sibling responses to SHSB are equally complex, and their needs are often overlooked by parents and professionals (Hackett et al., 2014; Welfare, 2008). Hackett et al. (2014) found that siblings who were not victimised often continued to support the accused CYP, demonstrating the importance of recognising the non-abusive aspects of relationships between siblings.

### Parental reactions and responses to SHSB

Most SHSB is undetected or not identified by parents (Griffee et al., 2016), although SHSB between opposite-sex siblings is more than twice as likely to be discovered by parents than SHSB between same-sex siblings (Griffee et al., 2016).

Up to one third of SHSB cases reported to authorities are by the parents of the children themselves (Collin-Vézina et al., 2014, Falcão et al., 2014). Collin-Vézina et al. (2014) found that parents were three times more likely to report sexual abuse between siblings than parents of children suspected of sexually harming non-siblings. These findings appear to be at odds with the experiences reported by victims of SHSB, the majority of whom revealed ineffectual parental responses (Carlson et al., 2006; Laviola, 1992). However, it

is not possible to verify with the parents of these children whether or not they were themselves aware of the SHSB and research about CSA in general suggests that most children try to tell indirectly rather than directly (Allnock & Miller, 2013).

The likelihood of concerns being reported to authorities varies between those parents who directly witness SHSB, and those whose children try to tell their parents directly or indirectly. For those parents who do not directly witness the sexual harm, suspicion and disbelief (Gervais and Romano, 2018), or the fear of statutory involvement and potential risk of family breakup, may be the factors that prevent them from instigating formal action. For others, they may be genuinely unaware of, or unconcerned by, the abuse. Alternatively, parents who discover sibling sexual abuse for themselves may be shocked and compelled into taking action in the form of reporting to CP services in the face of what is clear evidence of abuse.

Parental responses to SHSB are thus complex and often conflicting. Anger, guilt, and shame are common parental reactions to SHSBs (Thornton et al., 2008), as well as shock, confusion and disbelief, which may undermine their parenting competencies (Duane et al., 2002). Research literature also suggests that HSB within the family may generate more complex and fluctuating responses in parents than for other forms of HSB (Archer et al., 2020). A range of parental responses to SHSB were identified in the research data, broadly categorised as supportive, ambivalent, or negative (Hackett et al., 2014; Tener & Katz, 2018; Tener et al. 2018). Welfare (2008) found that around half of parents were supportive, whilst the remainder were either supportive of only one of the children or unsupportive of both. Tener et al. (2018) found most parents gave some form of acknowledgment to SHSB; one third minimised the harm caused by SHSB, and another third were overcome by a state of crisis. Family systems perspectives consider a family crisis to be a state of disequilibrium, in which the family is incapacitated and cannot function adequately (Price et al., 2010).

Research described divided parental loyalties when supporting both children (Cyr et al., 2002), which was the most common response (Tener & Silberstein, 2019; Welfare, 2008).

However, this support was often compromised by strained family relationships, difficulties with trust and, for some parents, memories of their own childhood sexual victimisation resurfacing (Thornton et al., 2008; Welfare, 2008). Parental support of the accused child appears to be dependent on this child accepting some responsibility for their behaviour (Hackett et al., 2014). Children who did not express remorse, and those who displayed further HSB, were spurned by parents who had initially been supportive (Hackett et al., 2014). Many parents were of the view that the responsibility for change lay solely with the child who harmed rather than the family (Thornton et al., 2008). This reaction represents a potential challenge to holistic family interventions.

It appears that parental responses are influenced by their relatedness to the child victim. For example, in a larger study of HSB, CYP who displayed SHSB were less likely to receive supportive family responses than CYP who harmed non-siblings (Hackett et al., 2014). Kaplan et al. (1990) also found that mothers of CYP accused of SHSB were significantly more likely to believe the allegation, than mothers of CYP accused of non-sibling HSB. Step-family responses to SHSB were particularly divided, with parents aligning to either the victim child or the child who sexually harmed (Thornton et al., 2008). Step-family responses to SHSB may be indicative of the considerable differences in the quality of parent-child relationships in step-families, compared to biological family relationships (O'Connor et al., 2006).

### Professional, agency, and system responses to SHSB

# Origins of SHSB concerns

The research provides minimal data regarding the origin of suspicions or disclosures about SHSB. The studies that do report referral data are mainly from treatment groups and therefore referrals are predominately made by statutory agencies or mandated by courts. However, two studies (Collin-Vézina et al., 2014; Falcão et al. (2014) use data from child protection investigations. The Canadian study by Collin-Vézina et al. (2014), identified that one third of referrals to child protection services were made by schools and around 10% from health or community services. A Portuguese study by Falcão et al.

(2014) found that suspicions were first raised by schools in 10% of cases, and in 3% by health services (Falcão et al., 2014). Parents or other family members raised concerns in around a third of all instances, and at a higher rate when compared to concerns reported about non-sibling HSB (Collin-Vézina et al., 2014; Falcão et al., 2014). Previous assertions that parents and professionals are reluctant to report sibling sexual abuse (Caffaro & Con-Caffaro, 2005) appear to be less well supported by some other findings in this review.

It is also important to consider the cultural contexts regarding the reporting of suspicions of SHSB. Whether individuals are under a mandatory reporting duty, in respect of child abuse, varies by country, administrative divisions within countries, and by occupation. In Canada, there is a duty on all citizens of almost every province to report child abuse concerns (Matthews & Kenny, 2008), whereas in Australia mandatory reporting of child abuse is specific to certain occupations (CFCA, 2017). In other countries, including England and Wales, mandatory reporting of CSA is not legislated,<sup>3</sup> but is a duty within practice standards of regulated professions (GMC; 2018; NMC, 2015; SWE, 2019). Despite these legislative variations, there appear to be no significant differences in the origins of reported concerns when the Canadian study is compared to the study in Portugal, where there is currently no mandatory reporting duty on citizens (EUAFR, 2015).

### Children and families' involvement with child welfare services prior to SHSB

A small number of studies detailed some prior involvement of child welfare services in families where sibling sexual abuse had occurred. There were some difficulties with establishing whether this prior child welfare involvement predated or was a result of the sibling HSB concerns. For example, Flanagan & Hayman-White (2000) recorded that a large proportion (two-thirds) of adolescents referred to treatment had involvement with child protective services. Although the service under examination accepted voluntary

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<sup>&</sup>lt;sup>3</sup> Female Genital Mutilation Act (2003) introduced a mandatory reporting duty requiring regulated health and social care professionals and teachers in England and Wales to report 'known' cases of FGM in under 18s (Home Office, 2015).

self-referrals, the service requires all offences to have been reported to police, and it is not possible to determine from the data whether this involvement was because of the HSB or not.

Pre-existing child welfare involvement exists in some of the data. In an Israeli CAC study, nearly a quarter of families referred following SHSB had been referred on multiple previous occasions for treatment, and two-third were known to child welfare services (Tener, Tarshish, et al., 2020). Over half of the sibling HSB families in the Canadian sample by Collin-Vézina et al. (2014) had previously been involved in a child protection investigation. In around one-third of the families where sibling HSB had occurred, there had been on-going child protection involvement at the time the HSB allegation occurred (Collin-Vézina et al., 2014). Some comparisons have been made against families where there had been SHSB concerns to families where the HSB involved extra-familial children, with a higher rate of prior child protection concerns within the former group (Collin-Vézina et al., 2014).

None of the above studies provide any further details on the nature of the maltreatment that led to previous child welfare involvement. This is an unfortunate omission, especially given the apparent connections between early childhood adversity and HSB. HSB rarely occurs in isolation (Lussier et al., 2019). Larger studies of PSB in pre-pubescent children have found than at least half of these children had experienced multiple forms of abuse, and this was not limited to sexual victimisation (Pithers et al., 1998; Gray et al., 1999). This is of particular significance for SHSB, where childhood maltreatment and family dysfunction appear to be more extensive in the early life experiences of children who have sexually harmed siblings (Tidefords et al., 2010; Martijn et al., 2020).

### Child welfare and criminal justice system responses to sibling HSB

A range of child welfare and CJ responses to SHSB are described in the research literature, and these broadly align with the welfare and justice models of youth justice (Young et al., 2017). Welfare models of justice focus on the treatment and protection

needs of CYP through informal processes, whereas the justice model instead focuses on accountability and procedural formality, including punishment (Young et al., 2017).

CJ systems vary globally and welfare versus justice responses to SHSB will be specific to their local legal context (Hazel, 2008). However, variations in responses to HSB have been observed within communities sharing the same legal jurisdiction (Finklhor et al., 2009), therefore international differences in legal systems are insufficient on their own to explain this variance. A summary of these varying responses is given in Table 5.1 below.

Table 5.1
Summary of professional responses to SHSB

Study	Overview of professional responses		
Jurisdiction	Welfare	Justice	
Becker et al. (1986)	32% Social Services involvement	46% probation/parole supervision	
NY, US		(9% pre-sentence stage)	
Collin-Vézina et al.	52% substantiated by child	46% criminal investigation	
(2014)	protection investigation	(SHSB)	
Canada			
	19% of those substantiated	77% criminal investigation	
	referred to support services (non-	(non-sibling HSB)	
	sibling HSB x2.7 more likely to		
	be referred to at least one service		
	than SHSB)		
Daly et al. (2013)	Therapeutic responses more	57% court disposal	
South Australia	likely in sibling HSB (68%) than	11% formal caution	
	non-sibling HSB (23%)	32% youth conference <sup>1</sup>	
		Higher admission of guilt in	
		SHSB: resulting in SHSB more	
		likely referred to a conference	
		than to court. SHSB more likely to	

		be 'proved' in court because of early admission.
O'Brien (1991)	SHSB more likely to be referred	Non-sibling HSB more likely to
MN, US	for assessment and intervention be referred by courts by Social Services	
		Court involvement:
		35% sibling HSB vs.
		75% non-sibling HSB
Pierce and Pierce	Most SHSB (68%) referred by	1/3 referred by CP services to
(1987)	child protective services for	State Attorney (decision to
IL, US	counselling	charge)
		20% referred to police

Youth Justice Conferencing is a pre-sentence option in the Australian youth justice systems. A conference is
a facilitated and informal decision-making forum in which the young offender and his or her family meet
with the victim of the offence to discuss the offending and harm done, to encourage acceptance of
responsibility and negotiate some form of restitution.

Similar to information on prior child welfare involvement, several studies refer to children's involvement with child welfare services in response to sibling HSB and at the time of referral to specialist assessment and treatment services (Becker et al., 1986; Thornton et al., 2008). Details on the nature of this involvement are limited. A smaller number of studies provide more specific information. In the US study by O'Brien (1991), CYP who had displayed SHSB were more likely to receive a welfare response than CYP who displayed non-sibling HSB, with a higher proportion of those who harmed extrafamilial children referred to treatment by and involved with court (75% non-sibling HSB, 35% SHSB). Adler & Schutz (1995) found minimal involvement of criminal courts and CP services in response to SHSB unless the CYP's parents were neglectful. More recent clinical literature on sibling HSB supports these findings with the view that the child welfare and CJ systems are much more reluctant to respond to sibling HSB (Caffaro, 202; O'Brien, 2010).

A large study by Collin-Vézina et al. (2014) examined administrative data on CP cases where there had been suspected SHSB. This research differed from most of the other studies within the systematic review insofar as the data relates to initial CP investigations – a critical decision-making stage – rather than confirmed cases that have progressed through the CJ system, and the data are likely to include a large number of CYP that do not proceed into this latter system. Within this study, over one-half of investigations into SHSB were substantiated (Collin-Vézina et al., 2014), although it was not clear from this study whether substantiation referred to civil or criminal standards of proof. The use of child welfare courts in response to HSB was low (4% of sibling HSB investigations, 2% for extra-familial HSB). Families in which SHSB was substantiated, were far less likely (19%) to receive further support services than families where HSB was extra-familial (51%). These findings are striking, despite the substantiation of SHSB and a large proportion of the initial concern made directly by parents, there was no further support for these families. When support referrals were made, parental support and family counselling were most likely. Victim support referrals were much less likely, occurring in only 10% of referrals in cases of sibling HSB (Collin-Vézina et al., 2014).

Clinical samples report much higher rates of reporting SHSB to the police, and as previously discussed, this is most probably a legal or treatment service requirement. In a US study, Pierce and Pierce (1987) found that around one-fifth of adolescents were referred to the police and about one-third to the State of Illinois Attorney. Thus, around one-half of the sample did not appear to have criminal justice involvement.

Correspondingly, a more contemporary study by Collin-Vézina et al. (2014) found that just under one-half of young people in their sample who had been accused of sibling HSB underwent criminal investigation, a much lower rate when compared to young people accused of extra-familial HSB (46% vs. 77%). Collin-Vézina et al. (2014) found police were much less likely to report young people accused of SHSB to CP services than they were for those who harmed extra-familial victims (5% compared to 37%). This finding appears to be unique to this particular study and similar information is not reported elsewhere. The authors postulate that extra-familial sexual abuse is more likely than

SHSB to be reported to the police in the first instance and then subsequently shared with CP services under their own agreement protocols (Collin-Vézina et al., 2014).

In an Israel study, 'exemption committees' were available as an alternative intervention to prioritise the therapeutic role over legal and investigative roles in mandatory reporting setting, thereby allowing for professional judgement whether to proceed with legal procedures in cases of SHSB (Tarshish & Tener, 2020). Differences between the cases of SHSB were identified for those referred to a legal route, compared to those receiving a therapeutic approach through an exemption committee. Tarshish & Tener (2020) found that legal responses were more likely when the CYP accused of SHSB did not take responsibility for harm, or where penetration was involved (47% legal route, 5% exemption committee).

Legal responses were also more likely when the victim child felt insecure or unprotected, if there was a history of CP concerns, or if the family did not engage with treatment (Tarshish & Tener 2020).

## Outcomes following criminal investigation

Considerable variations in outcomes of criminal investigations are reported across the literature. Some studies indicate that young people who have sexually harmed siblings may be less likely to be criminalised than those who harm extra-familial victims (O'Brien, 1991; Collin-Vézina et al., 2014). In one study only a third of children who sexually harmed siblings were referred to court compared to around three-quarters of those who sexually harmed extra-familial children (O'Brien, 1991). The author concluded that the legal system often differentiates sibling HSB from extra-familial HSB, conceptualising sibling cases as non-abusive (O'Brien, 1991). It has been suggested by others that the child welfare system is more likely to manage HSB concerns within family settings than is the CJ system (Finkelhor et al., 2009). Similarly, an archival study by Daly et al. (2013) suggest a more stringent legal response to CYP who displayed SHSB than CYP who displayed non-sibling HSB. Most cases of SHSB which went to court were more likely to be 'proved' than CYP who had displayed non-sibling HSB (Daly et al., 2013). The researchers suggest that this is because CYP who displayed SHSB had

much lower levels of prior offending and were also more likely to provide early admissions of guilt, than CYP accused of non-sibling HSB. These findings are in conflict with previous assertions, including those from Australian authors (O'Brien, 2010), that sibling HSB is minimised when brought to the attention of services and treated more leniently than HSB with extra-familial victims.

However, there does not appear to be a general consensus within the empirical data on whether or not SHSB receives a differential response from the CJ system, compared to non-SHSB.

 Table 5.2

 Comparison of criminal justice system responses

Study  Jurisdiction	No further action / insufficient evidence for prosecution	Formal caution or diversion	Court sentence	Sibling HSB more or less likely to be criminalised than extra-familial HSB
Collin-Vézina et al. (2014)  Canada	-	-	-	Less likely
Daly et al. (2013)  South Australia	-	11% (caution), 32% (conference)	57%	More likely
Falcão et al. (2014)  Portugal	31%	19% (diversion programme)	43%	-
Flanagan & Hayman- White (2000) Victoria, Australia	48%	11% (caution)	8%	-
O'Brien (1991)  MN, US	-	-	-	Less likely

A large dataset from an Australian treatment programme (Flanagan & Hayman-White, 2000) found that just under half of all adolescents investigated by the police for sibling HSB received no further action, whilst others remained under investigation (23%), received a formal caution (11%), charged by police (8%), or sentenced by the courts (8%). One of the striking differences appears to be a divide between the North American and Australian studies, with the former finding that SHSB is responded to more leniently than other forms of HSB and the latter disputing this. One possible explanation for this difference could be the greater emphasis on RJ and diversionary approaches within the Australian youth justice systems, including conferencing, which has been attributed to the decline in juvenile custody rates (Hazel, 2008). Indeed, the research by Daly et al. (2013) found that a larger proportion of the sibling HSB cases were finalised through conferencing instead of court. The absence of these diversionary approaches in other jurisdictions may mean that services, and families themselves, are reluctant to pursue criminal justice routes to avoid criminalisation and possible family breakup when the victim and accused are from the same family. These RJ approaches may provide a bridge between the disparate welfare and justice responses to SHSB, so that the welfare needs of all family members are addressed (Anderson & Parkinson, 2018), whilst avoiding severe legal sanctions and the lifelong consequences of a criminal record. However, critics of RJ point out its failure to "address social-inclusion issues with the same degree of enthusiasm with which they pursue the responsibilisation of young offender" (Gray, 2005, p. 953).

### Out of home care in response to sibling HSB

Empirical knowledge on out-of-home care as a response to SHSB is limited, being reported upon by a small proportion of the studies in this review. Out-of-home care refers to the care of children unable to live with their primary caregivers, and encompasses placements with relatives, foster care, and residential care, whether it is voluntarily or court-ordered, and on a short- or long-term basis (AFIS, 2018).

Separation of the accused CYP from the victim child were considered as key decisions for professionals responding to SHSB (Tener, Newman et al., 2020). This cross-cultural

comparison study of CACs found different practice approaches to these removal decisions, with Israeli professionals placing more attention on safety planning to reduce harm than out-of-home care arrangements, and US professionals of the view that separation was essential, except when SHSB involved young children (Tener, Newman et al., 2020).

General practice guidance recommends that, as far as is possible, most young people who have displayed HSB should remain with their families and for their behaviour to be managed in the community (Hackett et al., 2019). It should not be assumed that out-of-home care, such as foster care or residential placements, will always be required. It is usually necessary only for a small number of young people who pose a risk of serious harm to others, those who have been rejected by their families following HSB disclosure, and for those for whom it is unsafe to remain at home (Hackett et al., 2019).

In cases of SHSB, the victim and accused CYP are usually living together, and this presents additional dilemmas about the safety of both children, with decisions about living arrangements usually an early consideration after sibling HSB is reported (Allardyce & Yates, 2018). There is discordance within the practice literature as to whether children who have displayed SHSB should be removed from the family home or not. Removing the sibling who harmed from the family home until treatment or intervention is provided, is an oft-cited recommendation (Ballatine, 2012; Hodges, 2002; Tapara, 2012; Thomas & Viar, 2005; Yates & Allardyce, 2021). However, this response can have a damaging effect, not only on the removed child, but the remaining family members (Welfare, 2008).

In a study by Falcão et al. (2014), 2 of the 16 cases where information was obtained on judicial responses had resulted in imprisonment. A much larger Canadian study on child protection case data (Collin-Vézina et al., 2014) found that the use of placements out-of-home in response to SHSB was very rare (less than 1%), and lower than use for CYP who displayed harmed non-sibling HSB (2%). Contrastingly, a dated US study of child protection case records found that most (60%) adolescents were moved out of their home

in response to reports of sibling HSB (Pierce & Pierce, 1987). These young people were placed in restrictive settings, including treatment and detention centres, since the time of the sibling HSB incident (Pierce & Pierce, 1987). However, not all of these out-of-home placements involved provision of counselling or therapy for the HSB concerns, and the authors conclude that placement away from home is too often used as a singular response rather than as an adjunct to treatment (Pierce & Pierce, 1987).

Other findings from studies in the present systematic review indicate that out-of-home care following sibling HSB is not the norm (Flanagan & Hayman-White, 2000), and that most children remain at home with their families and presumably the sibling who was harmed. Yates (2020) found no examples of separation of siblings on the basis of a single incident of SHSB, with a second or more incidents required before removal of the accused CYP was considered (Yates, 2018; 2020). When siblings were separated, professionals rarely considered this as a long-term solution and contact and reunification were progressed, often without any resolution of underlying problems (Yates, 2020).

The study by Pierce & Pierce (1987) is an exception to this finding, even so, a considerable number of children in that sample continued to live with their families. It is possible that, as a much older study, this reflects historic approaches to practice in response to sibling HSB, or perhaps the local child protection and legal practices in one state of the US. When methodological rigour is considered, more weight can be given to the findings from Collin-Vézina et al. (2014), who suggest that, more often than not, siblings remain together following HSB. Details of children's living arrangements following sibling HSB are limited in the research data, and this is an area which future research should aim to address.

### The responses of professional practitioners to SHSB

Empirical data on the responses of professionals to SHSB is limited, the bulk of it reports on qualitative findings from a handful of studies, limiting the external validity of these findings.

Professionals' responses to SHSB have been criticised as inconsistent or inadequate (Yates & Allardyce, 2021), however the systematic review dataset did not find any consensus in evidence of differences between professional disciplines in their responses to SHSB. In one study from California, professionals, such as teachers and mental health practitioners, were found to be less likely to report SHSB than other forms of CSA (Caffaro & Conn-Caffaro, 2005). On the contrary, the results of a Canadian study found a larger proportion of schools and day care professionals referring SHSB to child welfare services when compared to non-sibling HSB (Collin-Vézina et al., 2014).

A small number of recent studies have examined professionals' decision-making in cases of sibling HSB. Professionals recognise that sibling HSB is multi-faceted (Tener, Tarshish, et al., 2020), and decision-making is complex (Tener & Katz, 2018; Tener, Newman et al., 2020), requiring careful consideration of both legal and therapeutic aspects of these decisions and subsequent responses (Tarshish & Tener, 2020; Tener, Newman et al., 2020). For example, practitioners involved in investigative interviewing expressed their concern that forensic legal approaches to sibling HSB could potentially be damaging to the family unit (Tener & Katz, 2018).

One Scottish study suggested that social workers responding to SHSB view the behaviour in isolation and give insufficient attention to the relationship dynamics between siblings (Yates, 2020). In contrast, mental health professionals in an Israeli study considered the unique context of each case in their decisions (Tener & Silberstein, 2019), which perhaps reflects the differing responses across cultures or practice settings. Best practice guidance advises practitioners to consider the wider needs of children as an important consideration in the assessment of HSB (Hackett et al., 2019; NICE, 2016).

Most social workers focus on the physical safety of children in their decisions, overlooking the siblings' emotional needs (Yates, 2020). It has been recognised that professionals find difficulty in balancing the emotional needs and safety of children when HSB has occurred (Clements et al., 2017), and HSB involving children within the same family may further magnify these difficulties. Similar findings were reported in parental

responses to sibling HSB, and it may therefore be practically easier and more immediate to respond to physical than emotional safety (Tener & Silberstein, 2019).

Recognising when HSB between siblings is harmful or abusive seems to be one of the major challenges facing professionals according to the findings of this review. Delineating between sibling sexual play or curiosity and abusive behaviours can be confusing for professionals (Caffaro, 2014), with norms about childhood sexual play varying across cultures and societies (Maddock & Larson, 1995). Difficulties with defining sibling HSB has been suggested as a possible explanation for inconsistent professional responses (Caffaro, 2014; Yates & Allardyce, 2021). Sibling HSB is often misunderstood or trivialised by professionals (Krienert & Walsh, 2011). Gaps in the knowledge, skills, and confidence of HSB within the children's workforce (Clements et al., 2017) has also been identified as one explanation for some of the false beliefs and assumptions professionals make about sibling HSB, and an area of need for future training (Collin-Vézina et al., 2014).

However, Yates (2020) concluded that it is not simply the normalising of sibling sexual behaviours that influenced professionals' decisions and responses, but their underlying assumptions about sibling relationships as inherently valuable and harmless. When social workers were uncertain, their decisions were influenced by a 'framing' of sibling relationships as non-abusive (Yates, 2018; 2020). Although not supported by any specific findings within this review, the wider literature refers to the 'incest taboo' impairing the ability of professionals' to recognise sibling HSB (Caffaro, 2014; Yates & Allardyce, 2021); and gender stereotypes of sexual behaviour, with higher levels of acceptance of behaviours amongst professionals when SSBs involve same-sex siblings (Johnson et al., 2009).

In other studies, professionals refer to decision-making difficulties when SSBs seemed reciprocal and were not perceived by children as traumatic (Tener & Silberstein, 2019; Tener, Tarshish, et al., 2020). In these instances, it was difficult for professionals to distinguish the children as either a 'victim' or 'perpetrator', and the use of this

terminology inadequately reflected the experiences and intent described by the children involved (Tener & Silberstein, 2019). Labelling CYP with adult terms is stigmatising and imprecise (Allardyce & Yates, 2018), particularly in the context of children from emotionally deprived families, where SSB was not necessarily deviant or abusive (Tener & Silberstein, 2019). In these circumstances, SSB seemed to provide comfort and care for both children in the absence of emotional needs being met by parents (Tener & Silberstein, 2019).

Theoreticians describe sibling sexualised emotional bonding as the 'Hansel-and-Gretel syndrome' (Bank and Khan, 1982), involving close-age-siblings and very different dynamics to sibling HSB where coercion or manipulation occurs (Furniss, 1991). In these cases, professionals perceive both children as victims of family circumstances rather than CSA victims (Tener & Silberstein, 2019; Tener, Tarshish, et al., 2020). These findings underline the potential iatrogenic harm of professionals interpreting all sibling sexual behaviours as inevitably traumatic (Tener, Tarshish, et al., 2020). In another study in this review, some professionals referred to these ethical dilemmas in their practice and when their treatments aimed to reconstruct the victim narrative to avoid self-blame in cases where SSB seemed reciprocal and non-traumatic (Tener & Silberstein, 2019). Assumptions that all sexual behaviours are inevitably traumatic has been criticised as unhelpful, with protectionist and moralising undertones (Smith & Woodiwiss, 2016). The authors draw a distinction drawn between wrongfulness and harm of sexual behaviours (Smith & Woodiwiss, 2016); and whilst the wrongfulness of SSB should be acknowledged, it does not necessarily mean these behaviours are always harmful and thus professionals should "avoid assuming a damaged victim identity" (Smith & Woodiwiss, 2016, p. 2183).

The studies with findings on decision-making in sibling HSB cases are geographically concentrated and they may therefore reflect specific legal and cultural approaches to the phenomenon in each region rather than any wider trends. There are also limitations with the research methodologies which should also be considered when assessing these findings. The included study designs involved either case file analysis (Tener & Katz,

2018; Tarshish & Tener, 2020) or practitioners' retrospective accounts of their decisionmaking (Tener & Silberstein, 2019; Yates, 2020). Research on child protection decisionmaking in general tends to heavily rely on retrospective descriptions, which do not fully consider the multi-dimensional influences in action when these decisions are made (López et al., 2015; Nyathi, 2018). Child protection decisions are not always rational (Keddell, 2014), are made within a specific context and contingent on a number of influences, comprising individual child and family characteristics, caseworker and supervisory characteristics, organisational contexts, and the prevailing policy context in which the decisions are made (López et al., 2015). Assessment and decision-making are not empirical processes, and instead professionals' judgments are inherently value-based, subjective and interpretive (Morley, 2003), and additionally subject to resources constraints, such as caseworker pressures and the availability of funding for intervention and support (Hegar, 2005). For these reasons, Bartelink et al. (2015) propose that entire child protection decision-making processes are examined so that multiple perspectives are considered, thus reducing the shortcomings of single retrospective accounts of complex processes.

# Intervention and treatment responses to SHSB

# Availability of intervention and treatment

The availability of support, intervention, or treatment, for children and their families following sibling HSB has been described as variable and often lacking by a number of studies. Some studies within this review report on the dearth of support available for the victim child. A large study by Collin-Vézina et al. (2014) found that most families were not referred for support following allegations of sibling sexual abuse, and that most support involved family or parent counselling, with only 10% receiving support specifically for the child. Disparities in support were also found by Cyr et al. (2002) who found that emotional support for girls sexually abused by brothers was poorer than support for girls victimised by fathers.

The data on intervention and treatment responses are limited to a small number of studies, some of which involve clinical samples, and therefore these findings are unlikely to provide an accurate picture of the support most children receive in response to sibling HSB. An older study by Pierce & Pierce (1987) found that responses to sibling HSB by a child protection service were limited by the availability of treatment services in that area. Despite this, approximately one-third of the CYP in the sample were in some form of treatment after the offence, and almost all these CYP received some form of counselling within a treatment facility (Pierce & Pierce, 1987). Treatment programmes, residential or community-based, are most likely to be provided to amongst those accused of the most serious sibling HSB (Caffaro, 2014). Nevertheless, many of the CYP in the same study by Pierce and Pierce received a prosecution without being provided with any intervention or treatment, and placement out-of-home was too often "used as a treatment rather than as an adjunct to therapy" (Pierce & Pierce, 1987, p. 363).

In more recent studies, which perhaps more accurately reflect contemporary practice, intervention and treatment in response to sibling HSB precluded the majority of children who harmed. A cross-cultural comparison between CACs in Israel and Pennsylvania, US, found that most accused children were part of CAC treatment (Tener, Newman, et al., 2020). There were some exceptions, with younger children (under 12-years-old, the age of legal responsibility) displaying PSB included in the Israeli CAC, and where the child who harmed had a sexual victimisation history in the US CAC (Tener, Newman, et al., 2020). In the US setting of the same study, most therapeutic interventions for the child who harmed, including those external to the CAC, were not available until after legal processes had concluded (Tener, Newman, et al., 2020). This is a significant void in support given that research of CYP who have displayed HSB has found that many experienced the involvement of services to be stressful, and more so than most parents or professionals may realise (Yoder et al., 2018),

It is not possible to make any further generalisations from these few studies, and the availability of services may vary by regions and countries. However, these findings receive some support from a comparison study of adolescents who harmed intra-familial

children and those who harmed extra-familial children, with the intra-familial group referred for residential treatment less often, and receiving shorter duration of treatment, than those with extra-familial child victims (van Vugt et al., 2020).

# Types of intervention and treatment

There is a paucity of research on intervention and treatment programmes for SHSB (Latzman et al., 2011; Yates & Allardyce, 2021). Several studies within this review are based on samples from community treatment services (Adler & Schutz, 1995; Becker at al., 1986; Latzman et al., 2011; Smith & Israel, 1987).

The duration of treatment for CYP who have displayed SHSB is discussed in some studies, with a general indication that most interventions are long-term. An average of 13 months treatment was reported by Smith & Israel (1987), 12 months by Daly et al. (2013), and between 9 and 12 months by Thornton et al. (2008). A British study involving a sample of CYP in community or residential treatment reported a substantial variation in treatment, with weekly sessions for up to 6 months in community services and much longer-term, up to several years, treatment for residential treatment (Hackett et al., 2014). The number of treatment sessions in the sample by Flanagan & Hayman-White (2000) also varied, with an average of 39 sessions for those reaching treatment goals, 7 sessions for those only requiring assessment, and completion of an average 12 sessions for those who withdrew from treatment.

A small proportion of studies within this review detail the therapeutic approaches to treatment of SHSB. Amongst the US studies, Latzman et al. (2011) describe individual treatment of CYP using psychological, psychiatric, and pharmacological treatments. A range of either individual, group, or family psychotherapeutic treatment programmes are reported by Adler & Schutz (1995). Smith & Israel described treatment in their sample as "either family, individual, couples, or group treatment" (1987, p. 102). Australian studies also reported on treatment approaches, with Flanagan & Hayman-White (2000) detailing a range of interventions, including individual and group counselling, most of which were based on CBT techniques (Flanagan & Hayman-White, 2000). A treatment programme

described by Thornton et al. was based on psychotherapy and was provided to "each family member with individual and group therapy, as well as couple, family and reunification sessions when required" (2008, p. 365). More unusually, the treatment programme in the study by Daly et al. (2013) was shaped by narrative therapy and based on HSB in the context of power relations, with treatment focused on the accountability of CYP, albeit in the context of their family relationships. Despite the promising picture of multi-modal treatments described in the above findings, this approach to treatment was the exception for most CYP, when the sample sizes and quality of evidence of the other studies in review are considered.

As reported earlier in this chapter, most CYP who displayed SHSB remained at home with their families (Collin-Vézina et al., 2014; Flanagan & Hayman-White, 2000), with residential treatment an exception (Pierce & Pierce, 1987). Treatment guidance, however, does not align with the reality of the living arrangements for most CYP following SHSB. Removal of the accused child from home is a firm recommendation in some practice guidance (Hodges, 2002), with others suggesting that, with exceptions for younger children and less serious PSB, separation should be strongly considered for SHSB (Caffaro, 2014; Yates & Allardyce, 2021). Within this review, removal of the accused CYP was a specified condition of one US treatment programme (Tener, Newman, et al., 2020). However, treating the accused CYP away from the family unit does not address the underlying family issues and relationship dynamics, and can lead the victim child feeling responsible for the accused child's removal (Grant et al., 2006).

The unique and complex treatment needs of CYP accused of SHSB have been recognised in the findings from multiple studies in this review (Flanagan & Hayman-White, 2000; Tener, Newman et al., 2020; Tener & Silberstein, 2019) and in the wider research literature (Halse et al., 2012; Joyal et al., 2016). Other studies within this review recommend that treatment takes a flexible approach (Tener & Silberstein, 2019), and is adjusted to the emotional, social, and developmental needs of the CYP (Collin-Vézina et al., 2014). However, these unique treatment needs of CYP are not sufficiently considered

by the legal systems and its responses to SHSB, often exacerbating the family crisis (Tener, Newman, et al., 2020).

In recognition of the importance of involving the whole family in treatment, some research within this review recommends MST as a treatment for SHSB (Daly et al., 2013; Latzman et al., 2011). MST is a model of intensive family treatment based on a socioecological framework and originally developed for youth with conduct problems (Henggeler & Schaeffer, 2016). Further adaptations of the model have evolved, including the MST-PSB programme for families of adolescents with PSB or HSB (Borduin et al., 2009; Fonagy et al., 2017). Standard MST is amongst the most extensively evaluated family treatment programmes internationally, subject to multiple RCTs of treatment effectiveness (Henggeler & Schaeffer, 2016), with a smaller number of RCTs conducted of its offshoot, MST-PSB (Borduin et al., 2009). Despite the methodological rigour of RCTs (Newman et al., 2005), independent systematic reviews have found varied and inconclusive evidence of any clear positive treatment effects of MST compared to other interventions or services for adolescents (Littell et al., 2005; Markham, 2018). Evaluations of implementing MST-PSB in the UK have also been unable to discern any advantages of this treatment over other services (Fonagy et al., 2017).

NICE guidelines for HSB recommend a range of intervention models, with increasing recognition of strengths-based approaches that involve families or caregivers (NICE, 2016). Despite the variations in treatment modalities for SHSB found within this review, there does not appear to be one model of intervention that is more effective than others in terms of HSB recidivism (ter Beek et al., 2018). Systematic reviews of HSB interventions have found that therapeutic alliance is of more importance than any specific treatment approach (Campbell et al., 2020; ter Beek et al., 2018), and the opportunity to talk about sexual behaviour with an empathic therapist was valued most by CYP (Campbell et al., 2020; Kjellgren, 2019; Worling and Langton, 2012).

Not all treatments for SHSB within the review findings were perceived as helpful, especially when children were labelled as either the 'victim' or the 'perpetrator' (Tener,

Tarshish, et al., 2020). The broader research on HSB treatment has found that CYP report feeling guilt and sadness associated with the harm (Campbell et al., 2020). A study within this present review found that low self-esteem was of significance in CYP accused of SHSB (Morrill, 2014), prompting the importance of interventions that address CYP's emotional wellbeing and social competencies, rather than the HSB needs in isolation (Allardyce et al., 2021; Hallett, et al., 2019). Bank & Khan (1982) differentiated between power- and nurturance-orientated SHSB, with the former a dysfunctional form of sexualised emotional bonding in the context of a family dysfunction. Therapists in an Israeli study recognised the dilemma of treating CYP when both children involved appear to be victims of disruptive family environment and SHSB may have functioned as a maladaptive way to meet their emotional needs (Tener & Silberstein, 2019).

Treatment complexities were also described for those CYP who had displayed SHSB and had themselves been sexually victimised (Caffaro & Conn-Caffaro, 2005). Research findings have found CYP who have displayed SHSB have extensive historied of maltreatment and family dysfunction (Cyr et al., 2002; McDonald & Martinez, 2017), and comparatively higher than CYP who have displayed non-sibling HSB (Latzman et al., 2011; Martijn et al., 2020). Unresolved trauma and insecure attachment patterns are widespread in CYP receiving treatment for HSB (Zaniewski et al., 2020). Findings on practice approaches to HSB in general signify a growing body of support for therapeutic interventions that are informed by, and responsive to, trauma in CYP's lives of CYP. These developments seem to auger a shift in practice, from those that are punishment-orientated, towards approaches that consider the vulnerabilities and wider wellbeing needs of CYP accused of SHSB (Caffaro, 2020). Some reservations about the uncritical acceptance of trauma-informed approaches have been raised, with concerns that there is a risk of pathologising individuals without considering the broader social context underlying trauma, such as poverty and racism (Becker-Blease, 2017).

# Involvement of family in intervention and treatment

Family dysfunction and trauma are of significance in the backgrounds of CYP who have displayed SHSB (Worling, 1995), which has led to the suggestion that the HSB may be

"only one manifestation" of wider family problems (Caffaro, 2020, p. 22). Understanding and responding to the complexities of SHSB requires a comprehensive and integrated approach, encompassing the child who was harmed, the child accused of harm, parents and other family members, and the wider social context; and combining individual, sibling, and family sessions (Caffaro & Conn-Caffaro, 2005).

There is a broad consensus within the findings from this review that therapeutic responses to SHSB should involve a whole-family approach (Adler & Schutz, 1995; Katz & Hamama, 2017; Latzman et al., 2011; Tener, Newman, et al., 2020; Tener & Silberstein, 2019), in which treatment is provided to all family members the child who was harmed, or the child accused of harm (Tener, Tarshish, et al., 2020).

Family-based approaches that have been recommended for SHSB interventions draw on several theories. Systems and socio-ecological theories recognise the interdependence of family relationships and their interconnection to family functioning (ATSA, 2017; Caffaro, 2014). In the systems approach, the focus of change is on the family environment and relationship dynamics (Payne, 2005), with particular attention on the power dynamics between family members in cases of SHSB (Yates & Allardyce, 2021). An integrated life-course developmental theory of sexual harm may also contribute to understanding the importance of responses that involve the family unit (Smallbone et al., 2013; Wortley & Smallbone, 2006). The theory posits that HSB develops from contributions of individual, ecological, and situational factors (Smallbone et al., 2013).

For SHSB, the family environment and situational opportunity – such as unimpeded access to a sibling child (Worling, 2001) – appear to be particularly relevant, and responses centred on affecting change in these environments and relationships of the CYP are likely to be more effective. However, and as this present review has found, integrative approaches to SHSB that address the needs and involve all family members are not typical for most CYP accessing treatment interventions. Several studies within this review examined treatment provided by CACs (Tarshish & Tener, 2020; Tener et al., 2018; Tener, Newman, et al., 2020). CACs, and the Nordic Barnahus iteration (Johansson

et al., 2017), are community-based multi-agency support services for children who have been sexually abused and their families (Conroy et al., 2018). However, despite CACs model of an integrated approach to CSA treatment, they do not provide support for most CYP accused of SHSB (Tener, Newman, et al., 2020).

Although SHSB emanates from family environments and relationships, the family are also pivotal to recovery. CYP are better able to respond to interventions when they have family members who are knowledgeable about the HSB interventions, and able to support the CYP's needs and build their strengths (Yoder et al., 2018). Families perceive SHSB as a crisis and support for the family in the aftermath of SHSB is critical to the family's recovery (Hackett et al., 2014; Tener, Newman, et al., 2020; Welfare, 2008). Views of CYP involved in general HSB interventions attest to the key role parents have in supporting engagement and success of these interventions (Campbell et al., 2020).

Welfare (2008) considers therapeutic work directed at parents as a major component of SHSB treatment. However, parents face enormous complexities when they are required to attend the differing support needs of both the victim and accused child (Gervais & Romano, 2018). Parents were generally considered responsive to receiving support following SHSB, however they were clearly fearful about the possible prosecution of the CYP accused of harm, and these fears consumed parents' time and energy, impeding their cooperation with SHSB treatment (Tener et al., 2018; Tarshish & Tener, 2020). The findings of studies in this review also identified practical and emotional support needs to help parents to cope with these stressful events, and with meeting the demands made of them from the welfare and criminal justice systems (Hackett et al., 2014). Flexible approaches to interventions were favoured by parents (Tener et al., 2018), however their emotional needs were mostly overlooked within interventions (Gervais & Romano, 2018; Welfare, 2008).

Evidence from these studies, and from across HSB research literature, demonstrate the importance of ensuring parents are adequately supported with their own emotional wellbeing following SHSB and to ensure their and their children's effective engagement

in treatment (Campbell et al., 2020). Yates & Allardyce (2021) acknowledge that practitioners who are faced with time and resource constraints may find difficulty meeting parents' emotional needs. However, organisational culture may be more of an impediment to this parental support than the capacity of individual professionals. The only cross-cultural study within this review found marked contrasts in treatment approaches for SHSB, with one CAC in US restricted a focus on the needs of the victim, and a much more holistic approach to families' wider needs in an Israeli CAC (Tener, Newman, et al., 2020).

Parents also reported difficulties with treatments that involved removing the accused CYP from the family home in response to SHSB (Katz & Hamama, 2017). Although some parents understood the necessity of separating the accused child from the victim child, these difficulties were pronounced the longer the children were separated (Welfare, 2008). The main goal of HSB treatment is to reduce recidivism and strengthening family relationships is a key intervention area to promote desistance (ATSA, 2017; Worling & Curwen, 2000). There is some evidence that CYP who live with their families are more likely to complete HSB treatment programmes (Seabloom et al., 2003). On that account, out-of-home treatment for SHSB seems to be in opposition to the empirical findings on effective interventions (Grant et al., 2006).

One study within this review examined the use of RJ as a response to SHSB (Daly et al., 2013), however the findings were concerned with impact of RJ on re-offending in cases of SHSB and do not provide data on family involvement in the RJ process. Allardyce & Yates (2018) recognise the potential of adopting RJ approaches for SHSB interventions. FGCs are family-led approaches to safety planning and based on RJ concepts of restoration. The use of FGCs for CYP who have displayed HSB has been examined and there are encouraging signs that this model could be used to repair family relationships, develop safety planning, and meet the holistic needs of all family members in cases of SHSB (Anderson & Parkinson, 2018). At present, RJ approaches have not been empirically evaluated within the research literature.

Practice literature places importance on eliciting an apology from the CYP who displayed SHSB and accepting responsibility for harm (Bentovim et al., 2009; Hodges, 2002; Thomas & Viar, 2005). Victim clarification sessions are considered an essential component of treatment for recovery from SHSB, with the purpose of reducing victim's self-blame and ensuring the child who harmed understands the emotional impact of HSB (Yates & Allardyce, 2021). However, this emphasis on apologies and clarification sessions as integral for the treatment of SHSB has not been supported by the empirical findings from this review. The small amount of research on clarification sessions primarily concerns adult-to-child IFCSA (DeMaio et al. 2006; Lipovsky et al. 1998). Recent research on family reconciliation following HSB provides some very limited data on 4 SHSB cases (Gervais & Johnson, 2021). Apologies by CYP who had displayed SHSBs were forthcoming in one half of sibling cases, and achieved only after years of counselling treatment, and whilst siblings remained in the same household (Gervais & Johnson, 2021). Yates & Allardyce (2021) also question the utility of clarification sessions for CYP who have displayed SHSB, which may exceed the CYP's developmental abilities, and apologies can be susceptible to misuse (Tarusarira, 2019), especially if conditional for family reunification.

#### Post-treatment outcomes

Outcomes following SHSB treatment were not widely reported by studies within this systematic review. Data on treatment outcomes are drawn from a small pool of studies and thus limits the transferability of these findings.

Almost all CYP in the US study by Pierce & Pierce (1987) were referred for counselling, however no data on completion of treatment was available to the researchers. Completion rates in an Australian HSB intervention programme showed that around two-thirds of CYP fully or substantially reached their treatment goals, around a quarter withdrew, and the remainder ended because they re-offended (2%) or moved out of area (Flanagan & Hayman-White, 2000). Very similar completion rates for CYP SHSB were reported in a separate Australian treatment programme (Thornton et al., 2008). Non-completion of treatment was associated with CYP who with histories of prior victimisation, suggesting

higher levels of treatment need and intensity to address past traumas (Thornton et al., 2008). There was also some association between CYP who lived in blended or reconstituted families and non-completion, with suggestion that these families appeared to find greater difficulty supporting the CYP to engage with, and complete, treatment (Thornton et al., 2008), further underscoring the integral role of families with SHSB treatment.

None of the CYP who substantially met treatment goals re-offended sexually, and the CYP who did sexually re-offend had attended far fewer sessions than other CYP (Flanagan & Hayman-White, 2000). There is a note of optimism that the low rates of recidivism reported in this treatment programme are likely to be sustained. There is some research supporting the efficacy of treatment for HSB, with significant reductions in sexual recidivism for CYP completing comprehensive specialist treatment (Worling & Curwen, 2000; Worling et al., 2010). However, others contend that the strength of evidence for HSB treatment in general is relatively weak (Kettrey & Lipsey, 2018), and notable gaps in research for the specific treatment needs of SHSB (Allardyce & Yates, 2018). Even so, sexual recidivism rates in CYP generally decline with age and with maturation of their relational and life skills (van Den Berg, et al. 2017).

Improvements post-treatment are predominantly reported from the perspective of parents rather than CYP themselves. Tener et al. (2018) found attitudinal changes in some parents following family treatment within a CAC. The CAC intervention had a positive impact on families and marked point of change in parents' perception and understanding of SHSB (Tener et al., 2018). Thornton et al. (2008) also found improved awareness within parents of their role within family functioning. Parents also reported improvements to their family life and progress with communication, boundary-setting, and with their coping abilities (Thornton et al., 2008).

CYP's experience and outcomes following treatment are less prominent in the review's findings. Thornton et al. (2008) found that most parents noticed positive changes in the CYP who had received treatment. Where the views of CYP were obtained directly,

improvements to anger, impulsivity, self-control, and taking responsibility for actions were found (Thornton et al., 2008). An association between self-regulation difficulties and recidivism indicate critical aspects of change in these CYP (Rich, 2011). CYP who had completed SHSB treatment credited their progress to the non-judgemental approaches of the therapy and the opportunity this provided to talk through problems, including SHSB (Thornton et al., 2008).

Not all aspects of SHSB treatment were beneficial to CYP. Some CYP were unclear about support plans to prevent HSB relapse and there did not appear to be significant improvement in CYP's understanding of victim empathy (Thornton et al., 2008). The impact of traumatic childhoods on CYP's empathy may be relevant (Simons et al., 2002), with 42% of the treatment programme sample reported to have been sexually victimised (Thornton et al., 2008). Findings on the relationships between empathy and HSB by CYP are inconclusive (Baly & Butler, 2017), however supportive family relationships and social connectedness are crucial to CYP's development of empathy (Rich, 2011).

Welfare (2008) found that recovery for both the victim and accused CYP was contingent on nurturing parental responses that were attuned to both children's practical and emotional needs. Some importance was placed on balancing support with accountability for the CYP accused of SHSB was also recognised, with less favourable recovery outcomes when parental responses were either too confrontational, or supportive but insufficiently challenging (Welfare, 2008).

Not all treatment outcomes were successful. Although the goal for most families was for their reunification, this was not possible for some families and less likely if attempted too early without considering the victim child's needs (Welfare, 2008). Research by Skau et al. (2008) was not included in this review but their findings indicate that reunification of the CYP accused of SHSB to the family household occurred in only about a fifth of families. In Welfare's study, several families recognised themselves that reunification was unachievable, despite progress CYP may have made, and these families "did not

consider that recovery had occurred for them, because the family unit had been destroyed" (Welfare, 2008, p. 145).

Where CYP have been separated from families because of SHSB, reunification is a core objective of treatment (Yates & Allardyce, 2021), instilling hope in all family members of the potential for change. However, reunification options can also be diverse, and where it is not possible for the accused CYP to return home, repairing and restoring family members' relationships remains a legitimate goal (Yates & Allardyce, 2021; Skau et al., 2008).

## Strengths and limitations of the research study

The scope of this study was to systematically review empirical research on family and professional responses to CYP who had displayed SHSB. The piloting stage of the systematic review indicated that there were relatively few empirical studies on SHSB, and therefore a broad review question was chosen comprising of two strands: family members' and professional responses to SHSB. This dual focus meant that the depth and scope of analysing and situating the data within the wider research literature were restricted. As research on this topic develops, there will be a much larger pool of empirical research available to expand the knowledge base, and it is recommended that future systematic reviews in this subject area examine either family reactions and responses, or professional responses, to ensure sufficient depth of analysis.

The research question was influenced by a personal interest in SHSB that developed from direct experience of social work practice working with CYP who had displayed HSB. This practice experience enabled evaluation of data based on practice knowledge, however positionality means that the research approach and interpretation of data is not neutral (Marques da Silva & Webster, 2018).

Three electronic databases were used for the search strategy and selected because of their subject relevance. A greater number of databases could have been searched to ensure a

broader search strategy and improve recall of relevant articles. However, additional database searching would have time and resource implications. Some electronic databases perform better than others (Gusenbauer & Haddaway, 2020), and database choice should be subject-specific (Hartling et al., 2016). The databases selected for this search are amongst the principally recommended systems for systematic reviewing (Gusenbauer & Haddaway, 2020). It is unlikely that additional database searching would yield further relevant 'hits' and confidence was reached in achieving 'data saturation' from the exhaustive search strategy (Booth, 2016). Additional techniques of searching were also used to identify articles not indexed in electronic databases.

The inclusion criteria were an important aspect of the exhaustive search strategy (Aveyard et al., 2016), ensuring the relevance and quality of selected studies to best answer the research question. However, the choices made when determining the inclusion criteria has an impact on the selected data. Non-English language papers were excluded from the systematic review because of insufficient resources to provide translation. Excluding non-English language studies may limit the results and create some bias in a systematic review (Rasmussen & Montgomery, 2018), however others believe that non-English language exclusion has only a modest overall effect on results (Jüni et al., 2002).

Non-empirical research was excluded from the systematic review to ensure findings were informed only by "direct experience or observation" (Punch & Oancea, 2014, p.2), and to distinguish findings from theoretical or conceptual papers. However, knowledge on SHSB is poorly developed and inclusion of grey literature could further expand the findings, although non-empirical findings would be less reliable. The inclusion of grey literature in systematic reviews has attracted extensive debate. Inclusion of grey literature provides a more complete and balanced view of the available evidence, and reduces publication bias (Paez, 2017). However, grey literature can be difficult to locate, especially when resources and time are constrained (Paez, 2017). Grey literature is not necessarily produced for a research audience, and this can impede quality appraisal (Mahood et al., 2013). Grey literature is not usually peer-reviewed, and without this

scrutiny the integrity and quality of findings can be compromised (IWH, 2008; Mahood et al., 2013).

As a student research project, this systematic review was conducted by a single reviewer. Double-reviewer screening of papers is conventional in systematic reviews to improve consistency of inclusion criteria in the identification of eligible studies (Stoll et al., 2019). More studies are mistakenly excluded in a single reviewer approach (Stoll et al., 2019), and although single review screening is preferential, it is time and resource intensive (Waffenschmidt et al., 2019). In spite of its limitations, Waffenschmidt et al. (2019) found variations in the proportion of missed studies by single reviewers, concluding that single review screening can be "robust enough to establish this approach as a methodological shortcut" (Waffenschmidt et al., 2019, pp.7-8). To reduce the impact of this methodological shortcoming, the review process was detailed explicitly in the methodology chapter to ensure transparency. Nevertheless, some selection decisions in the screening process of this research review were not always clear-cut and subject to a degree of interpretation and subjectivity.

Some authors contributed to multiple papers in the dataset of this systematic review, which accounts for the disproportionate number of studies from Israeli samples. Shin (2009) recommends that systematic reviewers should not discard findings by the same author and instead assess for relatedness of the samples. Although it appeared that the samples reported by the same authors originated from a single Israeli CAC (Tener et al. 2018; Tener, Newman, et al., 2020; Tener & Silberstein, 2019; Tener, Tarshish, et al., 2020), these articles examined different perspectives from different participants and of varying sample sizes. It can be assumed that there is relatedness to these studies, and while some degree of data overlap could be possible within the samples, they cannot be considered as duplicates. However, there is some risk of bias from "between-studies dependence" (Shin, 2009, p.44), where findings from the same author share the same standpoint and positionality and are built on the author's prior research and knowledge (Shin, 2009).

There are inherent risks of bias when reporting, comparing, and making quality appraisal judgements in a systematic review (Bryman, 2016; Ma et al., 2020). The use of a CATs in systematic reviews can help guide quality appraisal decisions but are not without limitations and most tools lack validation (Wash & Downe, 2006). CATs have been criticised by some as evolving from and favouring positivist research assumptions, valorising replicability and objective truth (Wash & Downe, 2006), and therefore the appraisal of research from different epistemological positions within MSRs can be problematic. There is debate between those who suggest using a CAT specific for each study design to avoid comparisons of irrelevant items, and the difficulties of directly comparing different CATs (Crowe & Sheppard, 2011). The MMAT, used in this systematic review, is a specific CAT to appraise quality criteria for all types of study design (Pluye et al. 2009). However, as with all CATs, the choice of tool, and the items of assessment within the tool, are based on a degree of subjective judgement (Attree and Milton, 2006). Quality appraisal is also dependent on the researcher's experience of assessing methodological quality (Waffenschmidt et al., 2019). As a relatively inexperienced researcher, and also a single reviewer, the quality appraisal of this study relied on individual judgements without an ability to confer with colleagues about these decisions. Difficulties appraising qualitative research was previously attributed to the imbalance of qualitative designs amongst the studies that were of the highest quality in this review, however it may also be indicative of researcher inexperience. Numerical scoring of a CAT may have helped with these appraisal judgements, however this is discouraged within the MMAT (Hong et al., 2018). Scoring also requires individual judgement and an overall score can conceal problematic aspects of a study (Crowe & Sheppard, 2011; Downes et al., 2016).

# **Conclusions**

This study examined the empirical research literature on family and professional responses to CYP who have displayed SHSBs.

A systematic review using a mixed studies design synthesised findings from a diverse range of quantitative and qualitative primary studies to provide a comprehensive understanding of the empirical knowledge on responses to SHSB. A total of 28 studies met the inclusion criteria and findings relating to the child accused of harm in cases of SHSB were analysed to provide a summary of the evidence in this area of research and practice.

The first aim of the present study was to examine family members' reactions and responses to SHSB. The findings across studies demonstrate the diverse and complex range of family members', especially parents', responses to SHSB. SHSB is perceived as a family crisis and parents find it difficult to meeting the demands made on them by professionals. Most parents attempt to support their children. However, it is difficult for them to meet the differing needs of both the accused child and victim child. Research has found that many parents appear to support the accused child to a greater extent than the child who was harmed, but this is usually because of the serious criminal justice consequences the accused child faces following allegations of SHSB. In the main, most family members, including the child who was harmed, find criminal justice responses to SHSB to be unhelpful and disruptive, and they have, instead, a preference for support through therapeutic interventions. Despite the number of studies on SHSB, very little is reported or known about the experiences and views of the child accused of harm.

In regard to the second aim, professional' responses to SHSB, more data are available on criminal justice responses. However, because the majority of studies included in this review are based on samples from clinical populations of children and families in contact with professional services, this limits the generalisability of these findings. Criminal justice responses to SHSB seem to be more likely when sexual penetration of the victim

occurred, when the accused child did not show remorse or acknowledge the allegations, or when the parents were uncooperative of disbelieving of SHSB. Some studies within the literature suggest that SHSB receives a response from services that is different to that provided to cases of EFCSA. However, no consistent findings on such differences were found within the empirical research data.

Practice guidance on responding to SHSB recommends that most siblings are separated (following the HSB), and the accused child is removed from the home until further assessment or intervention (Hodges, 2002; Allardyce & Yates, 2018). However, there appears to be a void between this guidance and the reality of most responses to SHSB according to the research data, with the majority of CYP accused of SHSB remaining at home in their families.

Support and intervention for SHSB is not always readily available, and in many instances structural barriers to treatment mean that it is only available to CYP who have displayed the most severe sexual harm and are involved in the criminal justice system.

Most interventions in response to SHSB are individual-based; where family-based treatments are provided, for example, through integrated CACs, the accused child is mainly excluded. Very little detail on the characteristics of treatment is included within the literature and no one treatment modality appears to be preferred, with empathic and inclusive responses appearing to be of more importance for CYP and families. Recidivism, where reported, was very low post-treatment. Most family circumstances improved following intervention programmes, especially with regards to parent-child relationships, communication, and boundaries, but not always in the relationship between the siblings involved in HSB.

The current review has found considerable methodological limitations in the research on SHSB, and therefore interpretation of these findings should be treated with caution. There is a paucity of empirical research on SHSB, and data specific to family and professional responses is an underdeveloped strand of this research. The validity and reliability of data

from the included studies within this review are impaired by various biases, including: small, mostly clinical, samples from CYP receiving an assessment or intervention; information bias from self-report data or delayed recall period in retrospective accounts of HSB; and an under-representation of evidence from non-Western countries.

Systematically reviewing the empirical research on responses to SHSB has provided an important additional contribution to the knowledge. A methodologically inclusive synthesis of quantitative and qualitative data has generated new insights in this area of practice and research. Comparisons were made between studies of varying designs and strength of findings were critically appraised to determine anomalous results and identify gaps in research knowledge.

#### **Implications for future research**

The voice of children accused of harm in cases of SHSB is absent from most of the research literature and this considerable gap urgently needs to be addressed in order to sufficiently develop an understanding of this phenomenon. The literature is predominately based on administrative datasets or third-party accounts of CYP accused of SHSB, such as interviews with their parents or the children they harmed. These factors mean that the data may be unreliable. Children who have displayed HSB are a vulnerable population and the inherent difficulties of research in this area have been documented (Masson et al, 2012). Alternative and creative ways of eliciting the views and experiences of these CYP are required, not only to ensure balance in perspectives and trustworthiness in the data, but also to bring about change through a deeper understanding of the issues and barriers these CYP face following SHSB allegations, and the ways in which they can be best supported towards a safer, positive future.

Individual characteristics of CYP have been the primary focus of research on SHSB to date. A consensus in the findings of the present review is for family-based approaches to SHSB, which do not appear to be typical trend in contemporary practice. By consequence of this lacuna, family-based approaches have not sufficiently been examined and

evaluated by research studies. Thus, research needs to consider SHSB in the context of the family and its interpersonal dynamics, and not solely the impact of HSB on individual family members.

The findings from this review indicate that, in the majority of instances, CYP who have displayed SHSB remain at home with their families. Further details of children's precise living arrangements following SHSB are limited to a small number of studies, and this is an area that future research should aim to address. Practice requires evidence from research, ideally longitudinal follow-up studies, on the characteristics and circumstances of children who remain at home, factors that support them to remain within their families, and the support needs to achieve family unity. Canadian researchers identified some supportive factors and counterindications of family reunification following SHSB. (Skau et al., 2008). Although this particular study did not meet the inclusion criteria for this review, it provides a template for future research enquiry.

There has also been a tendency for research to examine the most severe cases of SHSB involving children who are accessing intervention and treatment services. Further research is required on non-penetrative SSB where there is some degree of mutuality to the behaviour, and which perhaps does not reach specialist support services. This important distinction will provide data on the heterogeneity of responses to the diverse range of SHSB and ensure that practice responses are proportionate.

A relatively small number of studies met the inclusion criteria for the current review. This is likely to be because research on SHSB remains in its infancy. Researchers should, therefore, consider including grey literature in any future review to further develop knowledge about family and professional responses.

Other methodological recommendations to broaden the knowledge base in future research would be greater use of larger and non-clinical samples to reduce potential bias and provide a more representative overview of responses to SHSB in non-treatment settings.

At present, data is over-reliant on clinical samples with only a few exceptions (Collin-

Vézina et al., 2014; Griffee et al., 2016). Data from non-Western samples are absent from this systematic review and more comparative studies, including cross-cultural comparisons with non-English language speaking countries, would ensure greater diversity to the data and reduce ethnocentricity.

Research examining SHSB covers a range of academic and professional disciplines. This systematic review has provided a synthesis relevant empirical research studies. However, efforts should be made to help ensure a cohesive evidence-base for future research by unifying definitions and terminology for this phenomenon.

# **Implications for policy**

SHSB describes a broad range of behaviours that exist along a continuum from mutual curiosity to abuse. Differences in terminology confuse and complicate professionals' and families' understanding and ability to identify SHSB. National policies and procedures for working with children, such as statutory *Working Together* guidance in England and Wales (DfE, 2018), should incorporate clear and specific descriptions of SHSB into sexual abuse guidelines. Non-statutory guides, such as a knowledge review by the CSA Centre in the UK (Yates & Allardyce, 2021), should be regularly updated as new research on SHSB is produced, with a greater emphasis on empirical evidence.

Research studies within this review consistently recommend holistic approaches to understanding and responding to SHSB. However, criminal justice and child welfare systems are often inadequate and inappropriate as responses to sexual harm between siblings in the same family home. These current system responses are fragmented, with support mostly provided to individual family members in isolation and without sufficiently considering the complex interpersonal dynamics of the family unit. Policymakers in many countries need to reconsider how, as a society, it is best to support children and families where SHSB has occurred and move away from system-approaches that individualise a family problem. Current welfare and criminal justice responses are often experienced as punitive and unhelpful by families where SHSB has occurred, and

therefore a shift in policy is required to develop a holistic, family-based framework for responding to SHSB as an alternative to an adversarial legal system. Promising findings have been reported on the use of exemption committees in cases of SHSB as an alternative route for prioritising therapeutic support for CYP and families, and to divert the accused CYP from the CJ system (Tarshish & Tener, 2020), however some adjustment to its current format would be required so that there is greater inclusion of the accused child in family-based support.

Policy approaches to SHSB should also foreground children's rights. The distinct developmental and behavioural differences between children and adults have been recognised in wider approaches to HSB in CYP (McKillop et al., 2015). However, policy – as with research and practice – does not appear to have made such advancements when HSB involve siblings. Research on SHSB indicates that a large proportion of CYP who display SHSB have experienced victimisation and family adversity in early childhood (Martijn et al., 2020). CJ policy does not adequately consider these broader factors, and instead apportions responsibility on to an individual child rather than situating SHSB within the context of family adversity and society's shared responsibility to support families before problems escalate (Balfe et al., 2019; Caffaro, 2020; Tener & Silberstein, 2019). All children within the family, including the victim child and accused child, should be afforded the status and rights of a child. There are inevitable complexities for policymakers when balancing children's rights when one child has been sexually harmed by a sibling, however this should not result in a diminution of the accused child's rights to protection from harm and a family life in consequence (Keane et al., 2013).

Findings from most studies within this review are from tertiary interventions, implemented after the occurrence of SHSB and once the children and families are involved in the criminal justice system. A public health model to address CSA has been gaining increased traction, and there is scope for policy approaches to also promote prevention of SHSB by supporting families at the earliest opportunity and before harm occurs (Caffaro, 2020). Public health approaches address the underlying risk factors and enhance protective factors through involvement in community-based support (Brown et

al., 2011). There is some evidence that incorporating CSA prevention within universal community education and parenting programmes can be effective, especially for those CYP recognised as more vulnerable to CSA (Rudolph et al., 2018). Further components to consider adding to existing curricula of established parenting programmes include healthy sexual behaviours in childhood, monitoring privacy and boundaries, and nurturing relationships between family members (Allardyce & Yates, 2018). These specific areas may support families with enhancing their strengths and protectiveness, ensuring timely and appropriate responses to PSB and thus reducing the risk of familial sexual harm.

## **Implications for practice**

The family context, including the relationship dynamics between family members, appears to be important in relation to SHSB according to the research findings. However, practice primarily involves individualised responses to the family-based issue of SHSB, often from disparate agencies reference. As with policy recommendations, a shift in practice to a holistic, family-focused approach to SHSB should be considered. Sibling HSB affects the entire family unit, yet professional responses are usually delivered separately, either for the child who was harmed, or the child accused of harm, premised on change at an individual level. There are unique needs for each child affected by SHSB, and some individualised approaches would help to support and address the unique needs of each child. However, there is a scarcity of practice approaches that seek to affect broader changes in relation to interactions and relationships within the family environment (Allardyce & Yates, 2018). Multi-agency protocols between all relevant agencies involved with a family following SHSB, would ensure a co-ordinated and joint approach for the whole family.

Several studies within this review found that for many families where SHSB had taken place, there had been prior involvement with child welfare services because of previous child maltreatment concerns. Inspections of multi-agency responses to HSB in general have identified missed opportunities to intervene at earlier stages in the lives of CYP who

have displayed HSB (CJJI, 2013; O'Brien, 2010). There are several implications for how practitioners can better respond to SHSB. First, this finding supports the importance of considering the developmental and family context of CYP who have displayed SHSB (Wortley and Smallbone, 2006), including the necessity of affecting change at a family, rather than individual, level. Greater consideration should be given by practitioners to understanding SHSB in terms of trauma and childhood adversity. A trauma-informed perspective of SHSB may also reframe practitioners' views about culpability and responsibility in SHSB cases. The accused child, whilst responsible for the sexual harm, should not exclusively be shouldering responsibility for historical family difficulties that are likely to have a contributory role in the development of SHSB.

Practice guidance has previously recommended 'clarification sessions' as a pre-requisite of treatment or reunification following SHSB. Victim clarification requires the child who harmed to assume responsibility for their behaviour in the presence of the victim and in some instances, the victim confronts the other child about the harm caused (Rich, 2011). This review has identified that most children who have been accused of SHSB do not fully admit responsibility for SHSB. The majority of CYP are also not removed from home following SHSB. The requirement to admit responsibility not only potentially precludes many CYP from accessing treatment, but it also seems to be out of kilter with the reality of practice responses to SHSB, whereby a large proportion of CYP do not fully admit to the harm, and yet most remain with their families. Practice guidance should be updated to place greater emphasis on responses and interventions that better reflect reality, including the practical and emotional support families require to remain intact after SHSB. The prominence of victim clarification in practice guidance on SHSB should also be appraised; while clarification may be desirable, its fundamental role in treatment has not been found within the empirical evidence.

There is promise in restorative approaches to practice where, instead of retribution through criminalisation, the objective is the repairing of family relationships. In its current form, responsibility is a core feature of RJ and this may not be entirely suitable

for many CYP who have displayed SHSB. Instead, other forms of restorative approaches, such as VRJ or FGCs, could be more inclusive for all family members.

Prior child welfare involvement also points to the importance of timely responses with families in difficulty and the previous potential opportunities where practitioners could assess and intervene when SSBs become apparent and before they lead to significant harm. The assessment of children's developmental needs does not typically include children's sexual development when children are involved with child welfare services (Department of Health, 2000). However, if practitioners understand and enquire about healthy sexual behaviours in childhood, regardless of the referral concerns, they will be better able to identify and distinguish behaviours that are harmful. More specialised assessment tools for CYP who have displayed HSB may need to be expanded or supplemented in order that the unique factors in cases of SHSB can be properly considered. Although HSB assessments provide a general indication of risk to others, they do not comprehensively consider the unique and specific features of SHSB, such as relationship dynamics between the siblings and the context of a shared living environment (Allardyce & Yates, 2013).

There are implications for developing child welfare and criminal justice professionals' training to include SHSB within their specialist or generic assessment processes. The profound impact of SHSB on family members should also be covered within the training of practitioners, to help respond to these families' needs. It may help practitioners to understand SHSB as a family crisis in which parental denial and disbelief of the harm are quite common initial reactions, and to encourage practitioners with addressing these emotional support needs which parents have found to be absent in their previous experiences of professional responses.

The incest taboo and professionals' assumptions of sibling relationships as harmful have been cited as barriers to the identification of SHSB (Yates, 2017). There is a further role for training to bring SHSB into the general awareness of professionals from services universal to all children and families, including schools and nurseries, children's centres,

health visiting, and general practice. In the UK, child protection awareness training is a core training requirement for all professionals working with children. Specifying SHSB as a type of CSA into these compulsory training courses will bring about much greater awareness of the potential for sexual harm between siblings, alerting professionals to respond to any SSB they consider to be developmentally atypical, and preventing escalation of harm at a far earlier stage. As a simple and cost-effective preventative measure, training has enormous potential to reduce the immediate and long-term harmful effects of SHSB on children, their families, and wider society.

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## Appendix A

#### Summary of included studies in final dataset

Author(s) and Year	Study aims and objectives	Sample and setting	Focus of study V - Victim child A - Accused child F- Family/parents P - Professionals	Study design / data collection methods	Strengths and limitations (potential bias)	Findings relevant to the review / Reasons for inclusion
Adler & Schutz (1995)	Purpose described as adding to the limited literature available on sibling sexual abuse offenders, to increase clinical awareness and stimulate further research, using a sample with demographic variables that differ from previous studies on this population.	US 12 males, 13-19 years old ( <i>M</i> = 16 years old) referred to a hospital-based outpatient psychiatric clinic for evaluation and treatment.  Predominately Caucasian. All from middle or upper income, suburban families	A	Descriptive study.  Retrospective reviews of clinical intake data.	Strengths: Descriptive data from a multiple range of sources to enhance data, including; parent and victim reports, offence accounts from accused child, police and child protection reports, school reports, mental state examinations and behavioural checklists.  Population in sample described as from middle or upper income, suburban families with predominately married parents, contrasting with lower SES and other study samples.  Limitations: Small sample from a hospital outpatient clinic may represent the most severe known cases of sibling HSB and thus limits generalisability of findings	Prior disclosure in 58% of cases, parental intervention at time not effective and HSB continued.  Minimal involvement from criminal court and CP services unless parents found neglectful. In many cases, once referred, CP involvement ended and only reopened if further neglect or physical abuse reported.  Sibling HSB must be taken more seriously by judicial, child protection, and mental health systems on prevention and intervention levels.
Becker et al. (1986)	Descriptive overview of the individual of the family, criminal and sexual backgrounds of adolescents charged with 'incest' and refereed to an out-patient evaluation and treatment service.	NY, US 22 males aged 13-18 (M = 14.8 years old) referred by criminal justice system or Social Services to a community (out- patient) evaluation and treatment service.  All had been charged or convicted of a sexual crime against a family member.	A	Descriptive data reported.  Structured clinical interviews focused on family, criminal and sexual histories. Consent obtained by young person and parent.	Strengths: Includes biological and socio-legal siblings (step-siblings) within sample. Participants had volunteered to undergo evaluation and treatment. Provides data on sample of minority ethnics groups.  Limitations: Small sample size. Participants described as inner-city, minority, and low SES status, which may limit comparability to other studies and generalisability of these findings. Relies of self-report data from those subject to probation involvement or recently released and may therefore minimise extent of HSB. Data from those charged with incest crime likely to represent the most serious of all sibling HSB and may not be representative of those not brought to attention of criminal justice system.	Two-thirds of adolescents admitted to HSB in part (46%) or full (23%).  A third denied all involvement.  Majority (over a third) of referrals for treatment by courts.  Higher proportion on probation/parole supervision (45%) than reported to child welfare services (32%)
Caffaro & Conn-Caffaro (2005)	Review of an integrative, multidimensional approach for conducting assessment and psychotherapy with	CA, US 73 adult survivors of sibling HSB and assault.	V	Qualitative description In-depth interviews transcribed and data from responses to the Adult	Strengths: In-depth qualitative analysis from adults receiving treatment for childhood sibling HSB, providing insights on family	Included because of data on treatment needs. Although mostly adult survivors of sibling HSB, also includes some participants who were both initiators of and victims of sibling HSB.

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	children and families where sibling HSB and sibling assault has occurred. Research questions: what family characteristics contribute to the development of abusive sibling relationships in childhood? How do various family configurations affect the relationship between siblings in abusive dyads?	Participants recruited voluntarily from advertisements, announcements, and requests from colleagues.  49 female (67%), 24 male (33%), ages 18-54 (M=38)  77% Caucasian 13% African American 10% Latino  39% (n=29) victims of sibling HSB, 25% victims pf both sibling HSB and assault		Sibling Abuse Survivor Questionnaire. Content analysis conducted on the transcribed interviews.	background, sibling relationships and treatment needs.  Small number of participants who were both victims and initiators of sibling HSB provided views on their experiences.  Utilised a standardised interview questionnaire for consistency with data collection.  Limitations:  Small, self-selected sample may not be representative of sibling HSB in general. Most participants had undergone some psychotherapy treatment, also reducing generalisability.  Retrospective information from adult survivors may not have recalled details of their childhood abuse experiences exactly as they occurred and not fully represent views of other family members.	Dilemma of treatment for siblings who displayed HSB and also victims.  Cautions professionals to avoid making rigid assumptions or generalisations about sibling HSB. Some HSB pseudo-consensual and resembles non-coercive sex play between children close in age, although that the incestuous behaviour may be more intense, more frequent, and longer lasting. Children in these families (victim and initiator) suffer from an extreme lack of parental guidance and a high level of neglect. Treatment challenges unique to pseudo-consensual sibling HSB is with reorganising the family so that HSB no longer occurs, without inducing shame or guilt on child or parents. Suggests that an integrative theoretical approach allows for a more explicit view of the interdependence of the sibling bond avoid rigid approaches.
Collin-Vézina et al. (2014)	1) An investigation of the characteristics of suspected incidents, the accused adolescent, victims, and families in cases of sibling HSB under child protection Investigation.  2) How do suspected sibling HSB cases investigated by child protection workers compare with suspected cases involving non-sibling young offenders?	Canada Profiles of victims aged 0-15 and accused sibling aged 20 & under.  10172 estimated sexual abuse cases investigated by Canadian CP agencies in 2008. 974 (10%) = sibling HSB. 918 (9%) = non- sibling HSB by CYP	V	Incidence study using administrative data from child welfare workers.  Multistage sampling design used to select child welfare sites and cases at each sampled site.  Representative sample of 112 child welfare sites selected / 412 child welfare organizations identified using Canadian Incidence Study on Child Abuse and Neglect (CIS-2008). Applied stratification to provinces and territories.  Various statistical measures used.	Strengths: Large sample size using administrative data and statistical analysis increases reliability and ecological validity. Includes suspected cases, including those later not substantiated, with a lower evidence threshold for investigation than convicted cases. This provides broader overview of sibling HSB than studies examining confirmed cases only.  Limitations: Administrative data from a single year and location may not be comparable with other populations. Cases open to CP services only and thus a fraction of all sibling HSB. Does not include data about treatment programmes offered to CYP accused of sibling HSB.	Sibling HSB more likely to have been reported to authorities by their custodial or non-custodial parents, or by the school and day care, than cases involving other non-sibling HSB by CYP.  More than half of families where sibling HSB occurred had prior CP investigation for children in family, and a third receiving ongoing child welfare services.  Criminal investigation more common for non-sibling HSB than sibling HSB.  Over half of allegations of sibling HSB substantiated. Use of child welfare placements and court rare. Referrals to support services less likely for sibling HSB. Only around a fifth of substantiated sibling HSB cases referred, mostly parenting support. Only a tenth of these included victim support.
Cyr et al. (2002)	To identify the differing characteristics of sibling HSB, the family environment, and the psychosocial distress of these children (victims).	Quebec, Canada 72 girls aged 5-16 years old, (M = 11.3) referred to CP services. All substantiated sexual abuse. Three groups sexually abused by brothers, fathers or stepfathers (24 in each group). Study completed before treatment began.	V	Questionnaires.  Prospective design. Subjects in each group paired for ages and assigned to one of the three groups. Subjects matched between groups on the basis of their actual age. Children completed measures of traumatic Stress, their mothers completed the Child Behavior Checklist-Parent Report Form (CBCL) and other self-report	Strengths: Based on prospective and matched design. Psychometric questionnaires to gather data with some validity. Pairing of groups for comparison according to age to ensure better control of the possible effects of a victim's age on the characteristics of the abuse, the symptoms, and some family characteristics.  Limitations: No data from brothers accused of HSB and relies on victim account or recorded information from CP services. Sample size limits ability to make statistically significant difference between groups.	Brothers more likely to admit to HSB than fathers or step-fathers who are more likely to deny.  Mothers more likely to believe allegations against a brother or father than a step-father.  Poorer support for brother HSB with loyalty of mothers between her daughter and son.  Included because of data on parental responses to sibling HSB.

Daly et al. (2013)	To determine the overall rates of general and sexual re-offending of youth (<18) charged with sexual offences and examine the influences of restorative justice and a specialist youth therapeutic programme on patterns of re-offending.  Research questions: (1) What is the overall rate of sexual and general re-offending? (2) Do rates of re-offending vary according to where finalised (court, conference, or caution)? (3) What is the impact of on re-offending of referral to a treatment programme? (4) What other factors affect re-offending?	South Australia  Archival dataset of all youth sex offence cases finalised by police caution, family conference, or youth court 1995-2001.  Youth cases n=365 84% 'touch' offences, 20% of touch offences - siblings (n=61) 57% finalised in court, 32% conference, 11% formal caution. Aim to examine the influences of restorative justice and a specialist youth therapeutic programme on patterns of re-offending.  Offenders (97% male, 9% Aboriginal) Victims (76% female) 69% 14-17 years old, 20% <14 when case	A	questionnaires on family characteristics. CP workers completed information regarding the nature and severity of the abuse. Statistical analysis of data. Analysis of data of youth within the Sexual Assault Archival Study. Database of cases contained variables about youth, victim, type and circumstances of offence. Statistical analyses of coded dataset. Survival analysis to estimate re-offending. Covariates, such as prior offending or referral to treatment, tested for differences in survival rates.	Cases from CP services in one Canadian province and therefore cannot be generalised to other populations and settings.  Strengths: Archival database provides data from a naturalistic setting. Large dataset with a reasonable proportion of SHSB. Survival analysis statistical procedures to follow-up youth and their pathway through the CI system over a period of time. Statistical analysis improves sensitivity of results.  Limitations: Self-Selection bias for different legal pathways. Conferencing is a restorative approach which is a voluntary process. Youth in conferences may be more motivated to engage in treatment because of this voluntary engagement. The distinctive legal pathways of cases make it difficult to assess the independent effects of conference and court on re-offending.	Victims much younger in sibling cases (c. 8 years old) than non-sibling cases (13 years old). Siblings offences more likely to involve multiple acts over longer duration.  When reported to the police, sibling HSB more likely to be referred to a conference than to court. This is because youth more frequently admit these offences to legal authorities (and admit them earlier) and significantly lower levels of prior offending than other CYP HSB. Conference outcomes more often included referral to treatment than court outcomes. Therapeutic responses more likely for sibling cases (68%) vs. non-sibling HSB (23%). Referral to treatment programme significantly associated with a reduction in general re-offending, but only for youth with no prior offending. Proved court cases more likely to be sibling HSB because of early admission which is associated with differing legal pathways for siblings HSB compared to other CYP HSB. Concluded that sibling cases treated more seriously than non-siblings cases in South Australian criminal justice system.
Falcão et al. (2014)	To contribute and improve the detection of sibling HSB from a forensic medical perspective through the characterisation of alleged victim, the accused, the sexual abuse, the forensic medical examination and judicial outcomes.	finalised.  Portugal Examined medical records from 2004- 2011 of victims under 18 years where examination for alleged sibling HSB Included half-siblings, stepsiblings, son of host family or son of stepmother/father). Based on sample of 68 cases of sibling HSB and legal outcomes obtained (23.5%).	V	Medical case files analysis.  Retrospective analysis of forensic medical records of alleged sibling HSB victims under 18 years old.  Data collected on characteristics of victim, accused and family Some statistical analysis of findings.	Strengths: Provides unique data from forensic medical examinations, including physical symptoms of sexual abuse, and importance of medical role in identifying CSA. Standardised data collection procedures to ensure reliability and replicability. Statistical analysis of data.  Limitations: Availability of some data limited. Judicial outcomes based on a very small subsample of just 16 cases. Possible variation in the FME between different physicians.	Delayed presentation of more than 3 days in majority of cases of sibling HSB and most FMEs did not reveal any a specific medical indication that sexual abuse had occurred.  An absence of medical evidence led to difficulties with providing proof of sibling HSB.  A half went to trial and around a third of cases did not proceed to prosecution.
Flanagan & Hayman- White (2000)	Description of the characteristics of children and young people who have attended an Adolescent Sex Offender	Melbourne, Australia 137 male children and adolescents Aged 8-17 years (M = 13.5 years old) 86% >12 years old	A	Retrospective case file review of adolescents who had accessed an HSB treatment programme.	Strengths: Large sample of 63 adolescents (46% of 137) in treatment following sibling HSB. Description of characteristics of referred adolescents and components of treatment.	Large proportion involved with statutory child protection system Most cases reported to police, with about half resulting in further action (official caution of sentenced by court).  A range of therapeutic interventions offered including group therapy, individual counselling and/or family reconstruction.  Mostly based on CBT techniques.

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	Treatment Programme, with a summary of HSB and victim characteristics.	46% HSB involved a sibling (or step-sibling).		Data collected throughout involvement with programme on child, history and nature of HSB, victim and Achenbach Youth Self Report Form.  Analysis in SPSS	Limitations: Limited data differentiating between sibling HSB and non-sibling HSB. One-third of non-mandated clients did not complete treatment, either failing to attend or withdrawing prematurely Limited information on family reconstruction support provided.	Sibling HSB requires comprehensive and integrated response to deal with complex issues and family members affected by HSB.  88 CYP (sibling and non-sibling HSB) received direct service Treatment goals reached for 34 (39%) 28% substantially reached goals 17% withdrew, or withdrawn by parents 6% 2% closed as a result of re-offending (1 HSB) 1 client left the area  Average 39 sessions for those who substantially reached goals 7 sessions on average for those who only required assessment, and 6 sessions for those referred elsewhere Those who withdrew or withdrawn by parents, averaged 12 sessions Those who re-offended, averaged 8 sessions Of those who substantially met goals, none re-offended sexually
						(2 non-sexually).
Griffee et al. (2016)	Epidemiologic study to identify aetiological risk factors for SSB and sibling HSB based on the nuclear family behaviours.	US Sub-sample of larger study. Participants with >1 sibling Participants >18 years old. (M = 21.5) Recruited from under- grad. & graduate college students and staff from 6 mid- Atlantic college campuses 2002-2011.  137 sibling HSB cases (5% of sample), 4 subsets brother- sister (54), sister- sister (37), sister- brother (27), & brother-brother (25)	V	Systematic epidemiologic study  Data collected anonymously through computer-assisted self-interview designed to obtain a history of sexual experiences and behaviours.  Logistic regression analysis	Strengths: Large epidemiological study using a non- clinical population and includes SSB not reported or brought to the attention of authorities. Robust and detailed statistical analysis to determine relationship between aetiological risk factors. Distinguishes between coerced HSB and non- coercive PSB/SSB.  Limitations: Non-random sample – self-selection convenience sample of students. Educated and motivated participants may not be representative of wider population and thus cannot determine prevalence or incidence of behaviour or outcome in a population. Reliability issues with retrospective self- reports No information about whether any of the siblings involved in SSB were involved with CP services or police following discovery.	Included because of data on parental responses at the time sibling HSB occurred.  Less than a third of the participants in the study were caught while they were involved in SSB, meaning that at least 71% of SSBs were never discovered by the parents.  Opposite-sex SSB 2.3 times as likely as the participants in same-sex sibling SSB to have been caught.
Hackett et al. (2014)	Family members' responses to HSB 1) How parents and other members of the young person's family responded to HSB 2. How the revelations impacted on family functioning in the short and longer term	UK Stratified purposeful sampling approach to identify a subsample from 700 young people referred to 9 different services providing HSB assessment and intervention (1992- 2000). Subsample reflected a range of service users in each site in respect of number of relevant key variables. 63% 13 -16 years old, (Mo = 15 years old)	F	Case files data analysis of 117 cases in sub-sample. Thematic analysis of recorded of family reactions (both positive and negative).	Strengths: Large sub-sample size. Reported broader than families' demographics and included Analysis of family responses to HSB with a focus on parental experiences of professional interventions. Overview of a range of community and residential specialist HSB intervention services in UK.  Limitations: Case file analysis limited to reports from professionals and may not fully reflect experiences of families. Varying level of detail in case files. Small numbers of families within each identified response group, thus conclusions tentative.	Three broad types of parental responses to HSB: supportive, ambivalent and negative. Parents more likely to be supportive when their child's victims were extra-familial and condemnatory when the victims were intra-familial. Parents may find it easier to support a child where they have some emotional or physical distance between their child and the victim. 'Disintegrative shaming' and betrayal described in responses to CYP accused of sibling HSB.  Family reactions to HSB especially complex when a sibling was abused. Even in supportive families, the emotional burden of accepting CSA a struggle, additional to the demands of the complex welfare and justice system responses. Professionals need to devote specific attention in particular to the needs of parents in situations of intra-familial CSA. Needs of non-abused siblings overlooked.  Substantial variation in length of intervention provided to CYP. 5/9 services community-based and provided weekly treatment

Hardy (2001)	Ascertain the prevalence of sibling sexual and physical abuse in a normative sample and participants' perception of the extent to which the behaviours with their siblings were 'abusive' at the time and later in life.	95% male, 97% White British  27% (n = 30) intrafamilial HSB only, 46% HSB extra-familial only, 27% HSB both intra- and extrafamilial  US  203 students from a large urban university recruited in partial fulfilment of requirements for Psychology course 74.4% females & 25.6% males (M = 21.21 years old) 74.9% Caucasian 19.2% African American	V	Questionnaire using the Family Adaptability and Cohesion Evaluation Scales (FACES-III) and further questions to assess sibling relationships, characteristics and frequency of behaviours. Analysis using descriptive data and statistical significance, comparing physical and sexual abuse between siblings.	Strengths: Large non-clinical sample provides more normative results. Data on changes in perceptions of SSB over time.  Limitations: Respondents mostly female which may distort results to those predominately from victims of sibling HSB. Information on responses to SSB minimal. College students as participants may potentially limit generalisability of the	sessions typically for up to 6 months. 4/9 services were residential providers and involvement on a longer-term basis, sometimes for several years.  Included for findings from both victims and initiators of SSB from non-clinical population as well as respondents' perspectives on SSB.  80% of SSB described as consensual at the time. Respondents who reported SSB most likely to change perception of behaviour as 'abusive' from time it occurred to the present.  Individuals who were either victims or initiators of sexual activity with a sibling reported that the quality of their relationship had remained approximately the same, albeit relatively neutral.
Kaplan et al. (1990)	Comparison of mothers of boys charged with sibling HSB to mothers of non- sibling HSB on several variables	NY, US 130 mothers of adolescents receiving treatment for HSB – sibling HSB (n=48) vs. non-sibling HSB (n=82) 9% Caucasian 64% Black American	A	Structured clinical interviews  Statistical analysis 2 x 2 cross tabulation and chisquare.	findings.  Strengths: Relatively large sample Statistical comparison between sibling and non-sibling HSB parental experiences.  Limitations: Information on family backgrounds and characteristics far outweigh parental responses. High proportion of Black American and lower SES participants may distort results and impair generalisability	Although appear to be an extension of study by Becker et al. (1986), which examined adolescents charged of convicted of sibling HSB, this study was included because the participants are the mothers of CYP convicted of HSB and appears to include a larger number of mothers (48) than the number of adolescents in the study by Becker et al. (22).  Significantly more mothers of sibling HSB boys believed their son had sexually harmed than mothers of non-sibling HSB boys. Significantly more mothers of sibling HSB boys believed their son needed treatment than mothers of non-sibling HSB boys.
Katz & Hamama (2017)	To characterise the way children describe their experiences and perceptions following alleged sibling HSB as portrayed in their narratives during forensic investigations.	Israel 20 forensic interviews (2009-2011) with children ranging 6-12 years old (M = 9.07) following suspicions they were victims of sibling HSB.	V	Phenomenological Random selection of investigative interviews. Interviews video recorded and transcribed. Thematic analysis of interviews by 2 researchers independently	Strengths: Robust research methods using video analysis of recorded forensic interviews (reducing interviewer and performance bias). Thematic analysis independently completed by 2 researchers Inclusion criteria required of additional evidence including suspect admission, medical evidence, or eyewitness testimony enhancing reliability of findings.  Limitations: Small sample and so generalisations cannot be validated. No case outcomes to follow up on substantiation. Described as 'severe' CSA known to authorities and thus likely some distortion of nature of HSB and perhaps unrepresentative. Developmental difficulties excluded – possible selection bias and not representative of population.	Although predominately a study of victims of sibling HSB, included because of unique insights into parental responses from children's perspectives, including familial reaction post disclosure.  Unsupportive reactions by parents, disbelief and rejection when children tried to disclose directly.  Difficulties encountered by families following removal and placement of offenders/victims outside of home.  Importance of family intervention.
Latzman et al. (2011)	Examination of adolescent sibling HSB and non-sibling HSB across various	Midwestern US. 166 male adolescents (13-17) referred to a	А	Assessment of risk and treatment need using two	Strengths: Large sample based on extensive file information rather than self-reporting.	Included because data on treatment needs identified from comprehensive assessment data on individual and family background and functioning, and treatment needs.

	domains of risk and treatment need by comparing using scores from risk and need instruments. Assessment of youth treatment need by examining sibling HSB and non-sibling HSB maltreatment histories.	residential sex offender programme, 1994-2005. Mandated to receive treatment. Sibling HSB n=100, non-sibling HSB n=66. Age M=15.25 admission, M=16.13 discharge. Ethnicity 83% White, 8.4& African America, 4.8% Hispanic, 1.2% American Indian/Alaskan Native.		clinical instruments: ERASOR and YLS/CMI. Ratings and coding of maltreatment histories based on reviews of case file information and on- going psychological assessments.  Coding by two raters. Independent t-tests to examine group assignment and continuous variables. Chi-square analyses to examine strength of relationship between victim-offender and dichotomous variables.	Use of empirically-based practice assessment of HSB risk and need for CYP. Inter-rater reliability of coding by researchers  Limitations: Data solely based on file information, no clinical interview to examine unique dynamics involved. All CYP adjudicated and referred to juvenile court, may not be generalisable to all SHSB. Findings that a high proportion (47%) of HSB involved anal penetration suggest that HSB particularly severe and resulted in criminal justice involvement. Limited validity of assessment measures for psychopathology	Sibling HSB CYP (58%) more likely than non-sibling HSB CYP (35%) to have a history of sexual abuse victimisation. Sibling HSB also more likely than non-sibling HSB to have been exposed to domestic violence and pornography, suggesting more aggressive and sexualised home environment. Findings underscore importance of treatment to all family members, with certain offence-specific interventions, as most effective for reducing recidivism.
McDonald & Martinez (2017)	US To explore the ways in which sibling HSB is understood by and experiences explained by victims.	US 33 respondents identified as victims of sibling HSB (women = 30)	V	Exploratory study using a qualitative survey (see: Jansen, 2010) online. Discourse analysis using qualitative, grounded theory coding.	Strengths: Insights on victims' experience of relationships with the sibling accused of HSB and later-life relationships.  Limitations: Small non-representative convenience sample. Non-random sampling; recruitment through family violence centres and LGBT community centres may further bias results and limit ecological validity. Online survey prevented follow-up questions.	Included for views from victims of sibling HSB on their relationship with the sibling who harmed them.  Little indication that relationships with their siblings had been repaired. Sibling sexual abuse likely causes the fracturing of familial bonds of all kinds.
Morrill (2014)	Explored the long-term impact on self-esteem for those having experience with sibling HSB as a child. Hypothesised that experiencing sibling HSB as a child inversely impacts level of self-esteem in adulthood.	US Anonymous survey of college students. Sample (n=87) of those indicating experience of sibling HSB as victim, initiator or both.	V & A	Exploratory self-report survey using an altered version of the Conflict Tactics Scale and the Rosenberg Self-Esteem Scale. Regression analysis	Strengths: Large non-clinical sample using validated measures of self-esteem for robust comparisons.  Limitations: Self-report survey may be influenced by social desirability or response bias given subject nature. Convenience sample, larger proportion of females to males. Study did not consider the effect or interaction of experiencing other forms of abuse in addition to sibling HSB abuse may have on self-esteem. Study did not disaggregate the measure of sibling HSB into types (contact vs. noncontact).	Included because of data on children who have displayed sibling HSB and self-esteem in later life.  Significance of displaying sibling HSB on self-esteem. The more experience an individual has of displaying sibling HSB as a child, the more likely he or she will be to have lower self-esteem as a college student.  Sibling sexual abuse is connected to issues in the family.
O'Brien (1991)	Comparison of demographic, sexual, individual, and family factors that differentiate male adolescent sibling HSB from other types of HSB.	MN, US Comparison of 170 adolescents referred for HSB assessment and intervention. Sibling HSB (n=50) 12-19 years old (M=15)	A	Interviews and case file analysis, using descriptive statistics.	Strengths: Relatively large sample using data to make comparisons between CYP referred for sibling and non-sibling HSB.  Limitations: Clinical sample Responses to sibling HSB may be specific to locality and not be representative of other areas/jurisdictions	Court involvement for CYP referred for sibling HSB lower than other groups. Sibling HSB more likely to be referred by social services.  Sibling HSB typically conceptualised as non-abusive by legal processes.

Pierce & Pierce (1987)	Purpose to increase understanding of CYP who have displayed intrafamilial HSB, and to establish a data base from which further research might proceed.	II, US 37 CYP identified in CP services records to have displayed sibling HSB. 6-17 years old (M=14.1) 81% male, 68% white Included foster, adoptive and step- siblings	А	Standardised data collection instrument used by CP worker and researcher. Descriptive statistics reported.	Strengths: Sample from CP services may provide broader overview than clinical/treatment samples. Detailed information on placement outcomes and legal disposition.  Limitations: Broader definition of intra-familial CSA includes non-relatives. Initial screening of case selection by CP caseworkers may bias results.	CP services not set up to meet the needs of CYP who display HSB. 60% of CYP moved at least once after discovery of HSB, 40% remained at home. CP services are limited by the treatment facilities available in any area. Need to balance between punishment and treatment A third referred to State's Attorney A fifth referred to Police 68% referred to counselling (almost all of whom accessed counselling), however many CYP prosecuted without treatment.
Smith & Israel (1987)	Explored the frequently observed dynamics within families where sibling HSB had occurred and evaluated how these dynamics might predispose the family system to act out its dysfunction through sibling HSB.	CO, US 25 families accessing a specialist sexual abuse team within social services, from intake through treatment.  CYP who had displayed HSB: 9-20 years old (M=13.2), 80% male. Victims: 3-13 (M=9.1), 89% female 76% 2-parent families, 24% 1-parent. 56% step-families.	F	Descriptive study no comparison group. Data obtained from intake (assessment) and therapeutic sessions.	Strengths: Overview of treatment provision and complex family dynamics involved in families where sibling HSB had occurred.  Limitations: Small clinical sample. Describes family background and dynamics but limited information on treatment provision and no information specific to parental responses to sibling HSB.	Treatment provided by social services either family individual, couples or group treatment.  Average length of treatment provided =13 months
Tarshish & Tener (2020)	A qualitative study examining the characteristics of cases referred to an Israeli Child Advocacy Centre. Research questions: (1) How do child welfare professionals assess characteristics of SSA during CAC interventions? (2) How do they make decisions concerning referrals of the cases to legal procedure versus and exemption committee?  An exemption committee is a specific process to balance therapeutic and legal roles of professionals that encounter SSA.	West Jerusalem, Israel (predominately Jewish population). 40 cases of SSA evaluated and treated at a multi-disciplinary CAC between 2013-18. Mandatory reporting setting. Victim child 70% female, 15% male and female (multi-victim), ages ( <i>M</i> = 10.8). Accused child 95% male, age ( <i>M</i> = 16.5) Siblings per family ( <i>M</i> = 7).	F & P	Qualitative document analysis of case files of two groups: 20 referred to exemption committee and 20 referred to legal procedure).  Case file information from intake documents and documented interventions, organised into thematic analysis framework.	Strengths: Provides a broad overview of the complexities in SSA cases as encountered by professionals. Case file documents provide a wide range of information including demographics, family characteristics, and interventions, rather than relying on an individual's perspective. Comparison of cases receiving legal or therapeutic responses from within the same CAC reduces external variables that may impact on group differences.  Limitations: Sample from single CAC and in Israeli context – possible impact on ecological validity. Sample of comparison groups relatively small. Case files compiled by child welfare workers and may limit extent of information available for research questions. Case file method cannot fully capture decision-making processes by professionals.	SSA varied throughout cases, although usually a wide age-gap between victim child and accused child.  Decision-making justifications for exemption committee or legal procedure routes involved an interaction of 4 categories: characteristics of accused child, victim child, nature of SSA, and family responses. Decisions by professionals referred to more than one category.  Differences between cases referred for exemption committee and those referred for legal procedures.  Exemption committee:  HSB relatively minor and often involving younger children, difficulty deciding who initiated SSA when multiple siblings involved.  Non-penetrative HSB more common, sexual touching under clothing (82% vs. 53% legal route). Only 5% involved penetration (47% legal procedure).  Exemption committee more likely when accused child is able to understand and show guilt/regret for actions, and willing to get treatment or already in treatment.  Victim children concerned about accused siblings and concerned about victim' label of legal process.  Parents described in case files as proactive, help-seeking, and cooperative in treatment. Exemption committee more likely when family motivated to help victim child.  Legal procedure cases:  In legal cases SSA lacked mutuality, HSB more severe and involved penetration and force/coercion. Larger age gaps between siblings.

						Legal procedures more likely when accused child did not take responsibility for SSA and when victim child felt insecure or was not protected by family, or family did not engage in treatment. Legal procedures more likely when family did not cooperate, were ambivalent, helpless, or disbelieving in response, and history of abuse/CP concerns.  Concludes that SSA requires a holistic family-centred responses, instead of separating distinct 'victim' or 'perpetrator' roles. Professionals' decisions are made after carefully considering the whole family and relationships between family members. Legal procedures inhibit cooperation and engagement of children and family. Family's energy and effort devoted to defending accused child and preventing legal consequences which leaves victim child unsupported and divides family loyalties. Exemption committees are an alternative intervention which prioritise therapeutic role over legal/investigative role in mandatory reporting setting and instead allows for professional judgement on choice whether to proceed with legal procedure.
Tener & Katz (2018)	Analysis of decision-making of professionals during forensic interviews of children suspected as victims of SSA Research questions: (1) How do interviewers assess children and families during investigation? (2) How do they make decisions concerning future referrals of investigated children in legal and therapeutic contexts?	Israel 42 cases (involving 25 families) referred to Israeli Service of Forensic Investigations for Children 2011-15. Inclusion criteria: child provided allegation of SSA and typically developed. 15 families = 1 sibling victim, 10 families = 2-5 victims. Victim children: 16 girls, 26 boys, age range 8-12 (M=9). Accused children: 36 biological siblings, 6 step-siblings (age range 12-18, M= 14).	V & P	Qualitative thematic analysis to understand and characterise the interpretative nature of assessment and decision-making of professionals.	Strengths: Explicit qualitative research methods to assess trustworthiness of findings, including details of methods to ensure narratives not impaired by translations from Hebrew to English. Written summaries provided by forensic interviewers rather than interpretation by researchers. Standardised template to ensure consistency in information gathered. Limitations: Specific research context of Israeli legal system may limit ecological validity. Research focus on the victims during the forensic interview with very little detail of accused child and parent or other family members' perspectives. Views of children subject to interpretation by forensic investigators. Researchers used case summaries provided by forensic interviewers, possible information bias (Bankhead et al., 2019). Unclear if these summaries were provided contemporaneously or retrospectively – recall bias.	Severe SSA in all cases, involving penetration and multiple incidents over a long period of time. Physical force used in a third of cases and threats, mostly of emotional consequences, in just under two-thirds of cases.  Parental responses: Reactions ranged from supportive, to ambivalent, disbelief and negative. SSA often a precursor to a family crisis. Most common characteristic of families was parents' physical and emotional absence during SSA and disclosure. Following disclosure, parents struggled to act in interest of both children.  Decision-making: Decision-making complex with legal and therapeutic aspects. Difficulty assessing the credibility of victims. Most children struggled to provide detail about more than one incident of SSA. Concern from professionals that the forensic legal approach could be damaging for the family system.  In all cases, recommendation from investigator that child does not testify in court against sibling because of emotional consequences for victim. Family in distress and therefore importance of a therapeutic rather than legal approach to SSA. Consider SSA in context of family system and address needs of all family members. Intervention on family unit as a whole rather than individuals. Family plays a critical role before, during, and after disclosure and intervention.
Tener at al. (2018)	Analysis of parents' attitudes regarding the disclosure of SSA during a CAC intervention. Research questions: (1) What are the parents' attitudes after disclosure of SSA? (2) Are those attitudes transformed during the intervention at the CAC, and how?	Israel 60 Jewish families referred to a CAC in Jerusalem 2010-15. CAC provides multi- disciplinary treatment to u18s over 3-5 meetings. Married parents 79% Divorced, separated, widowed 21%. Average no. children per family 6.5.	F & V	Qualitative document analysis of case summaries which included notes on conversations between CP officer and parents to identify meaning and insights. Thematic analysis approach to document analysis	Strengths: Unique insights and analysis of the experiences and attitudes of parents whose children were involved in sibling HSB. Large sample size for qualitative study Clear methods, including exclusion of cases, enhances trustworthiness and reliability.  Limitations: Ecological validity of a sample from single CAC Religiosity of sample may impact reported parental attitudes	A range of parental responses to SSA pre- and post-CAC intervention identified, from not believing to acknowledgement. Not believing (18% pre, 7% post) included never occurred, misunderstood, or imagined.  Acknowledgement (75% pre-, 87% post-) sub-themes: SSB but not abusive, a game curiosity or exploration (37% pre-13% post-) Serious and a rupture to the family's previous ideal image (13% pre-, 30% post-) A further crisis within the family history (25% pre-, 43% post-). Although some parental attitudes remained unchanged during intervention, attitudinal shift occurred for some, transforming from disbelief to acknowledgement.

		Victim child: 71% female, M=7.8 years old Accused child: 94% male, M=15.2 years old. 89% multiple SSA		Further 20 cases excluded for insufficient information.	Legal intervention within CAC may impact on parental responses to SSA.  Case files compiled by caseworkers and subject to interpretation by researchers Purposive sampling to select case files – selection bias.	Transformation explained by unique nature of CAC intervention. Families' views on SSB reframed by encounter with professional outsiders and CAC intervention described as a turning point. Powerful impact of social and legal attitudes of CAC staff. Families in crisis pre-intervention, fear of prosecution of accused sibling, and families responsive to receiving help. Families need sensitive support to cope with these range of responses, including flexibility in interventions and meeting parents' emotional needs. Treat families as a unit not disparate 'victim' or 'perpetrator' roles.
Tener, Newman, et al., (2020)	Cross-cultural study comparing professionals' views and experiences of therapeutic and legal interventions in SSA cases. Research examines: (1) How CAC staff experience and perceive cases of SSA (2) How they experience and perceive the CAC interventions in cases of SSA, and the unique challenges in these cases. (3) The differences and commonalities between CAC interventions within different countries and legal contexts.	14 focus groups involving staff from multi-disciplinary CACs. Israel (7 groups) and Pennsylvania, US, from 2015-18. Israel: 5-10 participants in each session, involving same core group of professionals in each session from law enforcement, social workers, child investigators, doctors, prosecutors. US: 4-18 participants per session. Most focus group sessions organised according to professional discipline, 3 groups MDT. No details of participants (ages/experience etc.) for anonymity.	P	Qualitative thematic analysis approach to analyse transcripts from focus groups in both countries. Comparisons of commonalities, differences, and themes. Involved reflective writing and feedback to CAC staff consistent with expectations. Open-ended questions and specific questions decided from literature Focus groups transcribed by researcher. US (6/7 online, 1/7 inperson; Israel 7/7 inperson).	Strengths Cross-cultural comparisons enhance ecological validity. Large and varied (by disciplines) group of professionals in study. Focus groups with some advantages over individual interviews, allows for collective meaning-making of phenomenon and challenging/revising views. Explicit reflexivity in researchers' role and informant feedback to check accuracy, increases confidence in reliability of findings.  Limitations: CAC interventions focused on victim child and not accused child, with limited information about responses for accused children. Differences in focus group structures may influence responses (single discipline in most US groups vs. MDT in Israeli groups). Primary researcher in-person during all Israeli groups and only 1 US group, possible impact of response bias.	CAC professionals in both countries view sibling HSB as unique and complex, but mandatory reporting laws requires similar responses to other CSA.  Different legal contexts: Israeli CAC u12s treated by CAC, and mandatory reporting laws but ability to refer to an exemption committee. US CAC persons 14+ years old treated as 'perpetrator', mandatory reporting laws.  Legal or therapeutic approach: Exemption committees available as a therapeutic approach in Israeli CAC. Israeli professionals more ambivalent about legal responses, believing this exacerbates family crisis. Although some professionals question if this provides legal justice to victims and consequences without legal responses. In both counties, accused child not part of CAC treatment, expect (Israel) younger children (u12, Israeli age of legal responsibility) or where accused child has history of victimisation (US).  US CAC duty to report to police dictates legal interventions, focus on legal response over therapeutic needs. Mandatory reporting in sibling HSB cases may contradict empirical literature of viewing sibling HSB in context of family system as a whole and address needs of all family members  Victim or family focus: Sibling HSB viewed as either a family issue requiring therapeutic intervention, or a criminal matter requiring legal intervention. Influenced by prevailing cultural perspectives regarding priorities of primarily meeting needs of victims or family as a whole. CACs created to focus on victims of sibling HSB, but professionals recognise dilemmas faced by parents and difficulties providing for needs both children. US professionals more focused how interventions would affect the victim (victim focused)), less consideration of other family members. US tendency to evaluate cases from a legal focus, with clear dichotomy between victim and accused child Israeli CAC regarded family system as focus of support with more examples of family-focused approaches, viewing sibling HSB as a family crisis beyond the act of abuse itself. Sibling HSB may r

						US CAC primarily focused on parents' level of cooperation during intervention and ability to support victim. Israeli CAC more focused on parental circumstances leading to negative response and family crisis In both countries, parents tended to support accused child. Professionals view legal interventions leaving parents to focus on accused child and uncertainty of legal consequences, while the victims tended to receive more support from the formal authorities and reduced support from parents.  Some parents uncooperative with CAC legal interventions because of possible legal outcomes.  Living arrangements:  Israeli professionals focus less on out-of-home care arrangements and more on safety planning to reduce harm.  Most US CAC view accused child's removal from home as vital, exceptions when both children young or a one-time event. US CAC would not initiate therapeutic intervention of accused child did not leave home.
Tener & Silberstein (2019)	Exploratory qualitative study examining the experience of intervention with SSA survivors from the perspective of mental health professionals. Research questions: What are the major therapeutic challenges professionals face when intervening in SSA cases, and how do they cope with these challenges?	Israel 20 Jewish mental health professionals working in public social welfare services (CACs, CSA treatment centres, MH clinics) or private clinics who had experience working with SSA. 16 therapists, 4 child protection officers. Ages: 35-63, 18 female, 2 male. Experience: 5= <10 years, 13= 15-30 years, 2=unspecified.	V & P	Qualitative thematic analysis  16 in-person semi-structured interviews focused on characteristics of SSA, perceptions about effects of SSA, intervention priorities, and therapeutic challenges compared to other CSA.  Interviews recorded, transcribed, transcribed, translated (Hebrew to English), and analysed. Peer debriefing, member checking and audit trail.	Strengths: Research of seldomly studied professionals' perspectives on sibling HSB. Multi-disciplinary perspectives. Direct interviews with clear and explicit qualitative methods, reducing potential bias and enhancing reliability and trustworthiness of findings.  Limitations: Unique cultural characteristics of sample – ecological validity. Perception of sibling HSB interpreted by professionals and not corroborated by victims or other family members. Unable to compare responses between mental health and CP professionals, distinct roles at initial and therapeutic stages of involvement may affect views. Although discussed in brief, limited information on interventions with accused child, parents or other family members.	Focus of study on professionals' experiences of working with victims of sibling HSB, however key findings of relevance to professionals' involvement with family as a whole, including accused child.  Three main themes: (1) ensuring victim's physical and emotional safety, (2) reconstructing narrative of victims through therapeutic process, and (3) 'grey areas' (a) child does not view self as victim, and (b) professionals cannot clearly label one child as initiator of sibling HSB.  Physical and emotional safety: Professionals believe in the importance of parents recognising severity and consequences of sibling HSB, although this recognition does not always occur. Professionals believe families feel forced to make difficult decisions about the immediate physical safety needs of the child, without time to come to terms with disclosure of sibling HSB. Professionals perceive physical protection needs easier to meet, emotional protection much more complex.  Narratives and therapeutic role: Role of therapy to process SSA, integrate thoughts and feelings, and address self-blame. Therapeutic approaches include talking therapies, play therapy, bibliotherapy, art therapy, and psychodrama. Importance of therapist adopting a flexible position about sibling HSB, not all aspects malevolent and some victims described pleasure and enjoyment as well as fear and disgust.  Grey areas: Differences between victims' and professionals' views of sibling HSB. Lack of perceived victimisation in many victims. Ethical dilemmas and uncertainty in professionals attempting to reconstruct victim narrative in therapy.  Some professionals recognise difficulties distinguishing both children seeming to take part. Terminology and definitions of 'victim' and 'perpetrator' did not fully reflect experience and intent, the victim's own experiences, and the unique family dynamics involved.  SSB may be meeting both children's emotional needs not met by parents, not necessarily deviant or abusive.

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						Professionals perceive both children as victims of family circumstances rather than CSA victims.  Sibling HSB complex and unique context of each case needs to be considered.  Diverse experiences and professionals' interpretation of sibling HSB may not be suitable for the victim.
Tener, Tarshish, et al. (2020)	A qualitative study analysing and describing the characteristics and dynamics of sibling HSB from the perspective of the siblings (victims) How do siblings attending the CAC interpret the dynamics of sibling HSB? Does this dynamic, as perceived by the siblings, transform over time and context, and how?	Israel Sample from all families (n=100) evaluated and treated in a Child Advocacy Centre (2013-14) 163 individual occurrences sibling HSB  All families Jewish Av. 6.6 children per family, 76% 2-parents, Victims: female (68%), male (32%) Victim age (M=9) Accused sibling (M=14).	V & F	Qualitative document analysis of case files summaries, demographic charts, and documented conversations between social workers and siblings.  Thematic analysis framework of themes elicited from document analysis.	Strengths: Large sample using detailed data from case files of an assessment treatment service. Perceptions from children on sibling HSB. Perceptions from a unique cultural and religious sample, previously ignored in the literature.  Limitations: Findings may be specific to large families in a specific religious and cultural context, limiting extent to which they can be generalised. Viewpoint from one perspective (usually victim). Under-reporting of viewpoint of child accused of sibling HSB < CAC only supports children accused of sibling HSB < 12 years old, however average age of accused child in sample 14 years old. Child's perspective written by CP worker may be misquoted or Document analysis subject to researchers biases.	Although this study primarily focuses on the perspective of victims of sibling HSB, this study was included because of the rich data on their families and prior involvement with professional agencies is provided.  Almost a quarter of families referred to CAC more than once, nearly two-thirds known to welfare services.  Sibling HSB multi-faceted and not all perceived as harmful, distinguishes between coercive and sometimes violent sibling HSB where clear victim and initiator roles; and SSB normative and routine in siblings' everyday lives and seen by child as natural and not constructed as deviant.  Recommends that treatment approaches need to be reformed to address all family members' needs and consider the sibling subsystem as a whole and beyond 'victim' and 'perpetrator' roles. Greater attention needed on approaches to SSB that are routine or problematic but not coercive or deviant.
Thornton et al. (2008)	Examines the families of adolescents attending a community-based treatment programme for intra-familial HSB. Qualitative and quantitative data were used to measure family functioning before and after 12 months of treatment, to understand the experience and impact of treatment on participants and their families and to capture the meaning of that experience.	Australia 38 adolescents (12-38 years old) and their parents accessing the SafeCare programme, 2004-2007. 35 males, 3 females Age at index offence=12.95 Intact nuclear family=21%, stepfamily=54% Further analysis of adolescents (n = 12) who had completed 12 months of a community-based sex offender treatment programme.	A & F	Mixed methods.  1. Qualitative Semi- structured interviews at 6 weeks assessment stage and closing interviews on completion of programme Interviews audio recorded and transcribed. Interpretive Phenomenological Analysis used to analyse the data.  2. Quasi-experimental design (one-group pre- test post-test design) provided detailed data using validated psychometric tests: Millon Adolescent Clinical Inventory & Family of Origin Scale.	Strengths: Detailed description of community programme. Sample diverse, including adolescents with intellectual and neurodevelopmental difficulties. Pre- and post-treatment data analysis. Robust quantitative and qualitative data analysis increases confidence in reliability of findings. Unique perspectives from adolescents in treatment and their families.  Limitations: Sample size reduced the power of pre- and post-test analyses. More difficult to assess treatment outcomes without a comparison group. All participants were volunteers and there may have been qualitative differences between the families who agreed to participate and those who declined to participate and those who declined to study. 39% of families did not complete the 12-month treatment programme and attendance by some clients was sporadic.	'SafeCare Young People's Program' – a psychotherapy treatment programme providing each family member with individual and group therapy, as well as couple, family and reunification sessions when required.  74% referred by statutory agencies, 26% family self-referrals. Treatment lasted 9-12 months.  Anger, guilt and shame for described by all parents after disclosure. Most supportive of adolescent, victim and other family members.  Disclosure strained relationships, divided loyalties, especially within step-families. Parents aligned to victim or perpetrator. Treatment improved family functioning for most More confident parenting skills and improved communication Improved relationships and less tension Treatment addressed multiple additional problems Greater progress and understanding when at least one parent engaged in therapy Parents founds dealing with sexual abuse, conflict and setting boundaries most helpful aspects of treatment Prior victimisation of adolescent associated with non-completion of programme Intact families more likely to complete programme. Non-intact families appeared to find more difficulty to committing to lengthy treatment (or require more intensive support) Recommends: development of range of welfare interventions (rather than criminal justice) and to involve all family members Treatment needs to be holistic, varied and flexible to meet the family's circumstances.
Welfare (2008)	To understand the perspectives of all family members following	Australia	V, A & F	Qualitative grounded theory approach to	Strengths: Study attempts to capture experiences and perspectives of multiple family members: the	Recovery optimally obtained in a family context of support and connectedness.

	disclosure of sibling HSB and the interactional patterns that assist or constrain recovery for each person.	Interviews of 21 families comprising of: 19 victims, 6 mothers, 5 fathers, 5 offending brothers, 4 siblings (non- offending/non-abused)  Opportunistic selection of participants. Majority of participants were adults when disclosed and abuse occurred pre- adolescent.	incorporate multiple viewpoints.  Most participants interviewed individually (separate to family)  Interviews transcribed and analysed.  Analysis used the conceptual frameworks of systems theory, feminism, constructivism and trauma theory.	victim, the accused child, parents, and non- harmed siblings. Analysis of perspectives on family dynamics, extending research beyond experiences of the individual. Explicitness with regard to theoretical approach to research and analysis.  Limitations: Retrospective accounts of sibling HSB – participants interviewed as adults – and possible impact on reliability. Opportunity sample increases bias. Difficulties recruiting accused siblings and interviews with them a considerable time after HSB (most adults). Perspective of victims outweighs those accused of HSB. Small sample.	Recovery for both victims and offenders depends on parents' connectedness with them and care for them.  Accused child needs to be supported and held to account – too confrontational or too supportive without confrontation, boys did not recover well. Important for son's recovery to accept responsibility  Parents supportive and confronted HSB issues (59%)  Parents not supportive of victim but supportive of accused child, minimising HSB as play or hostile (12%)  Parents who did not support either victim or accused child, avoiding discussion and some even denying completely (29%)  Reunification:  Most parents and (non-offending) siblings could understand the need for separation of victim and accused child. However, more difficult as time passed without any change to this. Other families recognised that reunification impossible – did not consider recovery had occurred and family unit destroyed.
Yates (2020)	Examined social worker decision-making in cases	UK P Convenience sample of	Qualitative exploratory study using constructivist	Representativeness of those accused of HSB reduced within data – only 5 accused brothers directly interviewed.  Strengths: Provides evidence of how social workers	Goal for most parents is reunite family, if attempted too early victim experiences as dismissing or devaluing their experiences of abuse  Social workers frame sibling relationships as non-abusive and of intrinsic value, and when faced with contradictory evidence
	involving sibling sexual behaviour. Research question: How do social workers account for the decisions they have made regarding separation, contact and reunification of siblings following sibling sexual behaviour becoming known?	21 local authority social workers who had had case management responsibility for a case involving SSB.  Interviews regarding 21 families and 54 children. 21 children identified as initiators of HSB, 3 examples of mutually initiated SSB  Children's ages: Victims: 1-12 years old, Initiator: 7-15 years old	grounded-theory to explore retrospective accounts by social workers in Scotland of their decision making in cases of SSB.  Interviews with social workers providing retrospective accounts of decision-making in cases of SSB.  Interviews audio-recorded and transcribed. Emerging categories developed using constant comparative analysis.	think and make decisions. Incorporation of researcher reflexivity. Interviewees prepared by reading case files prior to interview and 9/21 had access to files during interview. All but 1 social worker had contact with families within 5 years of interview. Researcher prior experience as a social worker provides additional identification and insights.  Limitations: Small convenience sample – selection bias. Retrospective account of decision-making, memories may be false or partial, and may be impeded by confirmation bias.	engage in a number of mechanisms to maintain this frame: Doubting what had happened; resisting labelling the behaviour as abuse; looking for reasons to explain behaviour; requiring a second incident; and focusing on safety. Where siblings were separated this was not regarded as a long- term solution Emotional impact of SSB not considered within decision-making. Social workers' perspectives contingent on their relationship with parents.

# Appendix B

#### **Summary of Excluded Studies (After Full-Text Screening)**

Study	Exclusion code*	Reasons for exclusion and relevant findings
Archer et al. (2020)	М	British qualitative study of 6 parents of children and young people who had displayed HSB and accessing specialist assessment and support service. HSB both intra- and extra-familial (for 3 parents their children's HSB was intra- and extra-familial, for 1 intra-familial only, and for 2 extra-familial only). Unclear if intra-familial involves non-sibling children. Excluded for small sample size and insufficient data specifically in relation to sibling HSB. Study found that when HSB intra-familial, parents loyalties between children divided and parental responses vacillated between ambivalent and supportive.
Carlson et al. (2006)	S	Study examining victim's experiences of sibling HSB, insufficient information of responses to sibling HSB in relation to the child who harmed
Cavanagh Johnson (1988)	S	Reports on treatment programme in LA, US, for boys who have displayed HSB. Insufficient information on specific responses to sibling HSB differentiating from non-sibling HSB
Daly (2013)	M & D	Conference paper, not peer-reviewed article – excluded. Australian study using archival data from police found that a larger proportion of sibling HSB cases were finalised through conferencing (RJ) instead of court. CYP accused of sibling HSB tended to be more remorseful and more likely to make an admission to police in investigative interviews than adolescents who had harmed extra-familial children.
Daly & Wade (2014)	M & D	Sub-sample from larger Sexual Assault Archival Study. In-depth analysis of 4 case studies of sibling HSB examining dynamics in families and restorative justice conferences. Found that most victims of sibling HSB too young to attend and participate in conferences. Parents conflicted in conferences by dual role of supporting the victim and accused children. Positive from conferences include bringing awareness of impact on victims, condemning the HSB, and facilitating frank discussions between family members. Excluded because of sample size of CYP who had displayed sibling HSB and duplication of Daley et al. (2013).
DeJong (1989)	S	Insufficient information on parental and professional responses to sibling HSB
Duane et al. (2002)	М	Irish study of a support group for parents of adolescents who have committed HSB. Parents interviewed before and after treatment programme. Participants = 5 parents (two couples and a single parent). One couple's son had committed sibling against his younger sister. Parents described a range of reactions to HSB and self-reported psychological adjustment, self-esteem and perceived social support improved over the course of treatment. Excluded because of small sibling HSB sample size.
Finkelhor (1980)	S	Survey of undergraduate college students' sexual experiences with siblings. Detailed information on prevalence and type of SSBs but insufficient information on parental or professional responses
Gervais & Romano (2018)	M & D	Sample of 16 parents from 10 families. Youth (n=10) displayed HSB, 4 involved brothers/half-brothers. Excluded because of insufficient data on sibling HSB differentiated from non-sibling HSB.
Gervais & Romano (2019)	M & D	Qualitative study examining parents' perspectives of the emotional and relational impact on siblings of C&YP who have displayed HSB. Findings reported the distress and uncertainty in siblings about child welfare and criminal justice investigations, and not fully understanding these processes. Siblings experienced stigma from negative attention in the community and online about their brothers' HSB. Parents' described reduced ability to cope with the demands and competing needs of all siblings. Impact of physical safety measures in family home following HSB on non-victimised siblings and the relational difficulties between siblings following HSB. Victims were siblings in 4 of the 10 families in the sample. Same sample as Gervais & Romano (2018) and Romano & Gervais (2018). Excluded because of insufficient data on sibling HSB differentiated from non-sibling HSB.
Gervais & Johnston (2021)	M & D	Qualitative study of parents' perspectives of reconciliation following a CYP who has displayed HSB and its implications and outcomes on victims, relatives and the CYP accused of HSB. Summary of offender-victim relationship details that of 10 families in the study, HSB involved siblings (full-, half-, step-) in 4 families (4 accused and 4 victims), therefore excluded because of sample size. Appears to be same sample as Gervais & Romano (2018) & Romano & Gervais (2018). Family relations after HSB strained, especially when CYP who displayed HSB was unable to apologise. Families reported experiences of healing when reconciliation was achieved. Most families desired restoration and reconciliation. Reconciliation enhanced by supportive family structures and bonds.
Grant et al. (2008)	D	Report detailing findings from same study as Halse et al. (2012) and Thornton et al. (2008). Duplication of findings.
Halse et al. (2012)	D	Reports on sub-sample of 12 adolescent's from a larger study on the treatment of sibling HSB at a community-treatment service.  Study reported elsewhere by Grant et al. (2008) and Thornton et al. (2008).To avoid duplication and bias, the paper by Thornton et al. (2008) was chosen for inclusion in final dataset because this reports on larger study of 38 adolescents pre- and post-treatment, and provides data on family and adolescents within the study.
Jarošová & Weiss (2007)	L	Czech Republic phenomenological study of 1129 respondents to an anonymous questionnaire, comparison of SSA and non-sibling sexual abuse. 794 respondents had siblings, 6.5% (n=51) referred to sibling HSB. Most victims (89%) described the negative impact of sibling incest on their later lives. Only one case (2%) investigated and tried. Abstract in English but full article in Czech. Excluded: Non-English language paper.
Jones (2015)	S	US pilot study exploring the experiences of 8 parents and parental figures of adolescents (12-17 years old) who have sexually offended.  No data on profile of adolescents. Refers to one step-father whose daughter was the victim of his step-son. No other data on sibling HSB and therefore excluded.
Joyal et al. (2016)	S	Large Canadian study with comparison of adolescents HSB involving sibling and non-sibling victims. The study found that adolescents who had displayed sibling HSB were more likely to have bene sexually victimised themselves and some other moderate differences suggesting that they constitute a distinct sub-group of CYP who display HSB. No information on family or professional/agency responses.
Krienert & Walsh (2011)	S	Large US study incident-based study of sibling HSB using national crime data from police records. Multiple levels of analysis for findings based on characteristics of victim, accused, and type of behaviour. However, no information on parental, professional or agency responses to sibling HSB.
Laviola (1992)	S	US study of 17 adult women to examine older brother-younger sister HSB from the perspective of adult women. Around half of the women felt both positive and negative about sibling HSB and their brothers at the time, usually when coercion used. Half felt completely negative about sibling HSB, usually when force used.  None of the women felt completely positive about HSB with their brothers. Excluded: insufficient data on CYP SHSB.
Morrill et al. (2013)	S	Survey of students to examine gender roles in the propensity and severity of sibling CSA.

		No data on family reactions or professional responses to sibling HSB.
O'Keefe et al. (2014)	S	Sub-set of analysis of 27 victims of sister-brother HSB from Griffee et al. (2016) using computer self-interview. Insufficient data on child who displayed HSB and responses to these children.
Rayment-McHugh & Nisbet (2003)	М	Conference paper, not peer-reviewed article – excluded. Australian study analysed adolescent males court-referred to treatment following HSB (13 boys accused of sibling HSB). Higher rate of prior child protection concerns within the sibling HSB boys. Sibling HSB boys charged with a higher number of sexual offences than non-sibling CYP. No evidence sibling HSB treated more leniently or less likely to be charged than non-sibling HSB.
Relva et al. (2017)	S	Survey of Portuguese university students on prevalence and coercion dyads (male-coerced, female-coerced and mutually coerced) involved in SSB. No data on family reactions or professional responses to sibling HSB.
Romano & Gervais (2018)	D	Same sample and Gervais & Romano (2018; 2021).
Rudd & Herzberger (1999)	S	US Survey of women attending a support group for 'incest' survivors comparing those who had been sexually abused by brothers, and a second group who were sexually abused by fathers. Respondents described their mothers as physically present but emotionally unavailable, remote or abusive. Sibling HSB linked to unavailable or deceased fathers. No intervention when parents made aware of sibling HSB.
Russell (1983)	S	Probability sample of 930 women >18 years old interviewed about any experiences of sexual abuse. Although the study contained prevalence data on sibling HSB, insufficient information to differentiate sibling HSB responses.
Skau et al. (2008)	М	Canadian survey of clinicians working with 60 families where sibling HSB had occurred. Unpublished conference paper, not peer-reviewed.
Sperry & Gilbert (2005)	S	Analysis of an archival dataset from university students containing retrospective reports of childhood sexual experiences.  Small sample unable to control for effects of intra-familial versus extra-familial CSA.  Insufficient data on sibling HSB and responses to this.
Tarren-Sweeny (2008)	S	Sub-set of a larger epidemiological study of pre-adolescent children in foster and kinship care, examining PSB. Insufficient data on sibling HSB and responses to this.
Tener (2018)	P & S	Study of women survivors of IFCSA. Interviews with 20 Jewish Israeli women abused by a family member (at least 5 years elder) in childhood, 3 of the women report abuse by their brothers. Excluded because main focus of study on adult-to-child IFCSA.
Tener (2019a)	S	Israeli study examining experiences of 15 survivors of sibling HSB and their relationships with the accused sibling in childhood and adulthood. Findings: most participants chose to distance themselves in adulthood from their siblings who displayed HSB, even when SSB considered as mutual and reciprocal during childhood. Viewing sexual exploration and curiosity between siblings as harmless does not correspond to the experiences of most survivors in this study. Excluded because retrospective accounts of adult survivors and mostly on adult functioning.
Tener (2019b)	S	Descriptive article on the characteristics of collaborative research–practice relationships, with specific reference to a CAC study on SSA. Excluded for scope: methodological discussion piece.
Tener, Katz, et al. (2020)	S	Israeli study examining disclosure of SSA through the narratives of 25 adult survivors:24 Jewish Israeli women and one man sexually abused by siblings during childhood or adolescence.  Exclusion: adult retrospective perspectives and impact on adulthood.
Tener, Marmor, et al. (2020)	Р	Cross-cultural comparison study analysing Israeli and US professionals' perceptions and experiences of working with IFCSA in the context of the COVID-19 pandemic. Findings included professionals reporting on the impact of COVID-19 on families raging from increased isolation, greater financial and emotional stressors, and reduced ability of families to access support. Professionals perceived COVID-19 isolation measures as a period of risk for further abuse in families where IFCSA had occurred, and concerns about reduced opportunities for children to report CSA. Shift in focus of interventions from IFCSA to family maintenance and stabilisation during pandemic, and complexity and limitations of internet or telephone-based interventions on privacy and trust discussed. Although this study makes reference to and gives examples of sibling HSB, insufficient information within the data to differentiate findings from adult-to-child IFCSA.
Tidefors et al. (2010)	S	Swedish empirical study comparing a CYP who displayed sibling HSB (n=21) with CYP who had displayed non-sibling HSB (n=24).  This study focused upon background and family variables and did not provide data on parental or professional responses.
Worling (1995)	S	Canadian study of adolescents receiving treatment for HSB. Comparison of those referred for sibling HSB and those for non-sibling HSB. Analysis and comparisons of individual and family functioning.  Study based on data from a community-based treatment programme in Ontario, clinical meetings ranged from 2 – 50 months ( <i>M</i> = 13 months). Does not provide data on parental responses to sibling HSB. Data on professional responses to sibling HSB insufficient for inclusion.
Worling (2001)	S	Canadian study using cluster analysis with an aim to attempt to define personality types within adolescents receiving treatment for HSB, and to determine any relationship between personality sub-group and sexual/non-sexual recidivism. Sibling HSB examined separately. Found that adolescents with anti-social/impulsive and confident/aggressive personality types more likely to have intra-familial victims, but also more likely to have younger siblings within family. Anti-social/impulsive type also more likely to be charged with subsequent violent (sexual/non-sexual) offences.  No discernible data on parental or professional responses for inclusion in final dataset.
Yates et al. (2012)  Yates (2018)	S	Exploratory study using case file analysis of 34 CYP referred to a service providing HSB intervention in Scotland. Found that children more likely to display HSB in family settings before HSB in the community. Boys who displayed HSB in both the family and community were more likely to have a younger age of onset of HSB and higher level of own victimisation. Boys whose displayed sibling HSB siblings motivated substantially by jealous anger less likely to display HSB outside of family, suggesting sibling HSB may describe a subset of CYP who display HSB with a different dynamic and pathway  Length of HSB agency involvement for the participants 5-48 months, average of 26 months. No further information on parental or professional responses for inclusion in final dataset.  Findings from same study and participants as Yates (2020). More detailed data for provided in Yates (2020) and therefore included in final dataset.

<sup>\*</sup>Codes: M-Method; S-Scope; P-Population; D-Duplicate, L-Language

### Appendix C

#### **Quality Appraisal Summary**

	1. Qualitative					3. Quantitative non- randomised			4. Quantitative descriptive			5. Mixed methods†				Overall quality					
Author & Year	1.1	1.2	1.3	1.4	1.5	3.1	3.2	3.3	3.4	3.5	4.1	4.2	4.3	4.4	4.5	5.1	5.2	5.3	5.4	5.5	
Adler & Schutz (1995)	-	-	-	-	-	-	-	-	-	-	?	?	Υ	Υ	Υ	-	-	-	-	-	***
Becker et al. (1986)	-	-	-	-	-	-	-	-	-	-	?	?	Υ	Υ	Υ	-	-	-	-	-	***
Caffaro & Conn-Caffaro (2005)	Y	Υ	Υ	Υ	?	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	****
Collin-Vézina et al. (2014)	-	-	-	-	-	Υ	Υ	Y	Υ	?	-	-	-	-	-	-	-	-	-	-	****
Cyr et al. (2002)	-	-	-	-	-	Υ	Υ	Y	Υ	?	-	-	-	-	-	-	-	-	-	-	****
Daly et al. (2013)						Υ	Υ	Y	Υ	Υ											****
Falcão et al. (2014)	-	-	-	-	-	-	-	-	-	-	Υ	Υ	?	N	Υ	-	-	-	-	-	***
Flanagan & Hayman-White (2000)	-	-	-	-	-	-	-	-	-	-	Y	Y	Y	N	Y	-	-	-	-	-	****
Griffee et al. (2016)	-	-	-	-	-	Υ	Υ	Υ	Υ	Y	-	-	-	-	-	-	-	-	-	-	****
Hackett et al. (2014)	Υ	Υ	Υ	Υ	Υ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	****
Hardy (2001)	-	-	-	-	-	-	-	-	-	-	?	?	Υ	?	Υ	-	-	-	-	-	**
Kaplan et al. (1990)	-	-	-	-	-	Υ	Υ	Υ	N	N	-	-	-	-	-	-	-	-	-	-	***
Katz & Hamama (2017)	Y	Υ	Υ	Y	Υ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	****
Latman et al. (2011)						Υ	N	Y	Υ	Υ											****
McDonald & Martinez (2017)	Y	Υ	Υ	Y	?	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	****
Morrill (2014)	-	-	-	-	-	-	-	-	-	-	?	?	Υ	Υ	Υ	-	-	-	-	-	***
O'Brien (1991)	-	-	-	-	-	Υ	Υ	Υ	?	Υ		-	-	-	-	-	-	-	-	-	****
Pierce & Pierce (1987)	-	-	-	-	-	-	-	-	-	-	Y	?	Υ	N	Υ	-	-	-	-	-	***
Smith & Israel (1987)	Y	Υ	?	Υ	?	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	***
Tarshish & Tener (2020)	Y	Υ	Y	Υ	Υ																****
Tener et al. (2018)	Y	Υ	Y	Υ	Υ																****
Tener & Katz (2018)	Y	Υ	Y	Υ	Υ																****
Tener, Newman, et al. (2020)	Y	Υ	Υ	Y	?																****
Tener & Silberstein (2019)	Υ	Υ	Υ	Υ	Υ																****
Tener, Tarshish, et al. (2020)	Y	Υ	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**
Thornton et al. (2008)	Y	Υ	Y	Y	Υ	Υ	Υ	N	?	Υ	-	-	-	-	-	Υ	Υ	?	Υ	Y	***
Welfare (2008)	Y	Υ	Y	Υ	Υ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	****
Yates (2020)	Y	Υ	Υ	Υ	Υ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	****

Notes: No quantitative randomised controlled trials (category 2) in the dataset. †Rating for mixed methods studies comprises of 15 criteria (QUAN+QUAL+MM), instead of 5. The overall quality of a combination cannot exceed the quality of its weakest component, and therefore the overall quality score is the lowest score of the study components (Hong, 2020).

### Appendix D

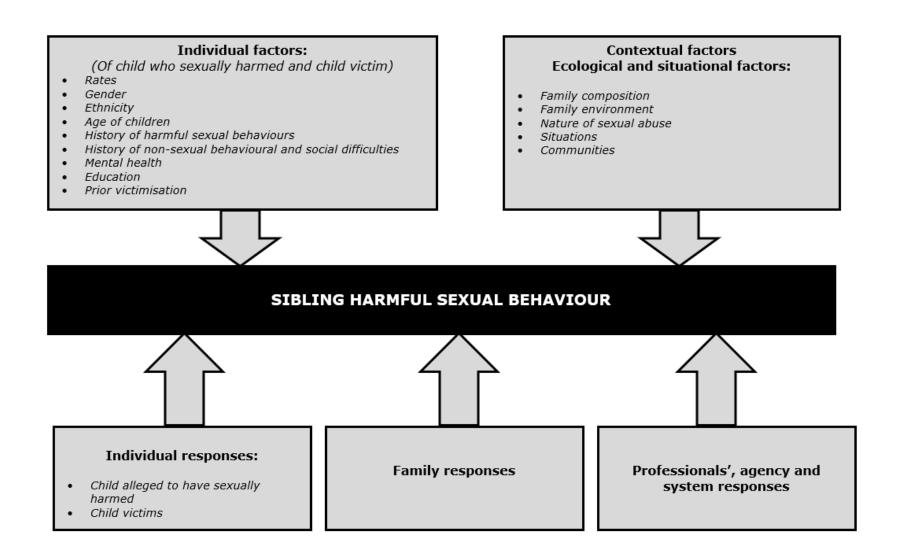
#### MMAT Methodological quality criteria

Category of study designs	Methodological quality criteria						
Screening (for all study designs) to ensure	S1. Clear research questions						
that the included literature is empirical	S2. Collected data allow addressing the research questions						
1. Qualitative	1.1 Qualitative approach appropriate to answer the research question						
	1.2 Qualitative data collection methods adequate to address the research question						
	1.3 Findings adequately derived from the data						
	1.4 Interpretation of results sufficiently substantiated by data						
	1.5 Coherence between qualitative data sources, collection, analysis and interpretation						
3. Quantitative non-randomised	3.1 Participants representative of the target population						
	3.2 Measurements appropriate regarding both the outcome and intervention (or exposure)						
	3.3 Complete outcome data						
	3.4 Confounders accounted for in the design and analysis						
	3.5 Intervention administered (or exposure occurred) as intended						
4. Quantitative descriptive	4.1 Sampling strategy relevant to address the research question						
	4.2 Sample representative of the target population						
	4.3 Measurements appropriate						
	4.4 Risk of nonresponse bias low						
	4.5 Statistical analysis appropriate to answer the research question						
5. Mixed methods	5.1 Adequate rationale for using a mixed methods design to address the research question						
	5.2 Different components of the study effectively integrated to answer the research question						
	5.3 Outputs of the integration of qualitative and quantitative components adequately interpreted						
	5.4 Divergences and inconsistencies between quantitative and qualitative results adequately addressed						
	5.5 Different components of the study adhere to the quality criteria of each tradition of the methods involved						

*Note:* No quantitative randomised controlled trials (category 2) in the dataset.

### Appendix E

Pictorial representation of main themes identified within the included studies of the systematic literature review



# Appendix F

#### Initial screening tracking log: Scopus (ProQuest)

term no. a	Title/	Articles	Excluded = n		Reason for	exclusion codes		Include to progress to second screening of full papers Total	Notes	
	abstract/ key words?	found = n		Language (L) = n	Method (M) = n	Population (P) = n	Scope (S) = n			
1	Title & Abstract & Key words	4	3	0	0	0	3	1	Limit to Subject areas: Psychology, arts & Humanities, medicine, social sciences, multidisciplinary	
2	Title & Abstract & Key words	70	45	0	9	4	33	24	Limit to Subject areas: Psychology, arts & Humanities, medicine, nursing, social sciences, multidisciplinary	
3	Title & Abstract & Key words	131	120	4	6	9	101	9	Limit to Subject areas: Psychology, arts & Humanities, medicine, nursing, social sciences, multidisciplinary Limit to Document type: article & article in press.	
4	Title & Abstract & Key words	4	1	0	0	0	1	3	No limits	
5	Title & Abstract & Key words	30	28	0	0	0	28	2	Limit to Subject areas: Psychology, arts & Humanities, medicine, nursing, social sciences, multidisciplinary No limits: document type (when 'article' applied 1 relevant hit omitted)	
6	Title & Abstract & Key words	23	16	1	3	1	11	7	Limit to Subject areas: Psychology, arts & Humanities, medicine, nursing, social sciences No limits: document type (when 'article' applied 2 relevant hits omitted)	
7	Title & Abstract & Key words	20	13	0	2	0	11	6	Limit to Subject areas: Psychology, arts & Humanities, medicine, nursing, social sciences, multidisciplinary	
8	Title & Abstract & Key words	115	103	1	12	6	84	12	Limit to subject areas: medicine, psychology, social sciences, nursing, multidisciplinary, health professions, undefined Limit to: Journals & Articles	
	Totals	397	329	6	32	20	272	50		

## Appendix G

### Initial screening tracking log: Summon

Search term no.	Title/ abstract/ key words?	Articles found = n	Excluded = n		Reason for e	exclusion codes		Include to progress to second screening of full	Notes	
	key words?			Language (L) = n	Method (M) = n	Population (P) = n	Scope (S) = n	papers Total		
1	Abstract	66	54	0	3	7	44	9	Content type: journal article Limit to: scholarly materials, including peer- reviewed Exclude: Book reviews Expand results: Include from outside library's collection Discipline: Education, government, law, medicine, nursing, psychology, public health, social sciences, social welfare and social work, sociology and social history, women's studies	
2	Abstract	103	72	0	10	12	50	24	Content type: journal article & report Limit to: scholarly materials, including peer-reviewed Exclude: Book reviews Expand results: Include from outside library's collection Discipline: Education, government, law, medicine, nursing, psychology, public health, social sciences, social welfare and social work, sociology and social history, women's studies	
3	Abstract	70	63	4 2 (after duplicates removed)	3	10	46	6 (after duplicates removed)	Content type: journal article & report Limit to: scholarly materials, including peer-reviewed Exclude: Book reviews Expand results: Include from outside library's collection Discipline: Education, government, law, medicine, nursing, psychology, public health, social sciences, social welfare and social work, sociology and social history, women's studies	

	,								
4	Abstract	6	3	0	2	0	1	3	Content type: journal article & report Limit to: scholarly materials, including peer- reviewed Exclude: Book reviews Expand results: Include from outside library's collection Discipline: Education, government, law, medicine, nursing, psychology, public health, social sciences, social welfare and social work, sociology and social history, women's studies
5	Abstract	23	22	0	2	0	20	1	Content type: journal article & report Limit to: scholarly materials, including peer-reviewed Exclude: Book reviews Expand results: Include from outside library's collection Discipline: Education, government, law, medicine, nursing, psychology, public health, social sciences, social welfare and social work, sociology and social history, women's studies
6	Abstract	17	10	0	1	3	6	5 (after duplicates removed)	Content type: any type Expand results: Include from outside library's collection Discipline: Government, law, medicine, nursing, psychology, public health, social sciences, social welfare and social work, sociology and social history, women's studies
7	Abstract	11	6	0	2	0	4	3	Content type: journal article Limit to: scholarly materials, including peer- reviewed Expand results: Include from outside library's collection Discipline: Education, medicine, nursing, psychology, public health, social welfare and social work
8	Abstract	133	122	0	6	0	116	11	Limit to: scholarly materials, including peer- reviewed  Expand results: Include from outside library's collection  Discipline: Education, government, law, medicine, nursing, psychology, public health, social sciences, social welfare and social work, sociology and social history, women's studies  Exclude: Book reviews & Newspaper articles
	Totals	429	352	2	29	32	287	55	

# Appendix H

#### Initial screening tracking log: PsycINFO

Search	Title/	Articles	Excluded = n		Reason for	exclusion codes		Include to progress to second	Notes	
term no.	key words?			Language (L) = n	Method (M) = n	Population (P) = n	Scope (S) = n	Include to progress to second screening of full papers Total		
1	Abstracts	4	3	0	1	0	2	1 (after duplicates removed)	Limit to: Scholarly journals	
2	Abstracts	50	31	2	7	3	19	19	Limit to: Scholarly journals	
3	Abstracts	28	23	2	2	1	18	5	Limit to: Scholarly journals	
4	Abstracts	3	1	0	0	0	1	2	Unable to truncate/wildcard at beginning of word	
5	Abstracts	259	234	3	33	8	190	25	Limit to: scholarly journals & peer reviewed  Unable to truncate/wildcard at beginning of word	
6	Abstracts	9	6	0	0	1	5	3	Limit to: scholarly journals	
7	Abstracts	14	7	0	2	0	5	7	No limits	
8	Abstracts	103	93	0	15	3	75	10	Limit to: scholarly journals & peer reviewed	
	Totals	470	398	7	60	16	315	66		